HEALTH

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BUILDING BRIDGES
Lessons from a Pittsburgh Partnership to Strengthen Systems of Care for Maternal Depression

Donna J. Keyser | Ellen Burke Beckjord | Ray Firth
Sarah Frith | Susan L. Lovejoy | Sajith Pillai
Dana Schultz | Harold Alan Pincus

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This report provides a detailed account of the Allegheny County Maternal Depression Initiative, conducted by the Allegheny County Maternal and Child Health Care Collaborative between January 1, 2007, and June 30, 2010. The RAND–University of Pittsburgh Health Institute (RUPHI) convened the collaborative in January 2002 with support from The Heinz Endowments. Its mission is to build a model system of care for mothers and young children in Allegheny County, Pennsylvania. The Allegheny County Maternal Depression Initiative represents the third phase of the collaborative’s work. The initiative was supported by a consortium of local funders and the Pennsylvania Department of Public Welfare.

With leadership from the University of Pittsburgh Medical Center (UPMC) Health Plan and the Allegheny County Department of Human Services, Office of Behavioral Health, initiative partners sought to improve the capacity of local systems of care for identifying women at high risk for maternal depression, enhancing their access to available resources and services, and engaging them in behavioral health treatment as needed and appropriate. The RUPHI project team, under contract with UPMC for You, was responsible for working with collaborative members to design, implement, and evaluate the initiative. The recommendations were developed by the RUPHI team with input from a subset of collaborative leaders and initiative partners.

The information presented in this report should prove useful to a wide range of stakeholders interested in mobilizing their communities to improve health care service delivery and outcomes, especially among traditionally underserved populations. The results and lessons learned will be especially relevant for communities in which maternal depression has been identified as a high-priority public health issue. Although the work of the collaborative was focused on improving practice and policy related to maternal depression within the Medicaid system in Allegheny County and, by extension, the broader Pennsylvania Medicaid managed care system, the overall approach could be extended to other populations and communities in the commonwealth and beyond.

Questions and comments about this report are welcome and should be addressed to the RUPHI project director:
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Summary

Maternal depression is a widespread public health issue that takes a toll on the well-being and livelihood of mothers and their families. It demands a strong community response involving people who share a common vision to strengthen the health and resilience of all mothers and their families in need of help and support.
—Mental Health America and National Center for Children in Poverty (2008)

Between January 2007 and June 2010, members of the Allegheny County Maternal and Child Health Care Collaborative—a broad-based community coalition that has been operating in Allegheny County, Pennsylvania, since 2002—designed, implemented, and evaluated the Allegheny County Maternal Depression Initiative. The initiative is a local systems-change effort focused on increasing identification, referrals, and engagement in treatment as needed and appropriate for women at high risk for maternal depression. This report describes how and why the initiative was created, the processes through which it was implemented and evaluated, and the results and lessons learned. It concludes with recommendations for practice and policy change designed to expand and sustain the initiative’s achievements.

The Problem

Documented high rates of prevalence, especially among low-income populations, combined with significant adverse consequences for both mother and child, make maternal depression the number one complication of childbirth in the United States. Empirical research has demonstrated that interventions for depression are effective for both the general population and ethnically diverse and impoverished groups (Miranda et al., 2003). Nevertheless, for many reasons, women with maternal depression are not identified, and, even when they are identified, they are not effectively engaged in treatment (Swartz et al., 2005).
Barriers to identifying and treating women with maternal depression exist in numerous forms and on many different levels, as documented in the literature and through the collaborative’s work, including the following:

- Many physicians do not routinely screen for maternal depression using a validated instrument.
- Capacity for appropriately triaging, referring, and treating women at high risk for maternal depression is limited in many physical health care settings.
- Existing gaps between the physical and behavioral health care systems make care coordination difficult.
- Consumer access is impeded by cultural, perceptual, and real-life issues and stressors that are not easily resolved.
- Available treatment protocols might not meet the needs and preferences of pregnant or postpartum women.

Aims and Focus of the Initiative

Since low-income women are at higher risk for maternal depression than other women (Lanzi et al., 1999; Miranda and Green, 1999; Onunaku, 2005; Siefert et al., 2000) and less likely to receive adequate care (Agency for Healthcare Research and Quality, 2004; Skaer et al., 2000; Wang, Berglund, and Kessler, 2000; Young et al., 2001; Vesga-López et al., 2008), the collaborative chose to focus its systems-change efforts on improving service delivery for maternal depression within the local Medicaid system. The initiative had three aims:

- to improve the identification of maternal depression among Medicaid-eligible pregnant and postpartum women in Allegheny County
- to enhance access to available resources and services for women who screen positive for maternal depression
- to increase engagement in behavioral health treatment as needed and appropriate.

To this end, three components of service delivery were targeted for improvement at the systems level: screening, referral, and engagement in treatment.

The Conceptual Model of Systems Change

Figure S.1 presents the initiative’s conceptual model of systems change (adapted from Pincus, Pechura, Elinson, et al., 2001; Pincus, 2003; Pincus, Hough, et al., 2003; Pincus, Houtsinger, et al., 2005; Pincus, Pechura, Keyser, et al., 2006). This model recognizes that consumers and families are at the center of the process, signifying
the intent of the local Medicaid managed care system to create a “safety net” around women at high risk for maternal depression. It further acknowledges the roles of key stakeholder groups in driving and sustaining practice and policy improvements. Strengthening linkages between these groups is essential for achieving the initiative’s aims and, in so doing, ensuring that the system better meets the needs and preferences of women at high risk for maternal depression.

**Operational Framework of the Initiative**

The collaborative developed a protocol for the initiative that delineated the roles and responsibilities of key stakeholder groups in accordance with best-practice standards, the capacities and stated preferences of individual participating practices, and network provider requirements as set forth in the state contract for Medicaid managed care services. Table S.1 provides a brief description of these roles and responsibilities for key partners in each stakeholder group.

The protocol was implemented in two phases:

- Phase 1 implementation (December 2007–December 2008) focused on implementing and tracking the screening and referral components of the initiative protocol.
Table S.1
Initiative Partners and Their Roles and Responsibilities, by Key Stakeholder Group

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Description</th>
<th>Roles and Responsibilities</th>
</tr>
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<tbody>
<tr>
<td>Medicaid-eligible consumers and families</td>
<td>Pregnant women or mothers with children under age 1 in Allegheny County presenting for care at a physical health practice participating in the initiative</td>
<td>The initiative’s target population and critical source of information on the needs and preferences of Medicaid-eligible women in Allegheny County</td>
</tr>
<tr>
<td>Physical health practices and providers in the HealthChoices network&lt;sup&gt;a&lt;/sup&gt;</td>
<td>10 pediatrics, obstetrics and gynecology, and family medicine sites and their affiliated providers</td>
<td>Systematically screen target population for maternal depression using a validated screening tool; enhance access to available supports and services via referral; support the initiative’s data-collection efforts</td>
</tr>
<tr>
<td>HealthChoices physical health MCOs</td>
<td>UPMC for You, Gateway Health Plan, Unison Health Plan, and their affiliated leaders and care management staff</td>
<td>Respond to referrals for members who screened positive for maternal depression; connect to behavioral health services as appropriate; serve as the system’s “safety net” for the target population; support the initiative’s data-collection efforts</td>
</tr>
<tr>
<td>Behavioral health practices and providers in the HealthChoices network</td>
<td>A range of practices offering behavioral health treatment for maternal depression and their affiliated providers</td>
<td>Provide evidence-based treatments that meet consumers’ needs and preferences</td>
</tr>
<tr>
<td>HealthChoices behavioral health MCO</td>
<td>Community Care and its affiliated leaders and care management staff</td>
<td>Work with initiative partners to arrange behavioral health treatment as needed and appropriate; support the initiative’s data-collection efforts</td>
</tr>
<tr>
<td>State and local purchasers and policymakers</td>
<td>Pennsylvania Department of Public Welfare, Allegheny County Department of Human Services, Pennsylvania Department of Health; Allegheny County Health Department; and their affiliated leaders and staff</td>
<td>Establish guidelines and standards, performance measures, review processes, and related strategies for ensuring that state contractual requirements are appropriate for meeting the needs of pregnant and postpartum women served through the HealthChoices program; support related data-collection efforts as needed</td>
</tr>
<tr>
<td>Other organizations in the community</td>
<td>Local funders, RUPHI, home-based service providers</td>
<td>Offer peripheral supports to ensure sustainable systems change</td>
</tr>
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NOTE: Community Care = Community Care Behavioral Health Organization.

<sup>a</sup> HealthChoices manages Medical Assistance (Medicaid) in Allegheny County.
• Phase 2 implementation (January 2009–February 2010) incorporated efforts to design and test various strategies for increasing referrals of women who screened positive for maternal depression to local physical health managed care organization (MCO) care managers for needed supports and services and enhancing their engagement in behavioral health treatment as needed and appropriate.

Over the course of the initiative, the collaborative also designed and carried out a range of strategies to support the implementation of the protocol and to ensure the overall success of the systems-change process. These strategies, which involved all stakeholder groups, are summarized in Table S.2 by phase of implementation. Based on the results of the phase 1 implementation, the collaborative modified and added components during phase 2.

**Initiative Evaluation Plan**

The collaborative designed a mixed-methods approach, using both qualitative and quantitative data, to evaluate the initiative. The evaluation indicators and data-collection instruments and data sources can be organized into two broad categories: organizational indicators and data-collection instruments and clinical indicators and data sources. The organizational indicators captured key features of systems change related to consumer and provider attitudes and behaviors; the clinical indicators captured key features of systems change related to care processes aligned with the initiative’s three aims. Figure S.2 illustrates how the data-collection tools and data sources align with the progression of a pregnant or postpartum woman through the processes of screening, referral, and engagement in treatment.

**Results of the Initiative**

Although it is not possible to disentangle specific cause-effect relationships among the strategies that were implemented as part of the initiative and the outcomes that were achieved, the results clearly show that, taken as a whole, the collaborative was successful in improving key organizational and clinical processes related to the achievement of its three aims, particularly as compared to reference points cited in the literature related to maternal depression screening, referral, and engagement in treatment for pregnant and postpartum women (Figure S.3).

**Aim 1: To improve the identification of maternal depression among Medicaid-eligible pregnant and postpartum women in Allegheny County.** Between December 2007 and December 2009, physical health providers participating in the initiative completed more than 8,500 screens on pregnant and postpartum women. Although the over-
all screening rate declined somewhat from phase 1 to phase 2, the overall 54-percent screening rate across all practices represents a significant accomplishment. The vast majority (86 percent) of participating physical health providers reported that they often, almost always, or always screened for maternal depression at a woman's first prenatal care or postpartum visit using a validated screening tool. Nonetheless, increasing the screening rate represents a clear target for continued quality improvement.

**Aim 2: To enhance access to available resources and services for women who screen positive for maternal depression.** Among the nearly 1,200 women identified as high risk by a positive screen, 57 percent were referred by the provider to their physical health...
MCO care managers. Overall, the referral rate improved from 47 percent in phase 1 to 65 percent in phase 2. Participating physical health providers also reported an increase in the frequency with which they referred women who screened positive to physical health MCO care managers. Overall, MCO care managers were able to reach just over half (53 percent) of their high-risk members. Improving this rate of contact and decreasing the average time between referral and first contact remain critical goals for the physical health MCO care managers.

**Aim 3:** To increase engagement in behavioral health treatment as needed and appropriate. Nearly one-half (46 percent) of the high-risk women referred had engaged in behavioral health treatment at some point. While some of these women engaged in
behavioral health treatment prior to the referral, 35 percent of referred women engaged in behavioral health treatment after being identified as being at high risk for maternal depression, which is considerably higher than the 20-percent engagement rate recently published for a similar population (Miranda et al., 2003). However, more work should be done to increase initial and sustained engagement in behavioral health treatment.

In other areas, the collaborative confronted challenges. For example, over the course of the initiative, it was difficult to ensure consistent and timely communication among those with shared responsibility for high-risk women. While the initiative protocol sought to open communication channels, in practice, the information did not always reach the individuals who needed it. Further, there was a considerable lag between a woman’s identification and referral and her ultimate engagement in behavioral health treatment, representing a target for continued quality improvement over time.

### Figure S.3
**Summary of Initiative Results**

<table>
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<tr>
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<th>Phase 1 results</th>
<th>Phase 2 results</th>
<th>Overall results</th>
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<tr>
<td><strong>Screening</strong></td>
<td></td>
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<tr>
<td>Estimated total number of</td>
<td>NA</td>
<td>6,419</td>
<td>9,272</td>
<td>15,692</td>
</tr>
<tr>
<td>visits at participating</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>physical health practices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screening rate (%)</td>
<td>4–25</td>
<td>59</td>
<td>52</td>
<td>54</td>
</tr>
<tr>
<td>Percentage of positive</td>
<td>13–25</td>
<td>24</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>screens</td>
<td></td>
<td>(n = 3,758)</td>
<td>(n = 4,789)</td>
<td>(n = 8,547)</td>
</tr>
<tr>
<td><strong>Referral</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referral rate among those</td>
<td>50</td>
<td>47</td>
<td>65</td>
<td>57</td>
</tr>
<tr>
<td>who screen positive (%)</td>
<td></td>
<td>(n = 234)</td>
<td>(n = 431)</td>
<td>(n = 665)</td>
</tr>
<tr>
<td><strong>Engagement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of referred</td>
<td>NA</td>
<td>65</td>
<td>43</td>
<td>53</td>
</tr>
<tr>
<td>women contacted by</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>physical health MCO care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engagement rate among</td>
<td>20</td>
<td>51</td>
<td>44</td>
<td>46</td>
</tr>
<tr>
<td>those referred (%)</td>
<td></td>
<td>(n = 72)</td>
<td>(n = 113)</td>
<td>(n = 195)</td>
</tr>
<tr>
<td>Percentage of engaged</td>
<td>NA</td>
<td>60</td>
<td>57</td>
<td>60</td>
</tr>
<tr>
<td>women who have at least 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>behavioral health claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: NA = not available.

**Reference point**

- Overall results
- Reference point
- Phase 1 results
- Phase 2 results

**Phase 2 results**

- Reference point
- Phase 1 results
- Phase 2 results

**Overall results**

- Reference point
- Phase 1 results
- Phase 2 results

RAND MG073-S.3
Top Ten Lessons Learned

In order to identify and prioritize the most important lessons learned through this initiative, the RUPHI team compared the results of the stakeholder group discussions held at the end of the initiative with quantitative and qualitative results that were collected over the course of the initiative. The resulting ten lessons listed here are described in more detail in Chapter Four.

1. There is no such thing as too much education or training on issues related to maternal depression, but training is not enough.
2. Numerous factors influence the needs and preferences of women who are at high risk for maternal depression.
3. Families’ negative views of or disappointing previous experiences with mental health services or referrals are pervasive and strong.
4. Physical health practices can integrate routine screening for maternal depression into the clinical care process.
5. Referrals within and across systems are difficult to execute.
6. The more links in the chain from screening to referral to engagement in treatment, the more likely the chain is to break, but shortening the chain is not a guaranteed solution.
7. Co-location can work if co-located providers are truly integrated into the care team.
8. Diffusion of responsibility in complex systems might not be completely avoidable, but it is remediable.
9. Effective health care requires transparency and sharing of information among providers and patients.
10. Clear expectations, performance measurement, agreed-upon quality standards, and mechanisms for accountability are key drivers of systems improvement.

Recommendations for Policy and Practice Change

Given the long-term, significant impact that maternal depression can have on maternal, child, and family health, the priority the state has placed on bridging existing gaps between physical and behavioral health care in the Medicaid system, and the obvious need for continued improvement related to maternal depression screening, referral, and engagement in treatment, the RUPHI team offers four sets of practice and policy recommendations for key stakeholder groups. These recommendations are provided in detail in Tables S.3–S.6.
## Table S.3
**Recommendations to Improve Identification of Maternal Depression**

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| **Pennsylvania General Assembly** | Universal screening is the first step in a comprehensive state strategy designed to ensure that more women with maternal depression receive services as needed and appropriate. However, nothing more than additional screening will be accomplished without adequate capacity and explicit processes for referring women who screen positive for maternal depression to an array of accessible, effective, and culturally informed services that meet their needs and preferences. In this context, we recommend the following:  
A. Mandate universal screening for maternal depression irrespective of insurance coverage.  
B. Legislation mandating universal screening should also ensure that (1) the Department of Public Welfare and the Department of Insurance develop adequate capacity for timely referrals and treatment of publicly and privately insured pregnant and postpartum women who screen positive for maternal depression and (2) the Department of Public Welfare and the Department of Insurance, along with the Department of Health, are involved in adopting and promulgating rules and regulations necessary to carry out the purposes and provisions of this legislation. |
| **HealthChoices physical health MCOs** | A. Establish maternal depression screening requirements for network providers who serve pregnant and postpartum women. These requirements should be consistent with evidence-based screening practices and professional organization standards and specify (1) validated screening tools acceptable for use, (2) appropriate screening intervals, (3) a common threshold for identifying probable maternal depression.  
B. Revise existing perinatal depression measures or create new measures that align with evidence-based practices and standards for maternal depression screening.  
C. Set explicit targets for improving the rate of maternal depression screening across network providers who serve pregnant and postpartum women.  
D. Establish reporting, monitoring, and feedback systems to assess and improve the maternal depression screening performance of network providers.  
E. Develop, implement, and evaluate various strategies to support network providers in meeting and exceeding their performance goals. |
| **Physical health practices and providers in the HealthChoices network** | A. Accelerate efforts to screen all pregnant and postpartum women with an acceptable validated screening tool, at the appropriate intervals, and using a common threshold for identifying probable maternal depression.  
B. To the extent possible, incorporate an acceptable, validated maternal depression screening tool into the practice’s electronic medical record. |

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* The Pennsylvania Department of Insurance is responsible for administering the laws of the commonwealth as they pertain to the regulation of the insurance industry, in order to protect the insurance consumer.
Recommendations to Enhance Access to Available Resources and Services for Women Who Screen Positive for Maternal Depression

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| Pennsylvania Department of Public Welfare, Office of Medical Assistance Programs and Office of Mental Health and Substance Abuse Services | The HealthChoices agreement has extensive requirements for written agreements and protocols related to access and coordination among physical and behavioral health MCOs and providers (see Text Box 2.1 in Chapter Two). These requirements are intended to maximize outreach efforts to members identified as needing services and to facilitate referrals and continuity of care as needed. The Department of Public Welfare regularly reviews these agreements and protocols. However, significant challenges remain with regard to ensuring successful outreach to members with maternal depression and their subsequent access to needed services. In this context, we recommend the following:  
A. Review and revise the current requirements in order to ensure their appropriateness for meeting the outreach and access needs of pregnant and postpartum members who screen positive for maternal depression.  
B. More explicitly delineate the roles and responsibilities of MCOs and network providers for implementing the revised requirements.  
C. Strengthen the current review process by establishing performance measures to properly assess the extent to which contractual requirements lead to (1) successful outreach to pregnant and postpartum members who screen positive for maternal depression and (2) improved service access as needed by these members.  
D. Develop, implement, and evaluate various strategies to support MCOs in meeting the contractual requirements.  

| HealthChoices physical and behavioral health MCOs | A. Establish explicit collaborative procedures involving MCO care management staff and network providers for making, receiving, and handling referrals of pregnant and postpartum members who screen positive for maternal depression. These procedures should include (1) an appropriately safeguarded electronic means for sharing necessary patient information among all relevant parties; (2) effective strategies for connecting with members, assessing their needs and health status, and responding appropriately; and (3) provision of timely feedback to referring providers on patient status and relevant outcomes.  
B. Revise existing perinatal depression measures or create new measures that align with the established referral procedures.  
C. Set explicit targets for increasing referrals of pregnant and postpartum members who screen positive for maternal depression to MCO care managers or behavioral health or other service providers as appropriate, and improving the process through which these referrals are handled.  
D. Establish reporting, monitoring, and feedback systems to assess and improve the referral performance of network providers and MCO care management staff. Incorporate measures of provider, MCO care management, and member satisfaction in the ongoing review process.  
E. Develop, implement, and evaluate various strategies to support network providers and MCO care management staff in meeting and exceeding their performance goals.  
F. Review member incentive and reward programs for opportunities to further encourage pregnant and postpartum women who screen positive for maternal depression to connect with their MCO care managers on a regular basis.  

| HealthChoices physical health MCOs | Revise the ONAF to include the EPDS or other acceptable depression screening score for all pregnant women. |
### Table S.4—Continued

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HealthChoices behavioral health MCOs</td>
<td>Evaluate the benefits of placing a behavioral health care manager in large-volume physical health practices. Develop a detailed plan for (1) integrating the individual or function into the practice's work flow and providing access to relevant information systems; (2) fully utilizing motivational interview techniques and patient-centered principles, with a strong focus on addressing the member's tangible social support needs (e.g., transportation, childcare); (3) assessing patient and family outcomes for engagement in behavioral health services or appropriate alternatives. To enable physical health providers to become sufficiently familiar with the access requirements and range of services and providers available through the behavioral health network, allow the co-location strategy to achieve its maximum level of implementation (at least one year) before making a final assessment of its value and sustainability (see discussion of co-location pilot results in Chapter Four).</td>
</tr>
<tr>
<td>Physical health practices and providers in the HealthChoices network</td>
<td>Accelerate efforts to refer pregnant and postpartum women who screen positive for maternal depression to physical and behavioral health MCOs, behavioral health providers, or community resources and services (e.g., home-based service programs) as needed and appropriate.</td>
</tr>
</tbody>
</table>

NOTE: ONAF = obstetrical needs assessment form.
The HealthChoices Agreement has extensive requirements for written agreements and protocols related to access and coordination among physical and behavioral health MCOs and providers (see Text Box 2.1 in Chapter Two). These requirements are intended to facilitate members’ access to diagnostic assessment and treatment, prescribing practices, and other treatment issues necessary for optimal health. The Department of Public Welfare regularly reviews these agreements and protocols. However, significant challenges remain with regard to engaging members with maternal depression in behavioral health treatment as needed and appropriate. In this context, we recommend the following:

A. Review and revise the current requirements in order to ensure their appropriateness for meeting the treatment engagement needs of pregnant and postpartum women who screen positive for maternal depression.

B. More explicitly delineate the roles and responsibilities of MCOs and network providers for implementing the revised requirements.

C. Strengthen the current review process by establishing performance measures to properly assess the extent to which the contractual requirements lead to engagement of members with maternal depression in behavioral health treatment.

D. Develop, implement, and evaluate various strategies to support MCOs in meeting the contractual requirements.

A. Establish explicit collaborative procedures involving MCO care management staff and network providers for facilitating engagement in behavioral health treatment among pregnant and postpartum members who screen positive for maternal depression. These procedures should include (1) an appropriately safeguarded electronic means for sharing necessary patient information among all relevant parties; (2) effective strategies for connecting with members, assessing their needs and health status, and responding appropriately; and (3) provision of timely feedback to referring providers on patient status and relevant outcomes.

B. Revise existing perinatal depression measures or create new measures that align with the established engagement procedures.

C. Set explicit targets for increasing engagement in behavioral health treatment for pregnant and postpartum members who screen positive for maternal depression.

D. Establish reporting, monitoring, and feedback systems to assess and improve the performance of network providers and MCO care management staff specific to engaging members who screen positive for maternal depression in behavioral health care. Incorporate measures of provider, MCO care management, and member satisfaction in the ongoing review process.

E. Develop, implement, and evaluate various strategies to support network providers and MCO care management staff in meeting and exceeding their performance goals.

F. Review member incentive and reward programs for opportunities to further encourage pregnant and postpartum women who screen positive for maternal depression to engage in behavioral health treatment as needed and appropriate.

G. In cases in which pregnant or postpartum women who screen positive for maternal depression will not accept a referral for outpatient mental health treatment, utilize and assess the cost-effectiveness of engaging them in home-based service programs or other nonmedical community programs.
Table 5.5—Continued

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HealthChoices behavioral health MCOs</td>
<td>The combined negative impact of the attributions of illness, difficult life circumstances (e.g., poverty), demands of infant caretaking, and unfavorable perceptions or past experiences with the behavioral health system too often impedes access to treatment for women with maternal depression. Overcoming these barriers would lead to maternal recovery and healthy early child development. In this context, it is critical to ensure adequate, sufficiently skilled psychiatric capacity to meet HealthChoices’ access standards and the treatment needs of pregnant and postpartum members with depression. Strategies to consider include the following: A. As rates of maternal depression screening increase, retest the utility and cost-effectiveness of a statewide telephone consultation service operated by psychiatrists to support providers (e.g., family medicine and other primary care practitioners) on issues related to diagnoses, treatment options, medications, or alternative therapies for pregnant and postpartum members who screen positive for maternal depression. B. Test the effectiveness and long-term viability of telephone or in-home mobile psychotherapy for pregnant and postpartum members who screen positive for maternal depression, as well as more innovative approaches, such as offering web-based cognitive behavioral therapy in multiple, family-friendly settings. C. Evaluate the benefits of placing a behavioral health specialist in large-volume physical health practices. Develop a detailed plan for (1) integrating the individual or function into the practice’s clinical work flow and providing access to relevant information systems; (2) fully utilizing motivational interview techniques and patient-centered principles; and (3) assessing patient and family health outcomes and satisfaction. Allow the co-location strategy to achieve its maximum level of implementation (at least one year) before making a final assessment of its value and sustainability (see discussion of co-location pilot results in Chapter Four). D. Develop mechanisms for obtaining input from pregnant and postpartum members who screen positive for maternal depression on alternative service options that meet their needs and preferences.</td>
</tr>
<tr>
<td>Behavioral health practices and providers in the HealthChoices network</td>
<td>Explore opportunities to co-locate behavioral health specialists at nearby physical health practices that currently do not have in-house behavioral health capacity. Develop a detailed plan for (1) integrating the individual or function into the practice’s clinical work flow and providing access to relevant information systems; (2) fully utilizing motivational interview techniques and patient-centered principles; and (3) assessing patient and family health and satisfaction. Allow the co-location strategy to achieve its maximum level of implementation (at least one year) before making a final assessment of its value and sustainability (see discussion of co-location pilot results in Chapter Four).</td>
</tr>
</tbody>
</table>
Table 5.6
Recommendations to Improve Overall Systems Performance in Relation to Maternal Depression Screening, Referral, and Engagement in Treatment

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania Department of Public Welfare, Office of Mental Health and Substance Abuse Services</td>
<td>Effective screening, referral, and treatment engagement enhances the quality of life and functioning of women with maternal depression and reduces a risk factor that can negatively affect a young child’s development. These outcomes support the department’s goals of enhancing the development of young children and increasing opportunities for persons dependent on Medicaid to obtain employment. In this context, it is critical to establish maternal depression as a priority in the public mental health system.</td>
</tr>
</tbody>
</table>
| Pennsylvania Department of Public Welfare, Office of Medical Assistance Programs and Office of Mental Health and Substance Abuse Services | A. Accelerate collaborative interdepartmental efforts to encourage the development and proliferation of interoperable electronic health records for improving data sharing and integration and coordination of care throughout the commonwealth.  
B. Enlist MCOs in a coordinated effort to develop common standards, metrics, and incentives for enhancing network providers’ use of health information technology options that support integrated care.  
C. Charge the physical and behavioral health care coordination groups within each HealthChoices zone to develop collaborative strategies for (1) increasing rates of maternal depression screening and (2) improving referral and treatment engagement rates of pregnant and postpartum members who screen positive for maternal depression. |
| HealthChoices physical and behavioral health MCOs | A. Work together with providers, consumers, and families to develop information-sharing agreements as needed for ensuring full knowledge of issues that affect a woman’s physical and behavioral health or the health of the mother and the child. Specific efforts should be made to develop a standard release-of-information form for use by MCOs and network providers serving similar patient populations.  
B. Create regular opportunities (e.g., in-person workgroups, teleconferences, webinars) for care managers and physical and behavioral health providers to review shared cases of success and failure related to serving pregnant and postpartum women who screen positive for maternal depression. |
| Physical and behavioral health practices and providers in the HealthChoices network | A. Identify appropriate health information technology options that support integrated care and funding opportunities or reduced cost programs for developing them.  
B. Continue to track progress on screening, referral, and engagement in treatment for women at high risk for maternal depression and develop and implement internal quality-improvement programs as needed.  
C. Advance efforts to network with other area providers who are treating pregnant and postpartum women who screen positive for maternal depression to share resources, experiences, and learning. |
Next Steps for the Collaborative

The collaborative has recently embarked on an expansion of the Allegheny County Maternal Depression Initiative, which serves as one concrete next step toward systems integration and holistic interventions for parents and children. The collaborative’s new initiative—Helping Families Raise Healthy Children—advances the work of the collaborative in three ways. First, it builds important linkages with an additional sector that provides services to families with children ages 0 to 3 in Allegheny County—namely, the early-intervention system. Second, it expands maternal depression screening to all primary caregivers with young children who enter the early-intervention system because of developmental concerns related to medical or environmental risks (e.g., very low birth weight, elevated blood lead levels). Third, it seeks to address primary-caregiver depression and the related challenges of healthy early childhood development through home-based, family-centered interventions designed to strengthen parenting and the parent-child relationship.

The Allegheny County Maternal and Child Health Care Collaborative has made a long-term commitment to building a model system of care for parents and young children in the community. While we at the collaborative have made significant progress during the past eight years, there is still much work to be done. We hope that this report will inspire others to mobilize forces in their communities and beyond to strengthen the systems responsible for ensuring the health and well-being of all families across the commonwealth.

Depression is real after childbirth—for both mothers and fathers. It is the people who touch the lives of new parents that can make a difference in a family’s life. It is the people that we trust that can make us feel safe enough to talk about the unhappy feelings that sometimes occur after a new baby comes into our life. . . . This project can make a difference . . . for the health of our future—our families.

—mother, Allegheny County, Pennsylvania
The RUPHI project team, on behalf of the Allegheny County Maternal and Child Health Care Collaborative, extends its sincerest gratitude to UPMC Health Plan and the Allegheny County Department of Human Services, Office of Behavioral Health. Without the leadership and support of these two organizations, the work of the initiative would not have been possible. In particular, we owe a very special thanks to the visionary leaders of the initiative, John Lovelace, president, UPMC for You, and chief program officer, Community Care, and Patricia L. Valentine, deputy director, Allegheny County Department of Human Services, Office of Behavioral Health.

We further acknowledge with gratitude the many individuals and organizations that participated in the Allegheny County Maternal Depression Initiative, and the local and state funders that supported our work. These organizations, and the leadership teams within them, are listed in Appendix A. We recognize and thank our funders in particular. These include UPMC Health Plan, Highmark Foundation, Staunton Farm Foundation, FISA Foundation, the Eden Hall Foundation, and the Pennsylvania Department of Public Welfare.

For their important contributions to this report, we thank Kristin Leuschner and Kathryn Giglio, communications analysts from RAND, and peer reviewers Helen Cahalane of the University of Pittsburgh and Melony Sorbero of RAND.

Finally, and perhaps most importantly, we thank all of the unnamed families in Allegheny County who have worked with the collaborative over the years to build a model system of care that will better serve mothers and young children in our community.
Abbreviations

ANOVA  analysis of variance
CHP   Children’s Hospital of Pittsburgh, Primary Care Center
CME   continuing medical education
CPT*  Current Procedural Terminology
DBT   dialectical behavior therapy
EPDS  Edinburgh Postnatal Depression Scale
FPL   federal poverty level
HFS   Illinois Department of Healthcare and Family Services
IMPLICIT Interventions to Minimize Preterm and Low Birth Weight Infants Through Continuous Improvement Techniques
IPRO  Improving Healthcare for the Common Good
MCO   managed care organization
OB/GYN obstetrician/gynecologist
ONAF  obstetrical needs assessment form
PHQ-2 Patient Health Questionnaire 2
PPP   Pennsylvania Perinatal Partnership
PRAMS Pregnancy Risk Assessment Monitoring System
RUPHI RAND–University of Pittsburgh Health Institute
UPMC  University of Pittsburgh Medical Center
CHAPTER ONE

Introduction

Between January 2007 and June 2010, a group of local stakeholders sought to change the way local systems of care work so that more women at high risk for maternal depression can be identified, supported, and treated as needed and appropriate. This systems-change effort—called the Allegheny County Maternal Depression Initiative—was conducted under the auspices of the Allegheny County Maternal and Child Health Care Collaborative, a broad-based community coalition that has been operating in Allegheny County, Pennsylvania, since January 2002. In this report, we provide a detailed account of the initiative, including how and why it was created, the processes through which it was implemented and evaluated, and the results and lessons learned. The report concludes with recommendations for practice and policy change designed to expand and sustain the initiative’s achievements.

We begin this chapter by explaining the impetus behind the organization of the collaborative and how its early work shaped the design and implementation of the initiative. Next, we provide an overview of the national context within which the initiative was developed, describe the emergence of maternal depression as a public health priority, and delineate the scope and context of the problem in Allegheny County. We then outline the parameters of the initiative in broad terms, including its aims and focus, the roles and responsibilities of key stakeholder groups, the protocol and strategies, and the time frame and implementation phases. We conclude with an outline of the remainder of this report.

Impetus Behind the Organization of the Allegheny County Maternal and Child Health Care Collaborative

Allegheny County and the Maternal and Child Health Care Challenge

Allegheny County, in which the city of Pittsburgh is located, is a community rich in health care resources. There are many excellent hospitals and an academic medical center, numerous health clinics and programs in low-income communities, and local foundations that actively support efforts to improve health care delivery and outcomes, especially for families living in traditionally underserved communities. Nevertheless,
in several key areas of health care, mothers and young children are not receiving the health care services they need, and the result is premature illness and death.

In 2000, 1,159 (8.1 percent) of the 14,249 newborns in Allegheny County were born at low birth weights; 257 (1.8 percent) were born at very low birth weight; and more than 100 infants died (Allegheny County Health Department, 2000). Additional investigations by the Allegheny County Health Department on fetal and infant deaths identified the gap separating fetal-infant mortality rates for whites and African Americans as an area of particular concern (University of Pittsburgh, Office of Child Development, 2003). For example, data gathered on the 347 fetal-infant deaths in the county from 1998 to 2000 show that the overall fetal-infant death rate for African Americans—15.2 deaths per 1,000 fetal deaths and live births—is more than twice that of whites. Regardless of race, the greatest risk period is the maternal health and prematurity period—fetal and infant death at less than 1,500 grams (3 lbs., 5 oz.) or very low birth weight. Half of the 124 African American infant deaths occurred during this period, as did about 35 percent of the 215 white infant deaths. The second-highest number of infant deaths occurred during the maternal care period—infant deaths at 1,500 grams or more. About 30 percent of white infant deaths occurred during that period, compared to 16 percent of African American infant deaths. Faced with this evidence of poor health outcomes and racial disparities, as well as the well-documented negative lifelong consequences and high costs associated with low birth weight and lack of prenatal care (Institute of Medicine, 2007), stakeholders in Allegheny County agreed that the local system of maternal and child health care was less than ideal in many respects and that it could be improved.

Organization and Goals of the Allegheny County Maternal and Child Health Care Collaborative

[T]he reform of our health care system should be undertaken in the same spirit of continuous improvement and renewal that has so often been the keystone of success in America. The profound changes required for effective reform, even when the nation builds on the existing strengths of its health care system, demand that we learn from experience. To do that we need good information and sound analyses of results, flexibility and creativity in responding to that information, and an abiding focus on the concerns of the people whose health and well-being we seek to improve.

—Institute of Medicine (1993)

Recognizing the important role that community coalitions can play in the health-system reform process (Institute of Medicine, 2001; Adams, Greiner, and Corrigan, 2004; Gostin, Boufford, and Martinez, 2004), in January 2002, The Heinz Endowments, a large Pittsburgh foundation, commissioned the RAND–University of Pittsburgh Health Institute (RUPHI) to organize the Allegheny County Maternal and
In partnership with the Allegheny County Department of Health and the Allegheny County Department of Human Services, a RUPHI project team brought together all key systems partners in a collaborative effort to build a model system of care for mothers and young children in the region. Drawing on the basic tenets of systems change put forth by the Institute of Medicine (Institute of Medicine, 2001, 2006) and adapted in related evidence-based efforts to improve systems performance (Wagner, 1998; Wagner et al., 2001), the collaborative embarked on an ongoing process of inquiry, experimentation, and learning, at all times focused on the concerns of the families whose health and well-being it sought to improve.

Impact of the Collaborative’s Early Work on the Design and Implementation of the Allegheny County Maternal Depression Initiative

In the first two years following the establishment of the collaborative, all systems partners, including consumers and families, practices and providers, health plans, local and state purchasers and policymakers, and the community, engaged in a systematic planning process designed to translate the collaborative’s vision of an ideal maternal and child health care system (Text Box 1.1) into a focused strategy and action plan for improvement. Attention was paid to both the practice and policy components of systems change. The collaborative identified four priority areas for improvement and two domains of best practice to be adapted and implemented in the community (Table 1.1). Research was conducted to understand and overcome existing barriers to the adoption of these best practices in relation to the targeted areas for improvement. The results of these efforts are documented in a previous RAND monograph titled Improving Maternal and Child Health Care: A Blueprint for Community Action in the Pittsburgh Region (Pincus, Thomas, Keyser, et al., 2005) and will appear in a forthcoming article by Keyser and others (Keyser, Pincus, et al., in press).

Using the blueprint as a guide, the collaborative designed a one-year pilot study to test whether several small-scale versions of its proposed evidence-based practice approach to systems improvement would be realistic and workable in local community settings, and to determine the specific types of policy and health systems changes that would be required to enhance and sustain these efforts. The pilot, carried out between October 2004 and September 2005, involved three community-based improvement teams

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1 In this report, the term practice can signify either a group of providers working in a specific health care setting or a provider intervention, such as an evidence-based practice.
focused on three of the collaborative’s priority areas for improvement (i.e., prenatal care, maternal depression, and childhood obesity).

The results of these efforts are documented in a 2006 RAND report titled *Building a Model Maternal and Child Health Care System in the Pittsburgh Region: A Community-Based Quality Improvement Effort* (Allegheny County Maternal and Child Health Care Collaborative, 2006) and will appear in a related forthcoming article this year (Allegheny County Maternal and Child Health Care Collaborative, in press). Results varied across measures and teams, but, in general, the gap between local physical and behavioral health care systems emerged as a sentinel issue underlying many of the ongoing maternal and child health care challenges. This finding highlighted the need for continued efforts to coordinate and integrate care, particularly in the context of high-priority areas, such as maternal depression, that cross-cut both the behavioral and physical health systems of care.
National Context for the Allegheny County Maternal Depression Initiative

Health care for general, mental, and substance-use problems and illnesses must be delivered with an understanding of the inherent interactions between the mind/brain and the rest of the body. . . . The aims, rules, and strategies for redesign set forth in Crossing the Quality Chasm should be applied throughout mental/substance-use health care or a day-to-day operational basis but tailored to reflect the characteristics that distinguish care for these problems and illnesses from general health care.

—Institute of Medicine (2006)

Heightened National Awareness of the Importance of Mental Health and Its Connection to Physical Health

In 1999, the first ever U.S. Surgeon General’s report on mental health shattered the national silence around the nation’s persistent failure to acknowledge, prevent, and treat serious mental health conditions (U.S. Public Health Service, 1999). As the report explained, even though a range of effective, well-documented treatments exist for most mental disorders, nearly half of all Americans who have a severe mental illness fail to receive treatment. The report also called attention to the important connection between mental health and physical health, barriers to receiving mental health treatment, and the specific mental health issues of children, adults, and the elderly.

In the decade since, national awareness of the importance of mental health to an individual’s overall health and well-being has grown significantly. Mental health is now generally recognized as more than the absence of mental disorders; it is “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (World Health Organization, 2007).

Increased Efforts to Integrate Physical and Behavioral Health Care

Along with these changes in awareness and thinking has come an increased recognition of the numerous problems that are created when a health care system identifies and treats physical and mental and behavioral health conditions as if they are separate from each other. Not surprisingly, greater integration across the physical and behav-

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2 In this report, we use the terms physical health instead of general health and behavioral health instead of mental health because the practices and plans involved in the initiative commonly identify themselves as being part of the physical health system or the behavioral health system. In other contexts, physical health and general health are used interchangeably to describe general medical conditions. Mental health is typically used in reference to specific mental disorders, while behavioral health encompasses mental disorders, substance-use conditions, and a broad range of psychosocial problems, as well as behavioral aspects of general medical conditions.
ioral health care systems has become a centerpiece of the Institute of Medicine’s strategy for improving the quality of health care (Institute of Medicine, 2006; Keyser, Houtsinger, et al., 2008) and a focus of numerous influential reports and studies on improving health care delivery and outcomes, particularly for persons with chronic illnesses or disabilities and those living in poverty (President’s New Freedom Commission on Mental Health, 2003; Bazelon Center for Mental Health Law, 2004; Drake et al., 2001).

The potential of integration to improve the quality of care and to slow cost increases has been demonstrated in Medicare populations (De Lew and Weinick, 2000), in primary care settings (Katon et al., 2001), and among persons with severe and persistent mental illness (Greenberg and Rosenheck, 2003). Integration might also offer an important opportunity to address issues of underutilization, overutilization, and inappropriate utilization of services (Ziguras and Stuart, 2000). Financing and policy issues for supporting care integration, as well as the identification and examination of strategies for improving integrated care through financial and other mechanisms, are topics of growing interest in the field (Mauch, Kautz, and Smith, 2008; Mauer, 2006; Bremer et al., 2008; Bachman et al., 2006; Frank, Huskamp, and Pincus, 2003).

Maternal Depression as a Public Health Priority

Maternal depression is a widespread public health issue that takes a toll on the well-being and livelihood of mothers and their families. It demands a strong community response involving people who share a common vision to strengthen the health and resilience of all mothers and their families in need of help and support.

—Mental Health America and National Center for Children in Poverty (2008)

Prevalence and Symptoms of Depression and Maternal Depression

The term mental health refers to a wide array of mental disorders that affect both men and women at different rates. Depression, like many other mental disorders, affects millions of Americans each year. In the United States, researchers estimate that, in any given one-year period, depressive illnesses affect 12 percent of women (more than 12 million women) and nearly 7 percent of men (more than 6 million men) (Narrow, 1998). Common symptoms of depression include prolonged periods of depressed or irritable mood, fatigue, loss of interest in activities, changes in sleep or appetite, feelings of guilt or worthlessness, or thoughts of harming oneself or someone else.

Women in their reproductive period (ages 15 to 45) are twice as likely to suffer from depression as similarly aged men (Kessler, McGonagle, et al., 1994; Gaynes et al., 2005). Point prevalence of depression ranges from 8.5 percent to 11.0 percent at dif-
ferent times during pregnancy and from 6.5 percent to 12.9 percent at different times during the first year postpartum (Gaynes et al., 2005).

Prevalence and Risk Factors of Maternal Depression for Low-Income Populations

Among low-income and other traditionally underserved populations, the estimated prevalence rates for maternal depression are much higher, typically ranging from 25 to 35 percent (Lanzi et al., 1999; Miranda and Green, 1999; Onunaku, 2005; Siefert et al., 2000). Targeted studies of specific populations, such as pregnant and parenting teens, report depressive symptoms in the 40- to 60-percent range (Administration for Children and Families, 2006; Kahn et al., 1999; Siefert et al., 2000). According to a recent analysis of data from the Pregnancy Risk Assessment Monitoring System (PRAMS)3 for 2004–2005, the average prevalence of self-reported postpartum depressive symptoms among women who received Medicaid benefits for their delivery was 21.3 percent (Centers for Disease Control and Prevention, 2008).

These high rates of prevalence among low-income women are linked to their life circumstances, which encompass many of the main risk factors for maternal depression. These risk factors include previous or family history of depression (Robertson et al., 2004); history of alcohol dependence or other substance use (Ross and Dennis, 2009); extreme social stressors and poor marital relationships (Ramchandani et al., 2009); lack of social support or absence of a community network (Ingram and Taylor, 2007; Robertson et al., 2004); childhood trauma and past or current experiences of intimate-partner violence (Knitzer, Theberge, and Johnson, 2008); and unplanned or unwanted pregnancy (O'Hara and Swain, 1996), among others.

Consequences of Maternal Depression

Untreated maternal depression is a significant public health concern because of its potentially serious consequences for a woman’s overall well-being, her functioning as a mother, the family’s functioning, and her child’s development (Onunaku, 2005; Field, 2000). Perinatal depression, in particular, affects children prenatally and after birth (Bonari et al., 2004). Infants born to depressed mothers are at greater risk of being small for gestational age and being born prematurely (U.S. Department of Health

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3 PRAMS is a population-based surveillance project administered by the Centers for Disease Control and Prevention that collects self-reported information on maternal attitudes and experiences before, during, and after delivery of a live infant. For the 2004–2005 survey, response rates were >70 percent in each of the 17 participating states; Pennsylvania did not participate. Two questions on self-reported postpartum depressive symptoms were included in the survey: (1) “Since your new baby was born, how often have you felt down, depressed, or hopeless?” and (2) “Since your new baby was born, how often have you had little interest or little pleasure in doing things?” The response choices were “always,” “often,” “sometimes,” “rarely,” and “never”; women who said “often” or “always” to either question were classified as experiencing self-reported postpartum depressive symptoms. Chi-square tests were used to test for significant differences (p < 0.05) in the proportion of women reporting postpartum depressive symptoms by demographic characteristics and other possible risk factors for postpartum depression symptoms; approximate 95-percent confidence intervals for these proportions were calculated.
and Human Services, Office of Women’s Health, 2009). After birth, a mother’s ability to bond with her child might also be compromised by depression, placing infants at risk for delayed social and emotional development (Diego, Field, and Hernandez-Reif, 2005; Paulson, Dauber, and Leiferman, 2006; Murray and Cooper, 1997).

Children of depressed mothers experience more social and emotional problems than children whose mothers are not depressed (Moore, Cohn, and Campbell, 2001; Whitaker, Orzol, and Kahn, 2006). Delays or impairments in cognitive and linguistic development and social interactions also emerge (Grace, Evindar, and Stewart, 2003; Downey and Coyne, 1990). Children of mothers with continued depression are more likely to develop long-term behavioral problems and are at greater risk of developing psychopathology, including affective (mainly depression), anxiety, and conduct disorders, later in life (Beck, 1999; Weissman et al., 2006). Depressed mothers also generally show less attentiveness and responsiveness to their children’s needs and are less likely to use preventive services (Diego, Field, and Hernandez-Reif, 2005).

Key Systems Challenges Related to Identifying and Treating Maternal Depression
Documented high rates of prevalence, especially among low-income populations, combined with significant adverse consequences for both mother and child, make maternal depression the number one complication of childbirth in the United States. Empirical research has demonstrated that interventions for depression are effective for both the general population and ethnically diverse and impoverished groups (Miranda et al., 2003). Nevertheless, for many reasons, women with maternal depression are not identified, and, even when they are identified, they are not effectively engaged in treatment (Swartz, Shear, et al., 2005).

Maternal Depression Screening. Although systematic screening is now widely recognized as a necessary prerequisite for the early identification of maternal depression, few physicians report using a validated tool at specified intervals to screen for maternal depression. Survey estimates range from 4 percent for pediatricians (Heneghan, Morton, and DeLeone, 2007; Olson et al., 2002), 18 percent for family-medicine physicians (Seehusen et al., 2005), and less than 25 percent for obstetricians/gynecologists (OB/GYNs) (LaRocco-Cockburn et al., 2003). Estimates of positive screens for maternal depression using a validated tool range from 13 to 25 percent, with variation depending on the setting and patient population (Birndorf et al., 2001; Carter et al., 2005; Marcus et al., 2003; Smith et al., 2004; Bethell, Peck, and Schor, 2001). Unfortunately, when screening in the health care setting is based on clinical observation

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4 Pediatrics is the branch of medicine that deals with the medical care of infants, children, and adolescents. A medical practitioner who specializes in this area is known as a pediatrician. Family-medicine physicians are primary care providers who serve any individual by providing personal, comprehensive, and continuing care in the context of the family and community. An OB/GYN is a physician specialist who provides medical and surgical care to women and has particular expertise in pregnancy, childbirth, and the reproductive system. This includes preventive care, prenatal care, Pap test screening, and family planning.
alone, 50 percent of women suffering from depression are missed (Wilen and Mounts, 2006). The lack of early detection is also disturbing not only because of the potential to avoid longer-term complications but also because high levels of prenatal depression are associated with high levels of postpartum depression (Beck, 2001). The rate of depression relapse among women with preexisting depression and established treatment is as high as 43 percent (Cohen et al., 2006).

**Actions Taken Following Positive Screens.** To be effective, screening must be followed by a formal diagnostic assessment, a method to guide referral or treatment decisions, and quality monitoring to track and remedy unexpected developments (Miller, Shade, and Vasireddy, 2009). To date, there is very little information available about what typically happens when a woman screens positive for maternal depression. One study of newborn visits in a pediatric practice found that one-half of the positive screens were referred (Chaudron et al., 2004).

**Engagement in Behavioral Health Treatment.** Treatments for maternal depression reach only a small subset of depressed women. This is especially true for racial and ethnic minorities, who have less access to mental health services and are less likely to receive high-quality mental health care (Agency for Healthcare Research and Quality, 2004; Skaer et al., 2000; Wang, Berglund, and Kessler, 2000; Young et al., 2001; Vesga-López et al., 2008). According to one recent study, only 20 percent of low-income minority women with depression engage in behavioral health treatment (Miranda et al., 2003).

Among those who do engage in treatment, discontinuities in care during pregnancy and postpartum can complicate the recovery process (Bennett, Marcus, et al., 2010). These discontinuities might be exacerbated by a lack of coordination between care providers (American Congress of Obstetricians and Gynecologists, 2006), as well as the fact that many maternal-care providers are uncomfortable treating depression without input from mental health care providers (LaRocco-Cockburn et al., 2003; Hill et al., 2001; Dietrich et al., 2003). A recent study has shown that, among women receiving Medicaid, pregnancy was associated with discontinuation of both antidepressant use and depression-care visits and that neither form of treatment was resumed postpartum (Bennett, Marcus, et al., 2010).

Defining what constitutes an “adequate dose” of treatment for maternal depression can be challenging. In their recent review of the availability of treatment for maternal depression, Witt and colleagues (2009) defined *adequate dose* as receipt of at least eight 30-minute outpatient or office-based psychotherapy visits or at least four antidepressant prescriptions. Other studies have shown that the percentage of patients who report improvements in their symptoms of depression doubles between zero and three doses (Howard et al., 1986). Specifically, about 40 percent of patients report that psychotherapy is improving their symptoms of depression after a third session. At more than 100 sessions, the percentage that reports improvement doubles again to about 80 percent (Howard et al., 1986).
Understanding the Scope and Context of the Problem in Allegheny County

We must move from thinking in silo fashion to integrated planning and operations. Without integrated service delivery, too many individuals fall through the cracks while trying to navigate the often confusing and very different systems for meeting their needs.

—former Pennsylvania Secretary of Public Welfare Estelle Richman (Pincus, Thomas, Keyser, et al., 2005, p. 9)

Maternal Depression in Allegheny County

In 2007, there were 13,368 live births in Allegheny County (Allegheny County Health Department, undated). Among these live births, 4,676 were to mothers covered by Medicaid (Office of Medical Assistance Programs, 2010). Based on the average estimated 10-percent prevalence rate of maternal depression for all postpartum women (Gaynes et al., 2005) and the PRAMS prevalence rate of 21.3 percent for self-reported postpartum depressive symptoms among women on Medicaid (Centers for Disease Control and Prevention, 2008), an estimated 1,865 of infants born in Allegheny County in 2007 had mothers with depression; 996 of these mothers were Medicaid recipients, and 869 were non–Medicaid recipients.

For a community that has placed a high priority on family behavioral health, the proportion of women with maternal depression who were being identified and engaged in appropriate behavioral health treatment prior to the start of the initiative was unacceptably low. The collaborative’s pilot work revealed ongoing challenges in identifying women at high risk early in their pregnancies, contacting hard-to-reach Medicaid recipients, and referring patients for off-site treatment to behavioral health providers with whom they did not have established relationships (Allegheny County Maternal and Child Health Care Collaborative, 2006). At one of the local participating family health care centers, among 66 Medicaid-eligible pregnant women who were screened for maternal depression, 38 percent (25 women) had a positive screen. Of the 60 percent (15 women) who completed a post-screening assessment, 73 percent (11 women) were diagnosed with depression and referred for behavioral health treatment. Only four of these women completed the referral, and, in all four cases, the women already had a mental health provider. Off-site referral for mental health treatment was 100-percent unsuccessful for those patients who did not have established relationships with the providers to whom they were referred (Allegheny County Maternal and Child Health Care Collaborative, 2006).
Operations and Management of the Medicaid Maternal and Child Health Care System in Allegheny County

The U.S. Medicaid program provides an important source of health insurance coverage for low-income individuals and supports institutions that serve a disproportionate number of low-income patients with special needs. In Pennsylvania, the Medicaid program is called Medical Assistance and is managed by the Department of Public Welfare. The HealthChoices program is one of Pennsylvania’s mandatory managed care programs for Medical Assistance recipients. Operating since 1997, it manages care for 1.2 million people in 25 counties across the commonwealth, including Allegheny County. The Pennsylvania Department of Public Welfare’s Office of Mental Health and Substance Abuse Services implemented the HealthChoices behavioral health carve-out in the ten southwest counties of Pennsylvania, including Allegheny County, in 1999.

In the third quarter of 2009, 158,124 individuals were enrolled in the HealthChoices program in Allegheny County; 54 percent of members were 20 years old or younger, and 46 percent were 21 years old or older (Allegheny HealthChoices, 2009). Mothers and children receiving medical assistance in Allegheny County can receive physical health services and prescription drugs through one of three managed care organizations (MCOs) (i.e., Gateway Health Plan, University of Pittsburgh Medical Center [UPMC] for You, and Unison Health Plan), and are automatically enrolled in a behavioral health MCO (Community Care Behavioral Health Organization, hereafter referred to as Community Care) through which they can receive behavioral health services. Each physical health MCO has a maternity program to support pregnant women and a special needs unit to support members with complex needs.

As Figure 1.1 illustrates, the Department of Public Welfare’s Office of Medical Assistance Programs oversees the physical health component of the HealthChoices program (represented by the blue boxes in Figure 1.1), and the department’s Office of Mental Health and Substance Abuse Services oversees the behavioral health component (represented by the green boxes in Figure 1.1). The Allegheny County Department of Human Services, Office of Behavioral Health, manages the contract with Community Care for Allegheny County.

Outside of the local Medicaid system, there are a number of additional programs that offer resources and services to low-income mothers, children, and families in Allegheny County (represented by the purple boxes in Figure 1.1). Many of the larger programs are operated through the Allegheny County Health Department, which is managed locally, and falls under the auspices of the Pennsylvania Department.

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5 The term managed care is used to describe a variety of techniques intended to reduce health care costs and improve quality of care, including programs for reviewing the medical necessity of specific services, selective contracting with health care providers, and intensive management of high-cost health care cases, among others. These mechanisms are now commonly used by public and private health benefit programs across the United States.
of Health. Current funding for these services is provided by various sources (e.g., the U.S. Department of Health and Human Services, Titles IV-B and IV-E of the Social Security Act, Medicaid behavioral health funding, and matching state and county support). Eligibility criteria for these programs might include place of residence, stage of pregnancy, or involvement with child protective services.

**Local Barriers to Identifying and Treating Maternal Depression**

The complexities of the Pennsylvania Medicaid maternal and child health care system, as well as the numerous challenges related to identifying and treating maternal depression highlighted in the previous two sections, create a number of barriers for consumers who are at high risk for maternal depression in Allegheny County and in need of supports or services. They also create barriers for maternal and child health care providers who are attempting to serve these high-risk women. These barriers exist in numerous forms and on many different levels, as described in the subsections that follow. The consumer story in Text Box 1.2 further highlights some of these issues.
Although this woman eventually received the care she needed, her story underscores the need for better communication and coordination between physical health and behavioral health providers, including a means for guaranteed follow-up when patients are referred for behavioral health treatment.

**Barriers to Care at the Systems Level.** At the systems level, there are the inherent complications created by a state Medicaid managed care system, which separates physical and behavioral health care. For most women in Allegheny County who are Medicaid eligible, screening for maternal depression occurs in the physical health managed care system. In some cases, particularly in primary care settings, women who screen positive for maternal depression can be assessed and treated within the same setting. In other cases, such as when women present for prenatal care or a well-child visit, follow-up assessment and treatment for maternal depression are provided through the behavioral health managed care system.

In spite of significant local efforts to coordinate care across these systems, at the start of the initiative, most physical health providers were not aware of the care management and behavioral health services that are locally available or whom to contact when such services are needed by consumers. In some instances, providers no longer contacted the health plans for assistance because past efforts were not successful. Even in situations in which providers or plans had established relationships, systems glitches still occurred because of the lack of clearly established pathways of communication. The result was less-than-optimal use of available resources and inadequate or untimely service provision.
Barriers to Care at the Provider Level. While some local providers were screening for maternal depression prior to the initiative, the process was neither universal nor systematic. Awareness of the importance of maternal depression screening across provider types was limited, and many providers did not have access to validated screening tools and other resources that are necessary for effectively triaging, referring, and treating women who screen positive.

Further, while research shows that “traditional” behavioral health treatment improves depressive symptoms even among women from traditionally underserved populations, many women with maternal depression do not receive the help they need because they are not effectively engaged in treatment. Recently, local researchers have made great progress in promoting improvements in engagement and retention of low-income or minority populations relative to usual care (Grote, Swartz, and Zuckoff, 2008; Swartz, Zuckoff, et al., 2007; Swartz, Frank, et al., 2008). Generally speaking, however, systemwide processes for identifying, referring, and effectively engaging women at high risk for maternal depression in behavioral health treatment do not appear to be functioning at an optimal level.

Barriers to Care at the Consumer Level. Some of the most intractable barriers to identifying, supporting, and treating women with maternal depression operate at the individual level. Attributions or beliefs about an illness or its treatment strongly affect health care behavior. Culture plays an integral role in the formation of such beliefs, which can vary by ethnic group. Providers’ knowledge of and sensitivity to their patients’ culture-specific, health-related beliefs are necessary for enhancing engagement in and adherence to treatment. Examples of important consumer-level barriers and beliefs were well described by women interviewed during earlier phases of the collaborative’s work, quotes from which are provided throughout this section.

For example, many women with depression believe that how they feel is a part of the reality of their life situations and that treatment will not help. “What kind of medication is going to help you pay your rent?” In most cases, low-income families have such a wide range of unmet needs that receiving help for their depression is simply not a priority. “Sometimes professionals don’t understand that even though you wanted to make an appointment you needed to go get food.” Others think that providers will not understand their daily life and cultural realities. “No doctor with their condescending attitude is ever going to help someone.” These complexities are further compounded by structural issues, which can prevent women from readily accessing care. “I need somebody to talk to who is right here who will know exactly where I’m supposed to go over there.” Moreover, while most women would like to have “one person you can see then you can build trust,” this is not that easy to achieve when physical and behavioral health providers typically offer distinct services that are delivered through separate systems.
Aims and Focus of the Initiative
From the outset, the collaborative viewed the Allegheny County Maternal Depression Initiative as the next step in achieving its vision of a model maternal and child health system—a system that would “promote healthy lifestyles and positive health outcomes, reduce preventable disease and environmental health risks, eliminate health disparities, and ensure access to quality care for young children, mothers, and families” (Pincus, Thomas, Keyser, et al., 2005). Since low-income women are at higher risk for maternal depression than other women and less likely to receive adequate care, the collaborative chose to focus its systems-change efforts on improving service delivery for maternal depression within the local Medicaid system. The initiative had three aims:

• to improve the identification of maternal depression among Medicaid-eligible pregnant and postpartum women in Allegheny County
• to enhance access to available resources and services for women who screen positive for maternal depression
• to increase engagement in behavioral health treatment as needed and appropriate.

To this end, three components of service delivery were targeted for improvement at the systems level: screening, referral, and engagement in treatment.

Roles and Responsibilities of Key Stakeholder Groups
The collaborative designed the initiative based on its best estimation of how the local Medicaid system’s six main stakeholder groups could work together to achieve the initiative’s three aims. These groups and their roles and responsibilities in relation to aims of the initiative are as follows:

• Medicaid-eligible consumers and families are at the center of the process (i.e., the target population of the initiative), signifying the intent of the local Medicaid managed care system to create a “safety net” around women at high risk for maternal depression and their families.
• Physical health providers and practices identify all women who are at high risk for maternal depression and take steps to link them to available supports, services, and treatments as needed and appropriate.
• Behavioral health providers and practices offer a range of evidence-based treatments that meet consumers’ needs and preferences.
• Physical health and behavioral health MCOs serve as the bridge between the physical and behavioral health systems by providing care management and ensuring access to available resources and services for high-risk consumers, thereby improving the likelihood that they will effectively engage in behavioral health treatment as needed and appropriate.
• State and local purchasers and policymakers support practice and policy changes to enhance the ability of systems partners to carry out their agreed-upon roles.
• Other organizations in the community offer peripheral supports (e.g., funding, data collection and analysis, access to requisite resources and services outside the Medicaid maternal and child health care system) to ensure successful and sustainable systems change.

Figure 1.2 (adapted from Pincus, Pechura, Elinson, et al., 2001; Pincus, 2003; Pincus, Hough, et al., 2003; Pincus, Houtsinger, et al., 2005; Pincus, Pechura, Keyser, et al., 2006) provides a high-level overview of the relationships among these groups with respect to identifying women at risk for maternal depression (aim 1), enhancing their access to available resources and services (aim 2), and engaging them in behavioral health treatment as needed and appropriate (aim 3).

Protocol and Strategies of the Initiative
The collaborative developed a protocol for the initiative that delineated the roles and responsibilities of key stakeholder groups in accordance with best-practice standards, the capacities and stated preferences of individual participating practices, and network provider requirements as set forth in the state contract for Medicaid managed care services. The collaborative also designed and implemented a comprehensive set of strategies to support these groups in fulfilling their roles and responsibilities in relation to the initiative. The strategies aligned with the initiative’s overall vision (Text Box 1.1) and the best practices for family engagement and care coordination and service integration (Table 1.1) identified through the collaborative’s previous work. They encompassed five general areas:

• education and training of consumers and providers
• listening and responding to consumers’ needs
• use of evidence-based tools and protocols for depression screening and triage
• pathways and related infrastructure to support integrated care
performance measures and data collection to assess progress and inform ongoing improvement.

Details of the initiative protocol and strategies are provided in Chapter Two.

**Time Frame and Implementation Phases of the Initiative**

The Allegheny County Maternal Depression Initiative began on January 1, 2007, and officially ended on June 30, 2010. The initiative’s work was conducted in four phases:

1. **Planning (January 2007–November 2007).** During the planning phase, collaborative members actively participated in developing the initiative protocol and evaluation plan, producing and disseminating related implementation and data-collection tools, and coordinating various partners’ roles in the protocol implementation.

2. **Phase 1 implementation (December 2007–December 2008).** This phase focused primarily on implementing and tracking the screening and referral components of the initiative protocol.

3. **Phase 2 implementation (January 2009–February 2010).** This phase incorporated efforts to design and test various strategies for increasing referrals of women who screened positive for maternal depression to local physical health MCO
care managers for needed supports and services and enhancing their engagement in behavioral health treatment as appropriate.

4. **Reporting and dissemination (March 2010–June 2010).** During this final phase, initiative partners engaged in the last round of data collection, and the RUPHI team compiled and analyzed the results. This information was used to develop recommendations for sustaining practice and policy improvements and disseminated to community stakeholders via this report and a public forum at the RAND Corporation on June 21, 2010.

Initiative partners are planning to continue their work related to maternal depression screening, referral, and engagement in behavioral health treatment after the June end date.

**Organization of This Report**

The organization of this report follows established guidelines for the publication of quality-improvement work (Davidoff and Batalden, 2005; Davidoff et al., 2008). The remainder of this report is divided into four chapters:

- In Chapter Two, we describe the collaborative’s methods for achieving the three aims of the Allegheny County Maternal Depression Initiative.
- Chapter Three presents the results of the phase 1 implementation, the adaptations that were made in phase 2 based on these results, and the results of phase 2 and the overall initiative.
- Chapter Four provides the initiative’s key findings and lessons learned.
- Chapter Five offers our recommendations for practice and policy change that will expand and sustain the achievements that were made and introduces the next steps in the collaborative’s systems-change process.
In this chapter, we present the collaborative’s methods for designing, implementing, and evaluating the initiative. We begin by describing the framework for systems change around which the initiative was organized, including the conceptual model, stakeholder goals, and the selection and characteristics of the initiative’s partners. Next, we explain the initiative protocol through which the framework was operationalized and the strategies that were undertaken by the collaborative to support its implementation. Finally, we present the details of the evaluation plan that guided the initiative’s progress and informed the development of the resulting recommendations.

The Collaborative’s Framework for Systems Change

The Conceptual Model

Figure 2.1 (adapted from Pincus, Pechura, Elinson, et al., 2001; Pincus, 2003; Pincus, Hough, et al., 2003; Pincus, Houtsinger, et al., 2005; Pincus, Pechura, Keyser, et al., 2006) presents the initiative’s conceptual model of systems change. This model recognizes and builds on the roles of key stakeholder groups in driving and sustaining practice and policy improvements. Further, as illustrated by the double-headed arrows, all stakeholder groups are linked to one another across increasingly broad spheres of influence. Strengthening these linkages is essential for achieving the systems operations as described in Chapter One. Four sets of relationships are especially critical for achieving the initiative’s aims and creating a viable “safety net” around women at high risk for maternal depression and their families: (1) the relationships between consumers and families and providers, (2) the relationships between physical and behavioral health providers and practices, (3) the relationships between physical and behavioral health MCOs, and (4) the relationships between providers and practices and plans.

Stakeholder Goals

The model also specifies the goals of the initiative for each stakeholder group, each of which aligns with the overall aims of the initiative. Specifically, aim 1 (i.e., to improve
the identification of maternal depression among Medicaid-eligible pregnant and postpartum women in Allegheny County) aligns with the goals of physical health providers and practices; aim 2 (i.e., to enhance access to available resources and services for women who screen positive for maternal depression) aligns with the goals of physical health providers and practices and physical and behavioral health MCOs; and aim 3 (i.e., to increase engagement in behavioral health treatment as needed and appropriate) aligns with the goals of physical and behavioral health MCOs.

**Initiative Partners**

Table 2.1 lists the initiative’s partners by key stakeholder group. There are two general points to note. First, while many of the initiative partners were involved in earlier
phases of the collaborative’s work, a few joined the collaborative when the initiative began (e.g., some of the family-medicine practices) or over the course of its implementation (e.g., home-based service programs in the community). Second, while all stakeholder groups participated in initiative activities, only three of these groups—providers, practices, and plans—were specifically charged with making changes to the way they provide care, as specified in the initiative protocol described in the next section.

**Medicaid-Eligible Consumers and Families.** Medicaid-eligible pregnant and postpartum women with children under the age of 1 became involved in the initiative by presenting for care at one of the participating physical health practices. An estimated 3,319 pregnant and postpartum women and children under age 1 (the initiative’s target population) are served annually across all practices (see Table 2.2). Among

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**Table 2.1**

**Descriptions of the Initiative’s Partners, by Key Stakeholder Group**

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Description</th>
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<tbody>
<tr>
<td>Medicaid-eligible consumers and families</td>
<td>Pregnant women or mothers with children under age 1 in Allegheny County presenting for care at a physical health practice participating in the initiative</td>
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<tr>
<td>Physical health practices and providers</td>
<td>10 practice sites, including CHP; Magee-Womens Hospital Outpatient Clinics in Oakland, Wilkinsburg, Clairton (collectively referred to as Magee); UPMC Family Medicine practices (Shady Side, McKeesport, Bloomfield–Garfield, New Kensington, Lawrenceville) and Forbes Family Medicine (collectively referred to as family medicine); and their affiliated pediatricians, OB/GYNs, family-medicine physicians, nurses, and social workers</td>
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<tr>
<td>HealthChoices physical health MCOs</td>
<td>UPMC for You, Gateway Health Plan, Unison Health Plan, and their affiliated leaders and care management staff</td>
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<tr>
<td>Behavioral health practices and providers</td>
<td>A range of practices offering behavioral health treatment or other services for maternal depression, including Western Psychiatric Institute and Clinic, Magee-Womens Behavioral Health, Mon Yough Community Services, and Milestone, among others, and their affiliated psychiatrists, psychologists, social workers, and masters’-level psychological health providers and counselors</td>
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<tr>
<td>HealthChoices behavioral health MCO</td>
<td>Community Care and its affiliated leaders and care management staff</td>
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<tr>
<td>State and local purchasers and policymakers</td>
<td>Pennsylvania Department of Public Welfare, Office of Medical Assistance Programs and Office of Mental Health and Substance Abuse Services; Allegheny County Department of Human Services, Office of Behavioral Health; Pennsylvania Department of Health; Allegheny County Health Department; and their affiliated leaders and staff</td>
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<tr>
<td>Other organizations in the community</td>
<td>RUPHI; local funders, including UPMC Health Plan, Highmark Foundation, Staunton Farm Foundation, FISA Foundation, and Eden Hall Foundation; seven home-based service providers (namely, Allegheny County Health Department, Early Head Start [University of Pittsburgh], Early Head Start [Council of Three Rivers American Indian Center], Healthy Start, East Liberty Family Health Care Center [Birth Circle], Every Child, and Family Resources); and their affiliated leaders and staff</td>
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NOTE: CHP = Children’s Hospital of Pittsburgh, Primary Care Center. Community Care = Community Care Behavioral Health Organization.
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<td>Magee Oakland</td>
<td>1,900/2,000</td>
<td>No</td>
<td>Yes</td>
<td>Yes, full time</td>
<td>Yes, full time</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
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<td>No</td>
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</tr>
</tbody>
</table>
these 3,319 families, approximately 85 percent (2,811) are Medicaid insured or Medicaid eligible,\(^1\) 11 percent (356) have private insurance, and 1 percent are self-pay; for the remaining 3 percent of families (119), insurance coverage is unknown. The collaborative did not collect additional demographic information on this population. Based on the demographic profiles of the Medicaid-eligible population in Allegheny County, it is likely that approximately 40 percent of the women are African American and 57 percent are Caucasian (3 percent other) and that approximately 50 percent of the children under age 1 are African American and 45 percent are Caucasian (5 percent other) (Allegheny HealthChoices, 2004).

**Physical Health Practices and Providers in the HealthChoices Network.** The collaborative used five criteria for selecting the physical health practices to participate in the initiative: (1) participation in the Allegheny County HealthChoices network; (2) number and percentage of Medicaid-insured or Medicaid-eligible pregnant and postpartum women with children under age 1 served at the practice; (3) recognized leadership and interest in quality improvement related to maternal depression; (4) expressed agreement to implement the initiative protocol, participate in all-partners meetings and other related initiative activities, and attend trainings as relevant; and (5) ability to collect and share the requisite data. Of the 11 practices that were invited to participate, ten remained involved throughout the project period and are listed in Table 2.2. One practice (not listed in Table 2.2) withdrew from the initiative during the planning period, due to internal institutional review board complications. Each participating practice received financial or other support for protocol implementation and data-collection activities; contracts between RUPHI and the practice were issued and signed as needed and appropriate.

Physical health providers with one or more of the roles and responsibilities outlined in the protocol were considered to be partners in the initiative. In addition, one or more providers at each practice assumed leadership roles with respect to the initiative within their organizations. These leadership teams are listed in Appendix A.

As Table 2.2 illustrates, there was significant variability across the participating physical health practices in terms of specialty, patient volume, and infrastructure (e.g., residency program, on-site social work or behavioral health staff). As a result, differences in provider-consumer relationships (i.e., single physician–patient versus multiple

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\(^1\) In Pennsylvania, pregnant women are eligible for Medical Assistance if their income is at or below 185 percent of the federal poverty level (FPL); eligibility is for the duration of their pregnancy and through the postpartum period (i.e., 60 days postdelivery plus any additional days needed to complete the last month of coverage). Medical Assistance streamlined eligibility for pregnant women by implementing presumptive eligibility (i.e., paying for medical care as soon as pregnancy is verified by a medical professional) to minimize delays in receiving prenatal care. Newborn children are automatically eligible for Medical Assistance until the age of one year if the mother is eligible for Medical Assistance at the time of the birth and the newborn continues to live with the mother. All newborns in families with incomes at or below 185 percent of the FPL are eligible for Medical Assistance. Women with children are eligible for Medical Assistance only if their family income is equal to or less than 25 percent of the FPL.
physicians–patient versus pediatrician-mother) and capacity to refer or treat women who screened positive for maternal depression had an impact on how and to what degree the protocol requirements could be implemented.

**HealthChoices Physical and Behavioral Health MCOs.** Leaders of the physical and behavioral health MCOs, particularly UPMC for You and Community Care, had been active participants in previous phases of the collaborative’s work and were instrumental in designing, implementing, and supporting the initiative. Each MCO identified and involved care management and other staff as needed and appropriate to implement the protocol and collect and share relevant data. MCO care management and other staff with roles and responsibilities outlined in the protocol were considered to be partners in the initiative and, as such, were invited to attend initiative all-partners meetings and other related activities and training sessions as relevant.

**Behavioral Health Practices and Providers in the HealthChoices Network.** Participation in the initiative was open to all behavioral health practices and providers in the Allegheny County HealthChoices network that provide behavioral health treatment or other services for pregnant and postpartum women with depression. Behavioral health practices located near the participating physical health practices and with shared patient populations were especially encouraged to participate. Behavioral health providers with one or more of the roles and responsibilities outlined in the protocol were considered to be partners in the initiative. These individuals were also invited to participate in initiative all-partners meetings and other related activities and training sessions as relevant.

**State and Local Purchasers and Policymakers.** Purchasing and policymaking leaders at the state and county levels had also been active participants in previous phases of the collaborative’s work. In terms of the initiative, the Pennsylvania Department of Public Welfare, Office of Medical Assistance Programs, and the Allegheny County Department of Human Services, Office of Behavioral Health, were particularly supportive. The former provided financial and data-collection support, and the latter served as the fiscal agent for the project. Individuals from both organizations monitored the initiative’s activities, provided strategic guidance as needed, and participated in initiative all-partners meetings and other related activities.

**Organizations in the Community.** Other organizations in the community also played important roles in supporting and evaluating the initiative. The RUPHI project team, which serves as the convener of the collaborative, worked in collaboration with initiative partners to design, implement, and evaluate the initiative. Local and state funders provided financial support, monitored the activities of the initiative, and participated in all-partners meetings and other related initiative activities. During phase 2 implementation of the initiative, a range of home-based service providers in Allegheny County provided additional resources and services for women identified at high risk for maternal depression.
Initiative Protocol and Roles and Responsibilities of Key Stakeholder Groups

To operationalize the systems-change model, the collaborative developed a protocol for the initiative that delineated the roles and responsibilities of the key stakeholder groups (Appendix B). Generally speaking, these roles and responsibilities encompass the three broad components of the initiative: screening, referral, and engagement. Providers and practices screen women in the target population for maternal depression (aim 1) using an evidence-based tool. Providers and practices refer women who screen positive for maternal depression to available resources and services (aim 2), most often through the assistance of a physical health MCO care manager with possible collaboration with Community Care. All partners, but particularly physical and behavioral health MCOs, attempt to effectively engage women who screen positive for maternal depression in behavioral health treatment as needed and appropriate (aim 3). Figure 2.2 illustrates how these actions are designed to facilitate the progression of a pregnant or postpartum woman through the processes of screening, referral, and engagement in treatment.

Development of the Initiative Protocol

Facilitated by the RUPHI team, members of the collaborative engaged in a participatory process to develop the initiative protocol. Particular attention was paid to ensuring that the protocol was consistent with the current managed care contractual obligations of key stakeholder groups, in particular the Office of Medical Assistance Program’s requirements for the physical and behavioral health MCOs in Allegheny County (Text Box 2.1). These requirements are intended to address the needs of consumers who are members of HealthChoices by enhancing coordination among the respective MCOs, between each MCO and its providers, and between network and nonnetwork providers.

The collaborative considered it important to align the protocol as closely as possible with these requirements in order to ensure its full implementation and sustainability over time. Given that HealthChoices assigns to the physical health MCOs the responsibility of ensuring a member’s physical and behavioral health care, the collaborative determined that this stakeholder group would serve as the “linchpin” of the cross-systems safety net.

To further inform the development of the protocol, the RUPHI team reviewed the literature on best practices related to identifying risk factors for maternal depression, screening tools and recommended thresholds for defining high risk, recommended screening intervals, methods for triaging patients for treatment based on screening results, the effectiveness of care management and various treatment approaches, and the rules governing the sharing of patient mental health information. Findings in each of these areas then had to be reconciled with what was practical and acceptable to the
collaborative’s physical health, behavioral health, and MCO partners (see, for example, “Use of Evidence-Based Tools and Protocols for Depression Screening and Triage” later in this chapter).

The RUPHI team also reviewed the literature on barriers to engaging in behavioral health care, particularly for low-income women, so that the collaborative could design a protocol that might better address them. For example, Anderson et al. (2006) finds that distressed low-income women who had initiated behavioral health care treatment for their children often required a “bridge” to connect with the behavioral health provider. The authors also acknowledge that advocacy and care management might be more important for some women than behavioral health treatment per se.
Development of the Initiative’s Release-of-Information Forms

As the collaborative worked to finalize the initiative protocol, several partners noted that the communication pathways defined in the protocol (e.g., communication between physical health providers and Community Care or behavioral health providers; communication between physical health MCOs and Community Care or behavioral health providers) would likely be prohibited without explicit consent from the woman at high risk for maternal depression. Additionally, for pediatric practices specifically, in which the woman is not the provider’s patient, the high-risk woman’s consent would be needed to open communication between the physical health provider and her physical health MCO (a communication pathway that does not require consent when the high-risk woman is the physical health provider’s patient).

Recognizing that full implementation of the initiative’s protocol would require open, but appropriately safeguarded, communication among all initiative partners involved in patients’ care, collaborative partners approved a set of release-of-information forms that were drafted by the RUPHI team in spring 2008 (Appendix C). They also added a statement to the protocol directing physical health providers to make every effort to have the patient sign the appropriate form at the time of screening.

Roles and Responsibilities of Each Stakeholder Group

The initiative protocol specified the roles and responsibilities of each stakeholder group, as described in this section.
Physical health providers and practices were charged with systematically screening all presenting pregnant women and mothers with a child under the age of 1 for maternal depression using an evidence-based tool (aim 1). At the start of the initiative, all practices were using the ten-question Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, and Sagovsky, 1987). About halfway through the initiative, the family-medicine practices began to administer the Patient Health Questionnaire 2 (PHQ-2) as an initial screen, followed by the EPDS only if the patient scored positive on the two-question screener. A “yes” response to either of the two questions was considered a positive screen warranting further assessment using the EPDS. Both screening tools are provided in Appendix D.

The change to the family-medicine screening protocol was made based on findings from a related continuous quality-improvement initiative in which the family-medicine practices were participating (see the description of the Interventions to Minimize Preterm and Low Birth Weight Infants Through Continuous Improvement Techniques [IMPLICIT] network in “Comparisons with Other Related Initiatives” in Chapter Four). Since it can be difficult to administer even a short screening tool, such as the EPDS, in a busy clinical practice, the family-medicine providers thought that the use of a brief two-question screen might increase the overall number of women who were actually screened. Studies of the use of the PHQ-2 showed it to perform reasonably well in identifying women at risk for maternal depression, particularly with the addition of depression history, which improves the sensitivity of the screening (Bennett, Coco, Coyne, et al., 2008). While 10 percent of women with either major or minor depression will be missed, use of the two-question screen reduces the need for further screening of approximately 60 to 80 percent of women, depending on the stage of pregnancy or postpartum. However, a diagnostic interview follow-up of women who screened positive on the PHQ-2 is still required.

For the OB/GYN and family-medicine practices, screening was to occur at the first prenatal visit, in the third trimester, and at the postpartum visit. At the participating pediatric practice, providers were to screen mothers at each well-child visit from birth through 6 months and at 12 months. The collaborative also identified responsibilities for physical health providers and practices related to actions to be taken based on screening results. These actions were intended to enhance access to available resources and services (aim 2).

Providers and practices used two methods for determining high-risk status: EPDS score and psychiatric history. If a woman scored above a practice-specified threshold on the EPDS or if she had a history of major depressive disorder, bipolar disorder, or schizophrenia, then she was considered to be at high risk for maternal depression. For these high-risk women, the protocol instructed the physical health practice to make a referral to the physical health MCO organization (or, if the woman was uninsured at the time of the screen, to the Allegheny County Office of Behavioral Health) to alert
the health plan of its member’s high-risk status and of any additional actions taken at the physical health practice.

As noted earlier, for mothers screened at the pediatric practice, the referral to the physical health MCO could not take place without her explicit permission, because she is not the pediatrician’s patient. The other physical health practices could make this referral without explicit permission, as there are no restrictions on information sharing between a patient’s physical health providers and practices and her physical health MCO. Nevertheless, providers were encouraged to discuss the referral with all women and indicate on the referral form those cases in which contact with an MCO care manager was not explicitly requested.

Finally, physical health providers and practices were charged with initiating a dialogue with women who screened positive for maternal depression about engaging in supportive services or behavioral health treatment at the time of the screening (aim 3). This dialogue was intended to educate women about maternal depression and to address any obvious barriers to treatment (e.g., child care and transportation needs, concerns about taking medications). If, at the time of screening and identification of high-risk status, a woman was willing to be referred to her physical health MCO and expressed an interest in other supports, services, and treatments, the physical health provider and practice could also make a variety of additional referrals, such as a referral to a co-located behavioral health provider, a community-based behavioral health provider, or other community service programs.

Physical health MCO care managers were responsible for responding to referrals from the physical health providers and practices. This response could involve several actions in keeping with the expectations specified in the plans’ contracts with HealthChoices, as described in Text Box 2.1, such as contacting the woman who was referred and using motivational interviewing techniques to enhance her readiness to access available resources and services (aim 2). Additionally, physical health MCO care managers were charged with providing instrumental support to facilitate women’s engagement in behavioral health treatment as needed and appropriate (aim 3). This instrumental support could take several forms, such as consultation with Community Care to arrange a behavioral health appointment, the initiation of community-based services (e.g., home visits, Nurse Family Partnership, Early Head Start), or assistance with the provision of services or supports as needed (e.g., basic needs, child care, transportation) to overcome barriers to engagement. Physical health MCO care managers also took on the responsibility of using all possible efforts to follow up with women at high risk for depression through the course of their pregnancy and the first postpartum year, and to serve as a communication link (or safety-net linchpin) between physical and behavioral health providers and practices.

The behavioral health MCO, Community Care, was tasked with working directly with physical health MCO care managers, physical health providers, behavioral health providers, and women who screened positive for maternal depression to arrange behav-
ioral health treatment appropriate to women’s needs and urgency standards (aim 3). As the behavioral health MCO in Allegheny County, Community Care also agreed to assist in identifying “alternative” behavioral health services and treatments to address maternal depression if a woman was reluctant to engage in traditional outpatient mental health treatment.

**Process Maps of the Protocol**
The RUPHI team developed pictorial versions of the protocol (or process maps) depicting in visual form the roles and responsibilities of various stakeholder groups in relation to referring and supporting women at high risk for maternal depression as they attempt to engage in behavioral health treatment (see example in Figure 2.3). These process maps were intended to help initiative partners fully understand, adopt, and implement the initiative protocol.

**Strategies to Support Protocol Implementation and the Overall Systems-Change Process**
Over the course of the initiative, the collaborative designed and carried out a range of strategies to support the implementation of the protocol and to ensure the overall success of the systems-change process. These strategies, which involved all stakeholder

**Figure 2.3**
Example of a Protocol Scenario Process Map

Consumer with Medicaid is identified as being at high risk for depression and wishes to see a behavioral health provider that does not have an existing relationship with the physical health provider.

1. The physical health provider calls the MCO care manager.
2. The MCO care manager contacts Community Care.
3. Community Care arranges an appointment with behavioral health and the consumer.
4. The MCO care manager contacts the consumer to help her stay engaged with care.
5. Community Care closes the communication loop with the MCO care manager.
6. The MCO care manager closes the communication loop with the physical health provider/practice-based social worker.

NOTE: The physical health provider/practice-based social worker may also directly contact Community Care.

RAND MG973-2.3
groups, are summarized in Table 2.3. In this section, we describe the components of these strategies that were implemented during phase 1 (December 2007–December 2008). Based on the results of the phase 1 implementation, the collaborative modified and added components during phase 2 (January 2009–February 2010). These additions and modifications are described in Chapter Three (see “Modifications Made During Phase 2 Implementation”).

Table 2.3
Summary of Strategies to Support Protocol Implementation During Phases 1 and 2

<table>
<thead>
<tr>
<th>Targeted Area of Focus</th>
<th>Phase 1 Strategy</th>
<th>Phase 2 Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education and training of consumers and providers</td>
<td>Educational pamphlet about maternal depression and list of community resources Provider training programs on use of validated maternal depression screening tool, referral, and engagement Website</td>
<td>Additional consumer-supportive materials (e.g., “Prescription for Good Health”) Provider training programs on mood disorders and motivational interviewing skills Policy forum on maternal depression practice and policy Educational and networking workshop on home-based service programs Public forum to disseminate initiative findings and recommendations</td>
</tr>
<tr>
<td>Listening and responding to consumers’ needs</td>
<td>Consumer focus groups Participation in prenatal support groups</td>
<td>Focus on home-based service options</td>
</tr>
<tr>
<td>Use of evidence-based tools and protocols for depression screening and triage</td>
<td>EPDS with varying high-risk thresholds across practices, PHQ-2, and psychiatric history Decision tool for triaging consumers who screened positive for maternal depression Handheld computers for individual screening EPDS in multiple languages</td>
<td>Use of warm transfers Efforts to improve communication between physical health providers and MCO care managers and consumers Pilot tests of co-location of behavioral health providers or care managers</td>
</tr>
<tr>
<td>Pathways and related infrastructure to support integrated care</td>
<td>Common referral fax form Procedures for obtaining informed consent All-partners meetings</td>
<td>Use of warm transfers Efforts to improve communication between physical health providers and MCO care managers and consumers Pilot tests of co-location of behavioral health providers or care managers</td>
</tr>
<tr>
<td>Performance measurement and shared data collection to assess progress and inform ongoing improvement</td>
<td>Agreed-upon performance measures and data-collection procedures Ongoing analysis and information sharing Course corrections as needed</td>
<td>Stakeholder group discussions</td>
</tr>
</tbody>
</table>
Education and Training of Consumers and Providers

At the start of the initiative, the collaborative provided informational materials and other resources related to maternal depression to initiative partners, including consumers and patients, providers, and care managers, as needed. For example, an educational pamphlet about maternal depression was made available to all pregnant and postpartum women who presented at the participating physical health practices (Appendix E.1), and a comprehensive list of available community resources related to maternal and child health care was provided for both consumers and providers (Appendix E.2).

During phase 1, the collaborative offered a series of training sessions to participating providers and MCO care managers on maternal depression, use of the EPDS for maternal depression screening and implementation of the screening, referral, and engagement components of the initiative protocol. Four sessions were conducted between April and December 2008. To maximize participation, RUPHI team members conducted these sessions onsite at individual physical health practices and physical health MCO offices.

In order to make information about initiative activities readily accessible to all collaborative partners, the RUPHI team created a website (RAND Corporation, 2009) with information about the collaborative and the initiative, available community resources, and past and planned training programs. The site also contains links to related initiatives and resources.

Listening and Responding to Consumers’ Needs

In the early stages of the initiative, an effort was made to gain the active participation of consumers who had experienced maternal depression by including them in collaborative meetings. These efforts were not successful due to the many competing demands and priorities that these women face. To ensure that the initiative was informed by the needs of the consumers it was trying to reach, the RUPHI team held three 90-minute focus groups in April 2008 to solicit feedback from consumers regarding their knowledge, attitudes, and behaviors related to maternal depression. The focus group participants were recruited by providers in physical and behavioral health practices and community-based maternal and child programs. To maximize participation, the meetings took place in the neighborhoods in which the women lived and at times that they identified to be the most convenient for them. The qualitative data from these focus groups were quickly shared with the collaborative to inform course corrections to the initiative protocol and related strategies. More details on the methodology and results of the focus groups will appear in a forthcoming article by Lara-Cinisomo, Burke, and Keyser. Additionally, members of the RUPHI team participated in prenatal support groups held at one of the participating physical health practices to provide psychoeducation about emotional changes during and after pregnancy and answer consumers’ questions about maternal depression.
Use of Evidence-Based Tools and Protocols for Depression Screening and Triage

Because relatively few physical health providers had been screening for maternal depression as specified in the protocol before the initiative began, there was some uncertainty among providers about the number of women who would be identified as being at high risk using different cutoff scores for the EPDS. In particular, providers did not want to use lower cutoff scores if women who scored positive could not be appropriately triaged and treated in a timely fashion. Since a major goal of the initiative was to increase screening and referrals for women at high risk for maternal depression (rather than assessing the predictive validity of different EPDS scores or individual outcomes for women with clinically diagnosed depression), the protocol recognized these concerns by allowing individual practices to adopt a cutoff score that was clinically meaningful but would not result in a high-risk prevalence that might overwhelm workflow norms.² EPDS cutoff scores for the participating practices ranged from 10 to 14 points: The family-medicine practices used a score of 10 or higher; CHP used a score of 12 or higher; and the Magee outpatient clinics used a score of 14 or higher. The family-medicine practices were more comfortable using a lower cutoff score because they have in-house social work, care management, and behavioral health capacity and, therefore, are more likely to be able to address the needs of women who score at high risk in a timely fashion.

The RUPHI team provided practices with support related to screening and triaging as needed. For example, a decision tool for triaging consumers who screened positive for maternal depression was developed specifically for CHP (Appendix F.1); handheld computers for individual screening were purchased for the Magee outpatient clinic in Oakland; and the EPDS tool was provided in languages other than English.

Pathways and Related Infrastructure to Support Integrated Care

Although in some cases physical health practices and physical health MCOs were in regular communication regarding a variety of consumer health–related issues, the initiative protocol standardized the process of referring consumers who screened positive for maternal depression through the use of a common referral fax form (Appendix F.2).³ The form was used to communicate a series of critical data elements agreed upon by the collaborative (e.g., date and destination of referral, EPDS score, and consumer’s stated interest in care management or behavioral health treatment) between physical health providers and physical health MCOs, as well as with other stakeholder groups, such as behavioral health providers and behavioral health MCOs, as needed.

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² We note that the optimal cutoff score for use of the EPDS to identify clinically significant levels of distress is an ongoing topic of research; recent studies suggest that a cutoff score of 13 is most appropriate for detecting maternal depression (Sit and Wisner, 2009).

³ Two versions of the referral fax form were used over the course of the initiative: One version was used during phase 1 implementation, and a revised version was used during phase 2 implementation. Appendix F.2 contains the revised version, which is described further in Chapter Three.
and appropriate. This standardized communication method was intended to facilitate information sharing across all initiative partners who were directly involved in any one patient’s or family’s care.

As noted previously, while the collaborative had agreed to use a common release-of-information form in order to facilitate communication as appropriate among all relevant initiative partners, in practice, the use of this form was somewhat limited. Two main barriers prevented its use. First, physical health providers had some concerns about women’s ability to read and understand the language in the form. These concerns are commonly associated with consent documents and reflect broader consumer literacy barriers that are well documented in the literature (Paasche-Orlow, Taylor, and Brancati, 2003; Raich, Plomer, and Coyne, 2001). Although efforts were made to keep the reading level as simple as possible, it was difficult to avoid certain required legal and medical terms. Second, workflow issues prevented physical health providers from consistently using the form. Physical health providers explained that there was simply not enough time during the typical office visit to conduct the depression screen, complete the recommended follow-up actions, and work through the release-of-information form with the consumer. In the end, while most initiative partners agreed that consistent use of the form would be ideal, obtaining the high-risk consumer’s oral consent was sufficient for enabling them to meet the protocol requirements.

Finally, quarterly all-partners meetings created an important opportunity for collaborative members to meet face to face and review progress, discuss barriers and challenges, and brainstorm together about potential solutions. These meetings were also extremely valuable for building a sense of camaraderie and trust among different (and sometimes competing) stakeholder groups and to facilitate ongoing communication between and within these groups.

**Performance Measurement and Shared Data Collection to Assess Progress and Inform Ongoing Improvement**

Initiative strategies and processes related to performance measurement and shared data collection were collaborative and highly participatory. The intention was to underscore the importance of data collection for supporting ongoing quality improvement while minimizing the associated workload, maximizing the relevance and impact of the performance measures, and increasing the sustainability of ongoing improvement efforts beyond the official end date of the initiative. During the planning phase of the initiative, collaborative members met several times, in large and small groups, to develop and finalize the set of performance measures that would be used for the evaluation. Through individual, face-to-face meetings with each of the physical health practices and physical and behavioral health MCOs participating in the initiative, the RUPHI team also worked collaboratively to tailor data-collection processes according to each site’s needs and workflow norms, thereby ensuring their fullest possible participation in the evaluation process.
The RUPHI team coordinated all components of the data-collection process, performed the analyses, and interpreted the results. However, obtaining the actual data that were used to evaluate the initiative would not have been possible without the full cooperation and support of key initiative partners. These included the ten participating physical health practice sites, the three local physical health MCOs, Community Care, and the Allegheny County Office of Behavioral Health. Members of the RUPHI team analyzed these data on an ongoing basis and shared the results with the collaborative during the all-partners meetings. The information was used to evaluate whether the initiative’s strategies were leading to improvements related to the initiative’s goals and to inform initiative “course corrections” (i.e., adaptations to the protocol or implementation strategies) as needed over the course of the initiative. RUPHI team members also met separately with some practices to discuss their individual results and brainstorm about areas for potential practice-based quality improvement. The results of the overall initiative were also used to derive the recommendations for sustainability and spread that are presented in Chapter Five.

Evaluation Plan for the Allegheny County Maternal Depression Initiative

Evaluation Indicators and Related Data-Collection Tools and Data Sources

The collaborative designed a mixed-methods approach, using both qualitative and quantitative data, to evaluate the initiative. The evaluation indicators and data-collection instruments and data sources can be organized into two broad categories: organizational indicators and data-collection instruments and clinical indicators and data sources. The organizational indicators captured key features of systems change related to consumer and provider attitudes and behaviors; the clinical indicators captured key features of systems change related to care processes aligned with the initiative’s three aims—namely, screening (aim 1), referral and access to available resources and services (aim 2), and engagement in behavioral health treatment as needed and appropriate (aim 3). Table 2.4 shows each of the evaluation indicators and associated data-collection tools and data sources, with the clinical indicators organized by aim. Figure 2.4 illustrates how the data-collection tools and data sources align with the progression of a pregnant or postpartum woman through the processes of screening, referral, and engagement in treatment.

Data-Collection Tools for the Organizational Indicators

In this section, we describe the data-collection tools that were developed by the RUPHI team for gathering information on the organizational indicators.

The focus group protocol was designed to elicit consumer attitudes, beliefs, and experiences concerning (1) stress and depression during pregnancy or postpartum,
### Table 2.4
Initiative Evaluation Indicators and Data-Collection Tools and Sources

<table>
<thead>
<tr>
<th>Evaluation Indicator</th>
<th>Data-Collection Tool/Source</th>
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<tr>
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<td>Consumer attitudes and behavior related to maternal depression and engagement in</td>
<td>Focus group protocol</td>
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<tr>
<td>treatment</td>
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</tr>
<tr>
<td>Provider attitudes and behavior related to maternal depression and the initiative</td>
<td>Web-based provider and care manager surveys</td>
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<tr>
<td>protocol</td>
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<td>Participants’ opinions about and responses to training sessions</td>
<td>Post-training evaluations</td>
</tr>
<tr>
<td>Cross-stakeholder perspectives on the initiative’s successes and challenges related</td>
<td>Discussion guides</td>
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<td>to screening, referral, and engagement and associated Medicaid policy recommendations</td>
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<td><strong>Clinical indicator</strong></td>
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<td><strong>Screening (aim 1)</strong></td>
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<td>Number of maternal depression screens and screening rate</td>
<td>Physical health provider data</td>
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<tr>
<td>Average EPDS scores and percentage of consumers at high risk for maternal depression</td>
<td>Physical health provider data</td>
</tr>
<tr>
<td><strong>Referral (aim 2)</strong></td>
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<tr>
<td>Percentage of consumers at high risk for maternal depression referred by a physical health plan care manager</td>
<td>Physical health provider data</td>
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<td>Percentage of referred consumers who are reached by a physical health plan care manager</td>
<td>Physical health MCO activity code and data</td>
</tr>
<tr>
<td>Time elapsed between when a woman is identified as being at high risk for maternal depression and when she is reached by a health plan care manager</td>
<td>Physical health provider data and physical health MCO activity code and data</td>
</tr>
<tr>
<td><strong>Engagement (aim 3)</strong></td>
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</tr>
<tr>
<td>Percentage of women at high risk for maternal depression who initiate behavioral health services</td>
<td>Community Care PsychConsult data</td>
</tr>
<tr>
<td>Time elapsed between when a woman is identified as being at high risk for maternal depression and when she engages in behavioral health care</td>
<td>Physical health provider data and Community Care PsychConsult data</td>
</tr>
<tr>
<td>Type of behavioral health services used by women at high risk for maternal depression</td>
<td>Community Care PsychConsult data</td>
</tr>
<tr>
<td>Amount of behavioral health services used by women at high risk for maternal depression</td>
<td>Community Care PsychConsult data</td>
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<td>Associations between contact with a physical health MCO care manager and engagement in behavioral health care</td>
<td>Physical health MCO activity code and data and Community Care PsychConsult data</td>
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<tr>
<td>Associations between physical health practice infrastructure (e.g., availability of co-located behavioral health treatment) and engagement in behavioral health care</td>
<td>Physical health provider data and Community Care PsychConsult data</td>
</tr>
</tbody>
</table>
(2) behavioral health treatment (medication and therapy), and (3) barriers to engaging in depression-related supports, services, and treatment (Appendix G.1).

The *provider and MCO care manager surveys* were designed to assess attitudes related to maternal depression and the roles and responsibilities outlined in the initiative protocol (Appendix G.2). The surveys were constructed based on a review of the relevant literature and input from collaborative members. The number of questions ranged from 38 to 50 for the providers, with more questions for the CHP providers, as requested by their leadership. The MCO care manager survey had 17 questions. The surveys were fielded electronically, and all survey responses were anonymous. For each survey administration, a link to the online survey was sent to one point of contact.

**Figure 2.4**
Alignment of Data-Collection Tools and Data Sources with the Progression of a Pregnant or Postpartum Woman Through the Screening, Referral, and Engagement Processes

<table>
<thead>
<tr>
<th>Initiative process</th>
<th>Associated implementation activities</th>
<th>Data tools and sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>Woman screened for maternal depression at physical health provider’s office</td>
<td>Physical health provider screening data</td>
</tr>
<tr>
<td>Referral</td>
<td>Woman’s physical health MCO is notified of her high-risk status</td>
<td>Physical health provider fax form data</td>
</tr>
<tr>
<td></td>
<td>Woman referred to Community Care for help in obtaining a behavioral health appointment</td>
<td>Physical health provider fax form data and/or physical health MCO record data</td>
</tr>
<tr>
<td></td>
<td>Woman referred to behavioral health provider</td>
<td>Physical health provider fax form data and/or physical health MCO record data</td>
</tr>
<tr>
<td></td>
<td>Woman referred to other available resources and services</td>
<td>Not systematically captured in initiative evaluation data</td>
</tr>
<tr>
<td>Engagement</td>
<td>Woman engages in behavioral health treatment</td>
<td>Community Care claims data</td>
</tr>
<tr>
<td></td>
<td>Woman engages in other related services</td>
<td>Not systematically captured in initiative evaluation data</td>
</tr>
</tbody>
</table>
at each participating practice or plan. A “snowball” method of recruitment was then used, in which the point of contact distributed the link to all members of the plan or practice who were involved with the initiative; individuals who received the survey link were encouraged to send it on to others who might have been excluded from the original survey pool. We note that use of the snowball method prevented us from being able to determine how many people received the surveys, and thus we could not calculate response rates.

Training evaluations were designed to elicit participants’ views on the usefulness of the initiative training programs as well as their recommendations for future training programs (Appendix G.3). The information was used to improve and expand training offerings over time.

A discussion guide was designed to solicit feedback from all key stakeholder groups (except for consumers and patients) at the end of the initiative (Appendix G.4). The discussion guide covered six areas of inquiry, asking about the initiative’s successes and challenges for each: screening, referral, engagement, sustaining initiative activities after the initiative ends, the focus of the initiative on maternal depression, and progress made in strengthening linkages between physical and behavioral health care.

Data Sources for the Clinical Indicators

In this section, we describe the sources that were available to the RUPHI team for obtaining data on the clinical indicators and how they were used.

The physical health provider data were housed in repositories designed collaboratively by physical health providers and members of the RUPHI team. These data included screening scores and referral information. Screening scores were not tracked at the individual level; that is, physical health providers were instructed to log the score each time a screening was done, but not the patient’s Medicaid ID number (unless the score was positive). In this way, screening data captured the number of screens that were conducted over the course of the initiative. A screening rate was calculated by dividing the number of screens in a month by the estimated average monthly visit volumes provided by the physical health practices.

Referral data were captured at the individual level via the initiative fax forms that were developed to standardize communication between stakeholder groups. Data from the fax forms documented a series of critical data elements agreed upon by the collaborative, as noted earlier (see “Pathways and Related Infrastructure to Support Integrated Care” earlier in this chapter). Further, as clinical workflow permitted, providers used these forms to record information reported by consumers on barriers encountered with respect to engaging in behavioral health treatment (e.g., child care and transportation concerns, stigma associated with mental health treatment or mental illness, fears related to being thought of as an “unfit” mother).

Physical health MCO activity code data were tracked at the individual level using spreadsheets designed collaboratively by physical health MCO care managers and
members of the RUPHI team to collect data on the activities of and outcomes associated with the actions of the physical health MCO care managers. The information included whether a member referred for being at risk for maternal depression was reached, the date she was reached, and whether Community Care assisted in arranging behavioral health treatment for the member.

Finally, *Community Care PsychConsult data* tracked claims paid by Community Care for behavioral health treatment rendered by behavioral health providers in its network. These data were used to measure whether women who scored positive for maternal depression and had a completed referral form initiated behavioral health treatment; the timing of their engagement in treatment in relation to being referred to a physical health MCO care manager and in relation to their contact, if any, with a care manager; the number of times they received behavioral health treatment; and the types of behavioral health treatment received.

**Data-Collection Activities**

All initiative data-collection activities were approved by the RAND Human Subjects Protection Committee. The Pennsylvania Department of Public Welfare granted approval for the MCOs to share data with the RUPHI team for the purposes of the initiative evaluation. No identifiable information was shared with the RUPHI team.

The RUPHI team conducted primary data collection to measure outcomes associated with the organizational indicators at different time points during both phases of implementation. During phase 1 implementation, focus group data were collected from three groups of consumers in April 2008. Overall, ten prenatal and 11 postpartum women from the initiative’s target population participated. The majority of participants were black, non-Hispanic (67 percent); 27 percent of participants were white, non-Hispanic. The mean age was 23.67 (standard deviation = 6.03). Forty-eight percent of the women had a history of mental health treatment, and 38 percent had a history of antidepressant use. Provider surveys were fielded between January and March 2008 (67 responses) and in December 2008 (84 responses). Given the snowball method used to recruit survey respondents, the results should be interpreted with some caution, as respondents might not be fully representative of the entire stakeholder group. MCO care manager survey data were collected in March 2008 (37 responses) and December 2008 (15 responses). Again, the results should be interpreted with caution because the number of respondents is low. Training evaluation data were collected four times for screening and initiative protocol training sessions conducted between April and December 2008 (an average 14 completed evaluations per training).

During phase 2 implementation, provider and MCO care manager survey data were collected one time (i.e., in February 2010) with 88 responses. Training evaluation data were collected two times in January 2009 and two times in May 2009 for the additional training sessions that were conducted during these periods, with an average
of 30 completed evaluations per training. Three stakeholder groups were conducted in February 2010 with a total of 20 initiative partners.

Clinical indicators were measured using data collected by the physical health practices and the physical and behavioral health MCOs. Because the measurement of several clinical indicators related to referral and engagement involved using data from more than one source (e.g., physical health provider data, physical health MCO activity code and data, Community Care PsychConsult data), the collaborative decided to use the Medicaid ID number as the unique identifier for women who scored positive for maternal depression. These data were collected for three discrete time periods: Phase 1 data collection was from March to December 2008; phase 2 data collection was from January to August 2009 and September to December 2009.

Data Analysis
The analytic plan for the evaluation examined organizational and clinical indicators across the entire span of the initiative implementation (March 2008 through February 2010), as well as by phase. This approach enabled the collaborative to use the results and lessons learned from the phase 1 implementation (December 2007–December 2008) to inform the development and execution of the phase 2 implementation (January 2009–February 2010).

The analyses made use of qualitative methods to derive themes from the focus groups and stakeholder discussions. For quantitative analyses, descriptive (frequencies, means, standard deviations) and bivariate (chi-square, t-tests, analysis of variance [ANOVA]) statistics described the outcomes of the provider and plan surveys (organizational indicators) and the outcomes of all clinical indicators. These analyses examined indicators by implementation phase and in relation to one another as hypothesized by the initiative protocol (e.g., to examine associations between contact with a physical health MCO care manager and engagement in treatment) and evaluated changes in outcomes over time (i.e., from phase 1 to phase 2).
CHAPTER THREE

Results

The Allegheny County Maternal Depression Initiative was implemented in two phases. Phase 1 implementation focused primarily on implementing and tracking the screening (aim 1) and referral (aim 2) components of the initiative. Based on the results and lessons learned from phase 1, the collaborative undertook additional strategies in phase 2 implementation to increase referrals of high-risk consumers to physical health MCO care managers for needed resources and services (aim 2) and enhance engagement in behavioral health treatment as appropriate (aim 3).

Given the phased implementation of the collaborative’s work, in reporting the results of the initiative, we begin by presenting the results of the phase 1 implementation (December 2007–December 2008). Next, we describe the modifications that were made during phase 2 implementation based on the phase 1 results. We then compare the results of the phase 2 implementation (January 2009–February 2010) with those of phase 1 and combine both sets of data to report the results for the overall initiative.

For each phase, we organize the results by the three aims and components of the initiative (i.e., screening, referral, and engagement). Each section includes results from both the clinical and organizational data that were collected during that period, as relevant to the aim or component of interest.

Results of Phase 1 Implementation

In this section, we report the results from the phase 1 implementation (December 2007–December 2008). The results include clinical and organizational data collected during this period. For the latter, the results from the provider and MCO care manager surveys should be interpreted with caution, as respondents might not be fully representative of the entire stakeholder group. This information is organized into three categories: screening, referral, and engagement.

Screening

PARTNERS FOUND INITIATIVE TRAINING PROGRAMS USEFUL. Many participants reported that the initiative training programs helped them to identify patients at risk for depres-
sion. On the training evaluation surveys, providers and care managers both said that the training helped clarify the purpose and goals of the initiative protocol.

**Systematic Screening with an Evidence-Based Tool Was Initiated.** Overall, the majority of physical health providers reported on the provider surveys that they screened women for maternal depression, regardless of whether signs or symptoms were present (Figure 3.1).

During phase 1, ten physical health practice sites were systematically screening women for maternal depression using the EPDS:

- CHP
- Magee-Womens Hospital Outpatient Clinics in Oakland, Clairton, and Wilkinsburg

Some of these practices were already screening for maternal depression prior to the launch of the initiative protocol, although the approaches used varied. Providers at the Magee outpatient clinics in Oakland, Clairton, and Wilkinsburg screened patients at the first prenatal visit. The participating family-medicine residency practices screened patients at three time points (i.e., first prenatal visit, third trimester visit, first trimester visit).

**Figure 3.1**
Frequency of Depression Screening Among Physical Health Providers

![Graph showing frequency of depression screening](image)
Results

postpartum visit) and continued to do so throughout phase 1. Prior to the initiative, CHP was not screening mothers for depression except at the newborn clinic. Throughout phase 1, CHP began screening at specified intervals (i.e., newborn, one-month, two-month, four-month, six-month, and 12-month visits).

**Total Number of Depression Screens Reached 3,758.** As a result of initiative partners’ efforts, 3,758 screens for maternal depression were conducted during phase 1 using the EPDS (Figure 3.2). While the family-medicine practices and Magee Outpatient Clinic–Oakland were already screening before the initiative, the more than 1,500 screens conducted at CHP would not have occurred without implementation of the initiative protocol. The Magee Outpatient Clinic–Oakland screened the highest proportion of women, with 44 percent of the estimated total, followed closely by CHP at 42 percent. The family-medicine practices completed more than 500 screens, representing 14 percent of the total screens during phase 1.

Throughout phase 1, the practices averaged nearly 420 screens per month (Figure 3.3). Magee Outpatient Clinic–Oakland completed 182 screens per month, CHP completed 175 screens per month, and the family medicine practices completed 60 screens per month.

**The Overall Screening Rate Was 59 Percent.** As a group, the physical health practices completed screens at an estimated 59 percent of the visits in which screening

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**Figure 3.2**

*Number of Completed Screens, by Practice Type*

![Bar chart showing the number of completed screens by practice type.](chart.png)

**NOTE:** In these analyses, data from the family-medicine practices are combined, as the numbers from any particular practice are quite small. Since data collection at the Magee outpatient clinics in Clairton and Wilkinsburg started later than at the other Magee clinic, the phase 1 data presented here include only Magee Outpatient Clinic–Oakland.
was supposed to occur according to the initiative protocol (Figure 3.4). The family-medicine practices had the highest screening rate at 67 percent, followed by Magee Outpatient Clinic–Oakland and CHP, which both screened at 57 percent. The high

Figure 3.4
Screening Rate
screening rate at CHP is notable since, prior to the initiative, it was screening only at its newborn clinic.

**Prevalence of High-Risk Screens (score of more than 10) Was 24 Percent; 12 Percent of Screens Had Scores Greater Than 14.** As noted in Chapter Two, the practices each specified an EPDS score to serve as an indicator of high-risk status:

- At the family-medicine practices, a score of 10 or higher on the EPDS designates a woman as being at high risk.
- At CHP, a cutoff score of 12 is used.
- At Magee Outpatient Clinic–Oakland, high-risk status is determined by a score of 14 or higher.

The overall mean EPDS score of 6.1 and the mean EPDS scores at each practice were well below any threshold of high-risk status (Figure 3.5). Magee Outpatient Clinic–Oakland had the highest mean EPDS score at 7.8. Across all of the screens completed during phase 1, 24 percent fell into any practice’s high-risk range (score of 10 or higher); 12 percent were above all thresholds of high risk (score of 14 or higher) (Figure 3.6).

---

1 The initiative’s data estimate the prevalence of high-risk screens using multiple cutoffs and suggest outcomes associated with referral and engagement for groups of women at various thresholds of distress as measured by the EPDS. Collection of the epidemiological data required to evaluate the predictive validity of different EPDS scores was outside the scope of the initiative.
Using Practice-Based Cutoff Scores, 13 Percent of Completed Screens Were Positive. Across the practices, 13 percent of the completed screens resulted in a positive score, indicating that the woman was at high risk for depression according to that practice’s cutoff score (Figure 3.7). Because of high volume of patients, most of these high-risk women were identified at Magee Outpatient Clinic–Oakland. Magee also had a higher percentage of patients on Medicaid than the other practices, which might indicate a lower-income and more vulnerable population.

Due to differences in mean EPDS scores, there were differences in the percentage of screens that identified a woman as at high risk for maternal depression: Twenty percent of screens at the family-medicine practices were in the high-risk range (at or above a score of 10); 16 percent of screens at Magee Outpatient Clinic–Oakland were in the high-risk range (at or above a score of 14); and 8 percent of screens at CHP were in the high-risk range (at or above a score of 12).

Referral
As noted in Chapter Two, the initiative protocol states that physical health providers will complete a referral form when a woman is identified as high risk for maternal depression based on a positive screen and send it to the appropriate physical health MCO. If the woman is uninsured at the time of screening, the referral form goes to the Allegheny County Office of Behavioral Health. CHP and Magee Outpatient Clinic–Oakland began referring high-risk women to physical health MCOs in March.

**Partners Found Initiative Training Programs Useful.** Providers and care managers both said on the training evaluation surveys that the training programs gave them concrete information about how to support patients at high risk for maternal depression. Several care managers noted the importance of learning about the different diagnoses and the resources available in the community through the initiative’s referral process. The care managers also valued the discussion of barriers to providing help and engaging women in treatment.

**Communication Between Physical Health MCOs and Physical Health Providers Improved.** On the provider surveys, physical health MCO care managers reported that it had become easier to communicate with members’ physical health providers (Figure 3.8; $\chi^2 = 9.2, p = 0.01$) but that ease of communication with Community Care had not changed and remained mostly positive (Figure 3.9). By the end of phase 1, significantly more physical health providers said that they received follow-up communication from a physical health MCO care manager after referring a high-risk woman than was the case at the beginning of the initiative (Figure 3.10; $\chi^2 = 6.8, p = 0.03$).

**Referrals Were Happening but Not Consistently.** Following the initiative protocol, physical health providers reported on the provider surveys that they referred high-risk women (those who screened positive) to physical health MCO care managers, and the percentage doing so increased during phase 1, although the difference was not significant (Figure 3.11).
Figure 3.8
Ease of Communication with Physical Health Providers

Figure 3.9
Ease of Communication with Community Care
Figure 3.10
Frequency of Follow-Up Communication from Physical Health Managed Care Organization Care Managers

Figure 3.11
Frequency of Referrals to Physical Health Managed Care Organization Care Managers
According to the clinical data, physical health providers completed almost 500 referral forms during phase 1 (Figure 3.12). The Magee outpatient clinics made nearly one-half (49 percent) of the referrals, CHP made 43 percent of the referrals, and the family-medicine practices made the remaining 9 percent of referrals (it is worth noting that the low number of referrals among the family-medicine practices might be due to the fact that these practices joined the initiative relatively late in phase 1).

**Just Under Half of High-Risk Women Were Referred.** More than 230 high-risk women were referred to physical health MCO care managers or the Allegheny County Office of Behavioral Health by physical health providers and were additionally supported by the MCO “safety net of care.” This total represents 47 percent of the high-risk screens at participating practices (Figure 3.13). Across the practices, CHP had the highest referral rate, with referrals completed for 79 percent of its high-risk screens. Forty-three percent of the high-risk screens were referred to the physical health MCO care managers at the Magee outpatient clinics. The family-medicine practices referred 19 percent of their high-risk screens.

While more than 230 referral forms were completed, based on the prevalence of high-risk screens, we would expect that nearly 500 referral forms would have been completed during phase 1. There are several possible explanations for why referral forms were completed for only 47 percent of the high-risk screens. First, at CHP, high-risk scores at the newborn visit are interpreted as “likely baby blues.” As this common condition often quickly resolves on its own, the protocol does not require these women
to be referred to MCO care managers. Second, some women might refuse referral to their physical health MCOs (particularly at CHP, where the woman must give her permission for referral, as she is technically not the provider’s patient). Finally, providers might not refer high-risk women to the MCOs when they can be connected to in-house behavioral health services, such as co-located psychologists or psychiatrists. According to the fax referral forms, the physical health providers made an appointment with a behavioral health provider for 11 percent of women and directly referred 18 percent to a behavioral health provider. On the referral form, the physical health providers also indicated that more than one-half (56 percent) of the women referred during phase 1 had a history of mental illness, including depression, bipolar disorder, or schizophrenia.

MCO Care Managers Successfully Contacted 65 Percent of the Referred Women. During phase 1, MCOs were able to track 157 of the high-risk referrals (67 percent), representing 147 women. To determine what happened to women identified as at high risk and referred to the physical health MCO care manager for maternal depression, the collaborative examined data collected by the MCOs and Community Care. Following the initiative protocol, the physical health MCO care managers attempted to contact the high-risk women referred to them by the physical health providers (unless a woman had specifically asked not to be contacted). During phase 1, 65 percent of these contact attempts were successful, with the MCO care manager able to reach the woman by telephone. According to the MCO records, 38 percent of the high-risk
women who were contacted by a care manager said that they would make their own behavioral health appointment. More than one-quarter (27 percent) denied the need for treatment, and 13 percent reported already receiving such services.

**Engagement**

As outlined in the initiative protocol, the purpose of the collaborative’s efforts to identify women at high risk for maternal depression through positive screens and refer them was to enhance access to supports and services and increase engagement in behavioral health treatment as appropriate.

**Just Over One-Half of All High-Risk Women Referred to an MCO Care Manager Engaged in Treatment.** Overall, it was difficult to engage high-risk women in treatment. According to Community Care records, just over one-half (51 percent) of the high-risk women who had been referred to their physical health MCO had engaged in behavioral health treatment at some point prior to the end of phase 1. The remaining 49 percent of referred women did not have any claims on file with Community Care.

Among those who had been referred, a few (5 percent) had claims with Community Care for behavioral health treatment that were before the date of identification of depressive symptoms and referral by the physical health provider, meaning that the initiative strategies likely were not related to the receipt of services by these women. Nearly one-third (32 percent) of the referred women received treatment after identification and referral by the physical health provider, and 13 percent received treatment both before and after physical health provider screening and referral.

**More Than Half of the High-Risk Women Who Had a Completed Referral Form Received Three or More “Doses” of Service.** The average number of postreferral claims on file was 12 during phase 1, with a range of one to 157 postreferral claims. Overall, 20 percent of women had one postreferral claim on file, 20 percent had two claims, and 60 percent had three or more claims. Among women with three or more claims, 19 percent had between four and eight claims, and the remaining 28 percent had more than eight claims on file. Since most high-risk women who received postreferral behavioral health treatment had at least three behavioral health claims on file, it appears that these high-risk women are not completing just one treatment encounter and then disappearing from the system.

**When High-Risk Women Engage in Treatment, They Utilize Various Types of Treatment.** The high-risk women with postreferral behavioral health claims received a variety of different types of behavioral treatment (Table 3.1). There were 17 types of postreferral behavioral health claims on file, and each woman could have had claims for multiple different types of services. These services are provided by licensed behavioral health professionals (e.g., psychologists, licensed social workers), with medication-related visits most likely provided by a psychiatrist. Outpatient mental health treatment (40 percent) and drug and alcohol treatment (18 percent) were the most common types of behavioral health treatment. Other types of services received occurred at lower
frequencies and included inpatient behavioral health services (e.g., inpatient mental health day or initial inpatient consultation), methadone maintenance services, and more general categories of behavioral health service (e.g., “outpatient visit for evaluation and management of new patient, problem moderate to high, with patient or family”).

Fifty-Two Percent of the Women Who Received Services Did So Within Two Months of Referral. For high-risk women who received postreferral behavioral health treatment, 14 percent received treatment within one week of physical health provider identification and referral, 13 percent received treatment between one and two weeks, 16 percent received treatment between two weeks and one month, and 9 percent received treatment between one and two months (Figure 3.14). For nearly one-half (48 percent) of those with postreferral behavioral health treatment claims, the treatment occurred more than two months after the referral. Among these women, 9 percent received treatment between two and four months postreferral; 16 percent received treatment between four and eight months postreferral; and the remainder received treatment more than eight months after screening at high risk for depression.

Focus Group Results Revealed the Multiple Stressors and Needs of High-Risk Women and Some of the Barriers to Engagement. The focus groups with consumers provided useful insights into the range of barriers that prevent women from engaging in treatment.

The women talked about their sources of stress and strategies for coping. These women said that their stress resulted from caring for their children and meeting family demands, negotiating time off with their partners, dealing with their own childhood issues, and a lack of financial resources. While the women sought social support from family and friends, they were sometimes criticized or judged about how they were feeling. Some women approached a medical professional about their depression but either

<table>
<thead>
<tr>
<th>Behavioral Health Treatment</th>
<th>Percentage Receiving Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outpatient mental health treatment</td>
<td>40</td>
</tr>
<tr>
<td>Outpatient drug and alcohol treatment</td>
<td>18</td>
</tr>
<tr>
<td>Blended mental health case management&lt;sup&gt;a&lt;/sup&gt;</td>
<td>6</td>
</tr>
<tr>
<td>Medication-related visits</td>
<td>6</td>
</tr>
<tr>
<td>Mobile crisis intervention</td>
<td>6</td>
</tr>
</tbody>
</table>

<sup>a</sup> This refers to a variety of mobile services aimed at coordinating care for individuals with serious mental illness. Billing for these services can be for more than just treatment provided (e.g., for travel time, phone contact), which may, in part, account for the high frequency with which these claims appeared among the initiative’s target population.
felt judged or were immediately prescribed antidepressants without being screened or consulted about their symptoms.

All of the women participating in the focus group sought help from providers but did not receive the appropriate level of care until after they were admitted for depression or expressed suicidal ideation. Women attributed the poor care to providers’ lack of experience with identifying and treating depression, unwillingness to listen, and inability to accurately diagnose and evaluate the patient’s condition. They recommended that efforts be made to train providers to “read the signs and ask the right questions,” implement prenatal and postpartum depression screenings, and listen to their concerns.

The women reported that they would benefit from having a variety of social support options. For instance, some women said that having a support group they could attend on an ongoing basis would enable them to get out of the house, share their experiences with others, and talk about their concerns without being judged. Others thought that having a home visitor was more appealing because private in-home consultations encourage conversation for women who are shy or do not have child care or reliable transportation.

Participants recommended that providers be encouraged to assess whether a woman would prefer behavioral health treatment in a clinical setting, medication, or another form of support, such as a support group. They thought that such an approach would ensure the woman’s participation in her treatment plan, while encouraging the provider to identify a program or plan to which the woman is more likely to adhere over the long term. It was clear from the discussions that not all women wish to remain
on medication for an extended period of time. Participants recommended that providers discuss with women periodically whether treatment plans are continuing to meet their needs.

Summary of Phase 1 Implementation

Figure 3.15 provides a summary of the phase 1 implementation results with reference to comparison points that have been cited in the literature related to maternal depression screening, referral, and engagement in treatment for pregnant and postpartum women (see Chapter One). These reference points include screening rates (Heneghan, Morton, and DeLeone, 2007; Olson et al., 2002; Seehusen et al., 2005; LaRocco-Cockburn et al., 2003); percentage of positive screens using a validated tool (Birnord et al., 2001; Carter et al., 2005; Marcus et al., 2003; Smith et al., 2004; Bethell, Peck,

<table>
<thead>
<tr>
<th>Screening</th>
<th>Reference point</th>
<th>Phase 1 results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated total number of visits at participating physical health practices</td>
<td>NA</td>
<td>6,419</td>
</tr>
<tr>
<td>Screening rate (%)</td>
<td>4–25</td>
<td>59</td>
</tr>
<tr>
<td>Percentage of positive screens using a validated tool</td>
<td>13–25</td>
<td>24 (n = 3,758)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Referral</th>
<th>Reference point</th>
<th>Phase 1 results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral rate among those who screened positive (%)</td>
<td>50</td>
<td>47 (n = 234)</td>
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<thead>
<tr>
<th>Engagement</th>
<th>Reference point</th>
<th>Phase 1 results</th>
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<tbody>
<tr>
<td>Percentage of referred women contacted by physical health MCO care manager</td>
<td>NA</td>
<td>65</td>
</tr>
<tr>
<td>Engagement rate among those referred (%)</td>
<td>20</td>
<td>51 (n = 72)</td>
</tr>
<tr>
<td>Percentage of engaged women who have at least 3 behavioral health claims</td>
<td>NA</td>
<td>60</td>
</tr>
</tbody>
</table>

NOTE: NA = not available.
and Schor, 2001); and referral and engagement rates for women who screened positive for maternal depression (Chaudron et al., 2004; Miranda et al., 2003).

Overall, the results from phase 1 suggested that, while screening is increasing, the existing pathway to treatment from time of screen to engagement in treatment was too long and required too many steps by both the high-risk woman and systems partners (Table 3.2). However, it is worth noting that the initiative screening rate was higher than the reference points; that the prevalence of positive screens and referral rate were consistent with other efforts focused on comparable target populations; and that the engagement rate appeared to be higher than what has been found in other reports. The survey findings also suggested that physical health providers’ attitudes and behaviors were moving in the right direction, although none of the changes observed during phase 1 was statistically significant. The focus groups revealed that women at high risk for maternal depression want services but not necessarily traditional outpatient behavioral health treatment.

Table 3.2
Modifications Made During Phase 2 Implementation

<table>
<thead>
<tr>
<th>Targeted Area of Focus</th>
<th>Phase 2 Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education and training of consumers and providers</td>
<td>Additional consumer-supportive materials (e.g., “Prescription for Good Health”)</td>
</tr>
<tr>
<td></td>
<td>Provider training on mood disorders and motivational interviewing skills</td>
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<tr>
<td></td>
<td>Policy forum on maternal depression practice and policy</td>
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<tr>
<td></td>
<td>Educational/networking workshop on home-based service programs</td>
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<tr>
<td></td>
<td>Public forum to disseminate initiative findings and recommendations</td>
</tr>
<tr>
<td>Listening and responding to consumers’ needs</td>
<td>Focus on home-based service options</td>
</tr>
<tr>
<td>Pathways and related infrastructure to support integrated care</td>
<td>Use of warm transfers</td>
</tr>
<tr>
<td></td>
<td>Efforts to improve communication between physical health providers and MCO care managers and consumers</td>
</tr>
<tr>
<td></td>
<td>Pilot tests of co-location of behavioral health providers or care managers</td>
</tr>
<tr>
<td>Performance measurement and shared data collection to assess progress and inform ongoing improvement</td>
<td>Stakeholder group discussions</td>
</tr>
</tbody>
</table>
Modifications Made During Phase 2 Implementation

Based on the results of the phase 1 implementation, the collaborative recognized that, despite the important progress that was being made in terms of screening and referral, much more work was required with respect to all three initiative components (i.e., screening, referral, and engagement). In particular, more attention needed to be paid to building on existing consumer-provider relations in order to enhance engagement of high-risk consumers in care management or treatment as needed; improving the success rate and timeliness of connections between high-risk consumers and MCO care managers; increasing consumer access to a wider range of supports, services, and behavioral health treatment options; and improving awareness of and knowledge about key issues related to maternal depression across key stakeholder groups.

One consumer’s story that was shared with the collaborative at the start of phase 2 implementation underscored the continuing systems challenges (Text Box 3.1). To address these challenges, the collaborative made a number of additions to the strategic components of the initiative for supporting phase 2 implementation, including specific

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**Text Box 3.1**

**Consumer Story on Barriers to Engagement in Treatment**

A pregnant woman with a history of bipolar disorder visits her physical health provider in mid-June. The provider phones the patient’s physical health MCO care manager for assistance in referring the patient to behavioral health treatment. The MCO care manager speaks to the patient, who says she will contact Community Care on her own. Later that day, the MCO care manager calls the woman to follow up and is told again that the woman plans to call Community Care on her own.

Two weeks later, the physical health provider calls the patient, who now requests a home visit from a behavioral health provider. The physician contacts the physical health MCO care manager for authorization, which is provided the same day, along with the names of six agencies for the provider to contact. The provider contacts all six agencies, but none is available to make a visit. A week later, the MCO care manager tells the physical health provider that she has tried more agencies but that the patient no longer wants anyone coming to her home.

On July 6, the physical health provider calls the patient and urges her to join in a three-way call to make an appointment with a behavioral health provider. The patient reports that the MCO care manager has given her numbers to call. The next day, the patient visits her physical health care provider again. After evaluating the patient, the doctor concludes that the patient has been thinking of suicide, though she does not appear to have a plan. The doctor calls three behavioral health providers: Two report wait times of two weeks; one does not answer. Eventually, the physical health provider calls another behavioral health service recommended by Community Care.

The behavioral health provider visits the patient’s home, completes the intake process, and refers the patient to another office for a second intake. However, that provider is not comfortable treating a patient for depression during pregnancy and refers the woman instead to an intensive outpatient program. An intake appointment is scheduled for the following week.

On July 23, five weeks after her first request for behavioral health treatment, the patient complains to her physical care provider of irritability and difficulty sleeping. She says she feels “like she wants to peel her skin off.” The doctor contacts a member of the RUPHI team, who refers the patient to a Community Care care manager. The care manager arranges a same-day appointment for the patient at a behavioral health clinic. The clinic assigns the patient to an acute case manager, and the patient sees a psychiatrist and therapist.

In this case, the patient’s physician follows up multiple times to ensure that the patient is receiving treatment for maternal depression. The physical health MCO care manager offers multiple referral options. Nonetheless, it takes more than five weeks for the patient to receive behavioral health treatment.
changes to the countywide protocol. These changes are summarized in Table 3.2 and described in more detail in this section.

Education and Training of Consumers and Providers

Additional Consumer-Supportive Materials. The collaborative developed additional materials to remind and encourage high-risk consumers to follow through with the referral and treatment decisions that were made during their physical health care appointments. For example, providers were supplied with “Prescription for Good Health” pads that they could use to write personal prescriptions for high-risk consumers (Appendix E.3). The prescriptions had space to indicate the woman’s EPDS score, date and time of any new or follow-up appointments, and phone numbers for accessing crisis intervention or behavioral health services. In addition, the revised referral fax forms (described under “Pathways and Related Infrastructure to Support Integrated Care”) were reproduced in duplicate so that the provider could give the woman a copy to take home.

Provider Training. The collaborative strengthened its provider training efforts during phase 2 with more in-depth trainings focused on engagement strategies and patient-centered care. A wide variety of professionals attended these training programs, indicating broader involvement from members of the collaborative over time. During phase 2 implementation, the collaborative offered two training sessions focused on issues related to the treatment of mood disorders during pregnancy, postpartum, and lactation in January 2009, and two training sessions focused on motivational interviewing skills in May 2009. A review of the literature on motivational interviewing found that engagement increases when providers spend time addressing pragmatic, psychological barriers to engagement (Swartz, Zuckoff, et al., 2007). Each training session also emphasized patient-centered care (consistent with the Chronic Care Model; Coleman et al., 2009) and the importance of actively engaging women in needed treatment. These training sessions took place at the RAND office, and educational credits were offered for each. They were led by experts from Western Psychiatric Institute and Clinic and were attended by an average of 30 people each, including physicians, social workers, care managers, nurses, psychologists, therapists, and community-based doulas. A wide variety of professionals attended these training sessions, indicating broader involvement from members of the collaborative over time.

Policy Forum on Maternal Depression Practice and Policy. In September 2009, the collaborative hosted a policy forum to provide opportunities for shared learning and networking among various partners and interested state- and county-level stakeholders. The forum was held in collaboration with the Pennsylvania Perinatal Partnership and the Family Medicine IMPLICIT Network on improving maternal and child health care practices and policy in Pennsylvania. The secretary of the Pennsylvania Department of Public Welfare delivered the keynote address at the forum, which was attended by state-level policymakers, physical and behavioral health providers,
MCOs, county officials, community organizations, foundations, and researchers. The forum provided an opportunity for the collaborative to present emerging lessons from the field and preliminary recommendations for better serving women at high risk for maternal depression.

**Educational/Networking Workshop on Home-Based Service Programs.** In March 2010, the collaborative convened an educational and networking workshop with leaders and staff from its participating home-based service programs and other collaborative partners. The workshop was designed to raise awareness of the home-based service providers and their services and to open communication pathways for referrals to them among the initiative’s physical and behavioral health providers and MCOs.

**Public Forum to Disseminate Initiative Findings and Recommendations.** In June 2010, the collaborative organized a large public forum to disseminate the findings and recommendations from the initiative and introduce the next steps for its systems-change efforts. The forum was well attended, and the recommendations were positively received by state and local policymakers, payers, and other key decisionmakers.

**Listening and Responding to Consumers’ Needs**

**Focus on Home-Based Service Options.** The collaborative also worked to increase consumers’ access to behavioral health treatment options other than traditional outpatient mental health that might better meet their needs and preferences. Home-based service programs typically work with parents to help them promote positive development of very young children, and most of the time they target families with newborns (Sweet and Appelbaum, 2004). Typically, these programs seek to improve child and family outcomes by promoting parenting skills and knowledge and providing referrals to needed services. During phase 2, the collaborative worked to actively engage a range of local home-based service providers in the initiative. To this end, the revised fax form included an option for a referral for a home visit, and seven home-based service programs, representing local doula services, Nurse Family Partnership, Healthy Start, Early Head Start, Early Intervention, child-abuse prevention programs, and behavioral health providers, joined the collaborative. Information was provided to participating practices and plans about these programs, including the types of services offered, insurance and income restrictions, locations served, and to whom referrals should be sent (Appendix F.3).

**Pathways and Related Infrastructure to Support Integrated Care**

**Use of Warm Transfers.** In March 2009, the initiative protocol was revised to increase the use of “warm transfers” for directly connecting high-risk consumers with their physical health MCO care managers or Community Care via phone while they are at the physical health practice. If this kind of direct connection was not possible, the provider was asked to provide additional information on a revised version of the
fax form to increase the likelihood of contact, including the best days or times for the MCO care manager to call the consumer and alternate contact information.

**Efforts to Improve Communication.** The revised initiative protocol also requested that physical health MCO care managers communicate with the referring physical health provider when a high-risk consumer could not be reached by phone within two weeks. A follow-up fax form was provided to the physical health MCO care managers that included the referring provider’s name in an effort to ensure that the form would make it to the correct place when faxed to the provider’s office. The care managers were also asked to notify the high-risk consumer’s primary care physician or OB/GYN about her high-risk status.

At the same time, all participating physical health providers were asked to use a modified referral fax form for communicating information about high-risk consumers to the physical health MCO care managers (Appendix F.2). With the revised fax forms, physical health providers were asked to work with high-risk women to jointly fill out the fax form, indicating the woman’s preferences among the expanded menu of options for behavioral health services and other supports. The revised fax form also indicated whether physical health providers were directly referring to on-site physical health MCO care managers, on-site social workers, on-site behavioral health specialists, Community Care, behavioral health providers, or local home-based service providers.

**Pilot Tests of Co-Location.** A review of the research literature found that co-location made treatment more convenient for the patient, reduced stigma, and provided the opportunity for more immediate services (Williams, Shore, and Foy, 2006). Physical co-location has also been associated with greater interaction and collaboration between physical and behavioral health providers (Valenstein et al., 1999). Studies have found that, when patients with depressive symptoms are connected with a social worker, they benefit from support in finding resources and making behavioral health appointments (Scholle et al., 2003). With the goal of increasing engagement in behavioral health treatment, the collaborative undertook several co-location efforts to bring behavioral health providers or behavioral health care managers into the physical health provider setting. These efforts are described in detail here:

- **co-location of a community behavioral health provider in a small-volume OB/GYN outpatient clinic.** The goal of this pilot project was to have a community behavioral provider on site in a small OB/GYN outpatient clinic (i.e., Magee Outpatient Clinic–Clairton) several days per week to focus on engagement of women who screened at high risk for maternal depression, to conduct a global assessment of strengths and needs of those referred to the on-site providers, and to complete a clinical assessment of treatment needs. The provider was also prepared to provide brief strategic therapy to address barriers to longer-term care, facilitate linkages to supports and services, including urgent intensive treatment as needed, and track identified barriers to behavioral health treatment.
• **co-location of a Community Care care manager at a large-volume pediatric practice.** Prior to this effort, the pediatric practice (i.e., CHP) had a part-time social worker who supported initiative activities along with handling many other practice-based responsibilities. Due to staff cutbacks, the practice lost this social worker at about the same time as the pilot started. During the pilot, the co-located care manager worked half time for the last six months of phase 2 with a focus on engaging women who have children under the age of 1 and are at high risk for behavioral health issues—in particular, depression—in appropriate behavioral health treatment. The care manager saw mothers in clinic who screened at high risk, followed up via telephone with those who had screened at high risk at prior visits, and conducted telephone outreach to families who missed well-child visits for children under the age of 1.

• **co-location of a behavioral health interventionist at a large-volume OB/GYN outpatient clinic.** At this large-volume OB/GYN outpatient clinic (i.e., Magee Outpatient Clinic–Oakland), pregnant women who screened at high risk for depression were connected with a social worker who conducted a follow-up assessment of the patient; discussed her needs and preferences for supports, services, or treatment; and attempted to make an appointment at a behavioral health clinic at the same location. During phase 1, the social workers found that wait times at the behavioral health clinic were lengthy, and the no-show rate among the population was high. For this pilot, the collaborative co-located two part-time behavioral health providers in the outpatient clinic for a six-month period. The co-located providers were in clinic twice per week on days determined by Magee staff to be high-volume, first prenatal visit days. The social workers were able to immediately engage the behavioral health providers, who took responsibility for communicating with the women about overcoming challenges to engagement in behavioral health treatment. During this initial consultation, the behavioral health providers conducted a brief motivational interview, provided brief problem-solving–focused behavioral health treatment, and scheduled follow-up appointments as needed.

**Performance Measurement and Shared Data Collection to Assess Progress and Inform Ongoing Improvement**

**Stakeholder Group Discussions.** In February 2010, the RUPHI team conducted three two-hour stakeholder group discussions with 20 total participants representing all key stakeholder groups (with the exception of consumers and patients). The information obtained from these discussions was used to inform the recommendations presented in Chapter Five.
Results of Phase 2 Implementation

In this section, we compare the results of phase 2 implementation (January 2009–February 2010) to the results of phase 1 implementation (December 2007–December 2008) and combine both sets of data to report the results for the overall initiative. The results include clinical and organizational data collected for both periods. This information is organized into three categories: screening, referral, and engagement.

Screening

Systematic Screening with Evidence-Based Tool Fully Under Way but Not Universal. By the end of phase 2, the vast majority (86 percent) of physical health providers indicated on the final provider survey that they often, almost always, or always screened for maternal depression at the first postpartum or newborn visit (Figure 3.16).

More Than 8,500 Total Depression Screens Completed. Over the course of the initiative, participating practices completed more than 8,500 screens for maternal depression using the EPDS (Figure 3.17). While screening was not universal across the practices, it is notable that CHP initiated screening at the beginning of phase 1 and completed nearly 3,000 screens during the initiative that would not otherwise have taken place. CHP conducted 53 percent of these screenings during phase 1 and the remaining 47 percent during phase 2. Together, the family-medicine practices completed just over 1,000 screens, with nearly equal percentages during each phase. The family-medicine practices targeted three time points for screening and completed more.

Figure 3.16
Frequency of Depression Screening

![Graph showing frequency of depression screening from July 2008 to February 2010]
than 1,000 screens. Across both phases, the three Magee outpatient clinics conducted more than 4,500 screens.

**Number of Screenings per Month Decreased from 418 in Phase 1 to 368 in Phase 2.** Overall, participating practices completed an average of 389 screens per month during the initiative (Figure 3.18). This average decreased from 418 per month in phase 1 to 368 per month during phase 2, representing a statistically significant decrease ($\chi^2 = 23.98, p < 0.001$). While the Magee outpatient clinics increased their screening from 182 per month to 225 per month, CHP and the family-medicine practices both experienced decreases in the average number of screens per month during phase 2. CHP completed an average of 135 screens per month over the course of the initiative. The family-medicine practices conducted nearly 50 screens per month. In some practices, the ambitious screening schedule or turnover among providers might have contributed to the decrease in screening rates.

**Initiative Partners Achieved a 54-Percent Overall Rate of Screening.** The overall screening rate was 54 percent during the initiative. At CHP, screening occurred at 44 percent of visits at which it was expected. Together, the family-medicine practices screened at more than one-half (51 percent) of visits, and the Magee outpatient

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2 There is a discrepancy between the degree to which physical health providers self-reported to screen patients for maternal depression (86 percent reported to screen always, almost always, or often [Figure 3.14]) and the screening rate suggested by their medical records (overall 54-percent screening rate). This discrepancy might be due, in part, to a sampling bias in which the survey respondents represented the most motivated and engaged providers in the initiative, who were more likely to have been screening consistently.
clinics completed screens at nearly two-thirds (65 percent) of the first prenatal visits. During phase 1, depression screening occurred at 59 percent of the visits at which it was expected according to the initiative protocol. The screening rate declined significantly to 52 percent during phase 2 (Figure 3.19; $\chi^2 = 9.97$, $p = 0.01$). While the screening rate at the Magee outpatient clinics increased from 57 percent during phase 1 to 71 percent during phase 2, the screening rate at CHP fell from 57 percent to 35 percent.

At some practices, such as CHP, the ambitious screening schedule or turnover among providers might have contributed to the decreased screening rate. Further, with turnover in the residents staffing the clinics it was difficult to maintain the screening rate from the start of the initiative. The decline in the screening rate among the family medicine practices (from 67 percent in Phase 1 to 40 percent in Phase 2) reflects an adjustment in the screening protocol for these practices, wherein they now only administer the EPDS after a positive result on a two-question screener (i.e., the PHQ-2). The screens collected for the evaluation only include the EPDS.

**Mean EPDS Scores Remained Stable Over Time.** The mean EPDS scores, used to indicate high-risk status, were fairly consistent over time (Figure 3.20). Across all the practices, the mean score went from 6.1 during phase 1 to 6.5 during phase 2. The Magee outpatient clinics consistently had the highest mean EPDS score, followed by the family-medicine practices and then CHP.

**High-Risk Prevalence Also Remained Stable.** As noted earlier, the physical health practice sites have each specified an EPDS score to serve as an indicator of high-risk status. Of the screens conducted across all practice sites over both phases, 25 percent
fell into any practice’s high-risk range (score of 10 or higher); 12 percent were above all thresholds of high risk (score of 14 or higher) (Figure 3.21).
During phase 1, 13 percent of the screens met the high-risk cut point. The prevalence of high-risk screens rose slightly to 14 percent during phase 2 (Figure 3.22). The
family-medicine practices (which had the lowest high-risk cutoff point) had the highest proportion, with 18 percent of screens scoring a 10 or higher. The Magee outpatient clinics (which had the highest cut point) had nearly as many (16 percent) who screened at high risk for maternal depression. At CHP, the prevalence of high-risk screens was 8 percent.

**Stakeholder Groups Valued Systematic Screening Using an Evidence-Based Tool.** Despite the fact that systematic screening following the protocol created more paperwork and lengthened office visits, participating physical health partners unanimously endorsed its value and confirmed their commitment to continue screening (though, in some cases, less frequently than the protocol required). They found that universal screening “normalizes” maternal depression for all women and provides an opening for the physical health provider to discuss other related behavioral health issues and available resources for dealing with them. Physical health MCO care managers also noted the importance of having the screening score to help them gauge the severity of the referral.

**Referral**
For women who screened at high risk for maternal depression during phase 2, the physical health providers continued to complete fax referral forms and sent these to one of the physical health MCOs or the county Office of Behavioral Health if the woman was uninsured. The process was also expanded to include direct referrals to other programs and organizations (e.g., home-based service programs).

**Providers Reported Continued Increase of Referrals to MCOs.** With the final provider survey at the conclusion of phase 2, many more physical health providers reported that they had continued to increase referrals to physical health MCO care managers (Figure 3.23; $\chi^2 = 12.13$, $p = 0.02$). By the end of the initiative, the percentage of physical health providers who never made referrals had decreased significantly, from 58 percent to 34 percent.

**The Number of Referrals to Physical Health MCO Care Managers Nearly Doubled from Phase 1 to Phase 2.** Overall, physical health providers completed 665 referral forms during the course of the initiative (Figure 3.24). Referrals increased from 234 during phase 1 to 431 during phase 2. Several of the modifications made during phase 2 targeted the referral process, and it appears that these paid off with an increase in the number of referrals. CHP made a total of 218 referrals, with 100 during phase 1 and 118 during phase 2. The family-medicine practices increased referrals from 20 during phase 1 to 68 during phase 2. The Magee outpatient clinics more than doubled the number of referrals, with 114 during phase 1 and 245 during phase 2, for a total of 359 referrals.

Rates of referral to physical health MCO care managers also increased, from 47 percent in phase 1 to 65 percent in phase 2. The overall rate of referrals to physical health MCO care managers and the rate at each practice type increased during the
course of the initiative as the physical health providers became more accustomed to the initiative protocol and referral process and responded to the modifications made.
The larger number of referrals to MCO care managers increased the overall referral rate from 47 percent of high-risk screens during phase 1 to 65 percent during phase 2 (Figure 3.25). The referral rate increased dramatically at the family-medicine practices, going from 19 percent to 86 percent. The referral rate at CHP increased from 79 percent during phase 1 to 96 percent for phase 2. For the Magee outpatient clinics, the referral rate increased from 43 percent to 53 percent.

Looking at the prevalence of high-risk screens, we would expect that more than 1,100 referrals would have been sent to MCO care managers or the county Office of Behavioral Health during the initiative. Altogether, physical health providers completed 665 referral forms, with 86 percent of those being sent to one of the three MCOs. As noted earlier, there are several explanations why only 57 percent of the high-risk screens were referred to physical health MCO care managers. These include likely “baby blues,” refusals, and access to on-site behavioral health providers that made a referral unnecessary. Overall, the referring physical health providers indicated that more than one-half (51 percent) of the women referred during the initiative had a history of mental illness. According to the fax referral forms, physical health providers engaged in a variety of follow-up activities with high-risk women (activities that were not mutually exclusive). For example, physical health providers made appointments for 12 percent of the women who were referred. Seventeen percent of these women were referred directly to a behavioral health provider. Nearly one-quarter (23 percent) of the women were referred to a social worker at the practice.
For women who did not have health insurance, the physical health provider faxed the referral form to the Allegheny County Office of Behavioral Health. A care manager at the office followed up with these referrals. For nearly three-quarters of the referrals, the form indicated that the individual did not want to be contacted at all (51 percent) or wanted to contact a behavioral health provider on her own (20 percent). When the care manager contacted the women, 22 percent of them already had an appointment or were already engaged with a behavioral health provider or social worker.

**Providers Did Not Report Improvements in Follow-Up Communication from MCOs.** At the same time, the physical health providers did not report improvements in the frequency of follow-up communication from the physical health MCO care manager (Figure 3.26). The referral process put in place a regular mechanism for interaction between the physical health providers and the MCO care managers, which resulted in increased communication. However, while the percentage of physical health providers who never received follow-up communication improved from 48 percent to 40 percent during phase 1, it increased to 46 percent by the end of phase 2. It is worth noting that data collected from the MCOs suggest that care managers did consistently follow up with physical health providers. Given the long lag between referral and follow-up (due to the often numerous efforts made by care managers to reach high-risk consumers), it might have been that the faxes from the MCO care managers never reached the refer-
ring provider (or did not register with the physical health provider as being a response to the provider’s original referral).

**MCO Care Managers Contacted More Than One-Half of High-Risk Women Referred in an Average 25 Days.** After receiving the referral form from the physical health provider, the physical health MCO care managers attempted to contact the high-risk women referred to them by the physical health providers. Overall, the MCO care manager contacted more than one-half (53 percent) of these women. It should be noted that, for the referrals made toward the end of phase 2, the MCO care managers might not have had time to contact the women before the data-collection period ended.

For the high-risk women who were contacted, it took an average of 25 days after being identified by their physical health provider before the MCO care manager reached them (Figure 3.27). Overall, 30 percent of the women who were contacted were reached within one week of the referral. While there was some slight improvement from phase 1 to phase 2, the difference was not statistically significant. An additional 28 percent were reached within two to three weeks of the referral. When they were reached, some high-risk women were not interested in support from the MCO care manager. While 42 percent planned on making an appointment for behavioral health services on their own, one-fifth of the women who were reached denied the need for treatment. Other high-risk women were already receiving services (14 percent).

**Figure 3.27**
Timing of Managed Care Organization Contact with Consumer
Stakeholder Groups Had Mixed Views on the Initiative Referral Process. At the end of the initiative, participating partners reported that the referral process had established a standardized mechanism for interaction between the physical health providers and the MCO care managers, which increased communication. Some providers, particularly those at CHP, found it reassuring to know that someone else was trying to connect with women who had screened at high risk. The initiative protocol and strategies also opened communication channels between the physical health MCO care managers and Community Care and educated care managers about the range of resources and services available for women who screen at high risk for maternal depression. Although providers expressed an interest in continuing to refer high-risk women to physical health MCOs as appropriate, they recommended use of a more streamlined, electronic process. At most practices, there were multiple hand-offs throughout the process before the MCO care manager became aware of a woman’s high-risk status. In addition, the referral forms were viewed as cumbersome and introduced opportunities for delays and lost forms.

Engagement

Providers Found Initiative Training Programs Useful. Most providers reported that they were better able to identify the major issues related to treatment planning for maternal depression after the initiative training sessions on medications. Following the motivational interviewing training sessions, providers said they better understood the goals for the motivational interview and the barriers to engagement in treatment and viewed the process as a useful framework for addressing the barriers.

Nearly One-Half of High-Risk Women Referred to an MCO Care Manager Were Engaged in Behavioral Health Treatment. During phase 1, just over one-half (51 percent) of the women referred to a physical health MCO care manager had engaged in behavioral health treatment, as evidenced by a claim in the Community Care database. Women who were referred during phase 2, particularly toward the end, had less time to engage in treatment before the data-collection period ended. Nonetheless, 44 percent of the women referred to an MCO care manager during phase 2 ultimately received some form of behavioral health treatment by the end of the data-collection period (Figure 3.28). Although the percentage of referred women who engaged in behavioral health treatment decreased from phase 1 to phase 2, the absolute number of women increased.

Contacting High-Risk Women Quickly Increases Potential for Engagement in Treatment. Across both phases of the initiative, 37 percent of the women contacted by the MCO care manager received behavioral health treatment, compared to 27 percent of those who were not contacted. There was also some association between the timing of the contact between the care manager and the high-risk woman and engagement in behavioral health treatment. The probability of becoming engaged in behavioral health treatment decreases the longer it takes for the care manager to reach the woman.
Results

Forty-four percent of the women reached within one week became engaged in behavioral health treatment, compared to 29 percent of those reached after one week. These findings suggest that it is important to reach the women quickly since being reached by a care manager after a week has much less effect on engagement in behavioral health treatment.

**Consumer Engagement Rates Were Relatively Consistent Across Practice Types, Despite Other Differences.** Although practices used different cutoff scores for determining high-risk status and had variable resources for facilitating referral and engagement of high-risk consumers, engagement rates across practice types were relatively consistent (Figure 3.29). Nearly one-half (48 percent) of the women referred by the Magee outpatient clinics had engaged in behavioral health treatment. The engagement rate was nearly as high at CHP (45 percent) and the family-medicine practices (41 percent). The high rate of engagement at the pediatric practice is particularly notable given that the woman is not the provider’s patient and because the practice did not consistently have an on-site social worker to assist with making referrals and helping the woman engage in services. For family medicine, more high-risk women might be receiving treatment for maternal depression than is reflected in the engagement rate because providers might be prescribing antidepressants to treat the depression that would not be recorded in the Community Care claim data.

Among the 46 percent of referred women who had engaged in behavioral health treatment, 11 percent had only prereferral claims (meaning that they had received the behavioral health treatment before the high-risk screen and referral) (Figure 3.30).
Nearly one-fifth of those who were engaged had only postreferral claims on file, while another 16 percent had both pre- and postreferral claims. The remaining 54 percent of referred women did not have any claims on file with Community Care.
Among the women who had engaged in behavioral health treatment, there was some variation across the practices in the timing of behavioral health treatment claims (Figure 3.31). More than one-third (36 percent) of the engaged women from the family-medicine practices had claims for behavioral health treatment only from before the screening and referral. This compares to 23 percent of engaged women at the Magee outpatient clinics and 19 percent of engaged women at CHP. Nearly one-half (46 percent) of the engaged women from CHP had only postreferral claims, indicating that they had not received behavioral health treatment prior to being screened and referred by their child’s pediatrician. The percentage of engaged women who had claims both before and after their referral was similar across the practices.

**Women Contacted by an MCO Care Manager Within One Week of Referral Are Much More Likely to Engage in Behavioral Health Treatment.** On average, women became engaged in behavioral health treatment 83 days after identification and referral. However, some women received behavioral health treatment very quickly (Figure 3.32). More than one-quarter (26 percent) of engaged women received behavioral health treatment within one week of the referral to the MCO. Women who were contacted by a MCO care manager within a week of the referral were much more likely to have received behavioral health treatment than were those who were contacted more than a week after the referral.

There is some evidence of improvement in the time it took for women to become engaged in behavioral health treatment, which might have resulted from these efforts to provide more direct linkages between physical and behavioral health providers.

**Figure 3.31**
Timing of Claims for Women Engaged in Behavioral Health Treatment, by Practice Type
There was improvement along this dimension from phase 1, when only 14 percent of engaged women received treatment within a week, to phase 2, when more than one-third (35 percent) received behavioral health treatment within a week of being identified and referred. Despite this improvement, overall, the majority of women did not receive treatment within one week of referral to the physical health MCO care manager. Further, a significant portion of women in phase 2 (34 percent) received treatment more than two months after being identified and referred. Among these women, 15 percent received treatment between two and four months after referral, and 18 per-
percent received treatment between four and eight months after referral (only one woman received treatment more than eight months after referral).

During the initiative overall, 23 percent of the engaged women received treatment between one week and one month of referral and 11 percent received treatment one to two months after the referral. For a substantial minority (39 percent) of engaged women, it took more than two months after being identified and referred to receive behavioral health treatment (12 percent received treatment between two and four months of referral; 17 percent received treatment between four and eight months of referral; and the remaining 11 percent received treatment more than eight months after being identified and referred).

The Number of “Doses” of Service for High-Risk Women Who Had Been Referred Was Consistent from Phase 1 to Phase 2 (Figure 3.33). Among women who had postreferral claims for behavioral health treatment, the average number of claims was just over ten, with a range of one to 157 claims. For phase 2, 32 percent of women had one claim, 11 percent had two claims, 7 percent had three claims, 25 percent had four to eight claims, and 25 percent had more than eight claims. For the initiative overall, 11 percent of women with postreferral claims had three claims on file, 23 percent had between four and eight claims on file, and 26 percent had more than eight claims.

High-Risk Women Who Had Been Referred to Their MCO Care Manager Engaged in Various Types of Treatment (42 percent in outpatient mental health). Across both phases of the initiative, the high-risk women with postreferral behavioral health claims received a variety of different types of behavioral health treatment (Table 3.3). Among

Figure 3.33
Number of Postreferral Claims for Behavioral Health Services
Building Bridges

the 17 different types of postreferral behavioral health claims on file, outpatient mental health treatment (42 percent) and drug and alcohol treatment (14 percent) were the most prevalent. Some women also received blended mental health case management (7 percent), medication-related visits (7 percent), and mobile crisis intervention (4 percent). Consistent with phase 1, the other types of services received during phase 2 occurred at lower frequencies and included inpatient behavioral health services and methadone maintenance services.

Pilot Co-Location Efforts Reduced Number of Hand-Offs Between Screening and Engagement in Treatment. The collaborative undertook three co-location pilots during phase 2: supporting a community behavioral health provider in a small-volume OB/GYN clinic, a Community Care care manager in a busy pediatric practice, and a behavioral health interventionist in a large-volume OB/GYN clinic. By bringing behavioral health providers into the physical health care setting, the collaborative created a more direct link between the woman identified as at high risk for maternal depression and available supports, services, and treatment. While the co-located providers and the physical health practices found the experience worthwhile, they discovered that having a provider on site required time and effort for full integration into the clinic processes. At the Magee Outpatient Clinic–Clairton, the co-located behavioral health provider was not well utilized, in part because it was difficult to become an established part of the clinical process during the short pilot effort. It took about a month for clinic staff to begin making referrals and another month before they were able to integrate the behavioral health support into the clinic workflow.

Co-located behavioral health providers also need access to medical records and to be proactive in seeking out referrals. At CHP, referrals plummeted when the practice lost its social worker before picking back up again during the time when the collaborative supported a co-located behavioral health care manager. Aside from returning the referral rate to its prior levels, the co-location of a behavioral health care manager at CHP helped remove the stigma of going to an outpatient behavioral health treatment center. With her regular presence in the clinic, the behavioral health care manager

<table>
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<tr>
<th>Behavioral Health Treatment</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Overall</th>
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<tbody>
<tr>
<td>Outpatient mental health treatment</td>
<td>40</td>
<td>45</td>
<td>42</td>
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<tr>
<td>Drug and alcohol treatment</td>
<td>18</td>
<td>18</td>
<td>14</td>
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<td>Blended mental health case management</td>
<td>6</td>
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<td>Medication-related visits</td>
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<td>Mobile crisis intervention</td>
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was able to take advantage of multiple opportunities to reach women at high risk for maternal depression. While it took time to integrate the care manager into the clinic workflow, the care manager was being well-utilized by the end of the six-month pilot period. At the Magee Outpatient Clinic–Clairton, the co-located behavioral health provider was able to directly address some of the barriers to engagement, including stigma, negative experiences with treatment, and lack of a support system.

Stakeholder Groups Acknowledged Ongoing Challenges of Engaging Low-Income Women with Maternal Depression. Despite the initiative’s efforts to facilitate engagement of low-income women at high risk for maternal depression, physical health MCO care managers expressed frustration about their continued inability to reach this population in a timely manner via phone. They were not aware of any plan-based initiatives to enhance outreach to and engagement of high-risk consumers through alternative means. All stakeholders recognized the importance of acknowledging the multiple stressors in these women’s lives and the fact that behavioral health treatment might not be a priority when they have other, more concrete needs.

Summary of the Results of the Overall Initiative

Although it is not possible to disentangle specific cause-effect relationships among the strategies that were implemented as part of the initiative and the outcomes that were achieved, the results clearly show that, taken as a whole, the collaborative was successful in improving key organizational and clinical processes related to the achievement of its three aims, particularly as compared to relevant reference points (Figure 3.34).

Aim 1: To Improve the Identification of Maternal Depression Among Medicaid-Eligible Pregnant and Postpartum Women in Allegheny County. Between December 2007 and December 2009, physical health providers participating in the initiative conducted more than 8,500 screens of pregnant and postpartum women. Although the overall screening rate declined somewhat from phase 1 to phase 2, the overall 54-percent screening rate across all practices represents a significant accomplishment. The vast majority (86 percent) of participating physical health providers reported that they often, almost always, or always screened for maternal depression at a woman’s first prenatal-care or postpartum visit using a validated screening tool. Nonetheless, increasing the screening rate represents a clear target for continued quality improvement.

Aim 2: To Enhance Access to Available Resources and Services for Women Who Screen Positive for Maternal Depression. Among the nearly 1,200 women identified as high risk by a positive screen, 57 percent were referred by the provider to their physical health MCO care managers. Overall, the referral rate improved from 47 percent in phase 1 to 65 percent in phase 2. Participating physical health providers also reported an increase in the frequency with which they referred women who screened positive to physical health MCO care managers. Overall, MCO care managers were able to reach
just over half (53 percent) of their high-risk members. Improving this rate of contact and decreasing the average time between referral and first contact remain critical goals for the physical health MCO care managers.

**Aim 3: To Increase Engagement in Behavioral Health Treatment as Needed and Appropriate.** Nearly one-half (46 percent) of the high-risk women referred had engaged in behavioral health treatment at some point. While some of these women engaged in behavioral health treatment prior to the referral, 35 percent of referred women engaged in behavioral health treatment after being identified as being at high risk for maternal depression, which is considerably higher than the 20-percent engagement rate recently published for a similar population (Miranda et al., 2003). However, more work should be done to increase initial and sustained engagement in behavioral health treatment.

In other areas, the collaborative confronted challenges. For example, over the course of the initiative, it was difficult to ensure consistent and timely communic-
tion among those with shared responsibility for high-risk women. While the initiative protocol sought to open communication channels, in practice, the information did not always reach the individuals who needed it. Further, there was a considerable lag between a woman’s identification and referral and her ultimate engagement in behavioral health treatment, representing a target for continued quality improvement over time.
In this chapter, we summarize the key components of the collaborative’s strategy for achieving its aims and provide insights into what worked, what did not work, and why. This summary is followed by a list of the top ten lessons learned by the collaborative through its efforts to better serve low-income women at high risk for maternal depression. We also provide a brief review of related legislation and initiatives as a benchmark for gauging the collaborative’s progress to date and as a means of informing the development of practice and policy recommendations to sustain this progress. We conclude with some observations about the limitations of our work.

What Worked, What Did Not Work, and Why

Education and Training of Consumers and Providers

Materials and Programs. The collaborative undertook a range of activities to educate high-risk women, providers, and other interested stakeholders about maternal depression and the resources, programs, and services that are available locally for high-risk women and their families. Easy-to-read informational brochures and community resource lists were developed and disseminated to families and providers at participating physical health practices and posted on the initiative website. RUPHI team members participated in practice-based parenting support groups; conducted provider training on screening, referral, and engagement of high-risk women in behavioral health treatment; and organized several large public forums highlighting the lessons learned from the collaborative’s work and other related initiatives. Local experts led specialized workshops on treatment for maternal depression and motivational interviewing. Certainly, additional related efforts to educate consumers and families (e.g., in community locations) and to train providers could serve to enhance awareness of and appropriate responses to the causes and consequences of maternal depression.

Strategies to Enhance Interest and Participation. Although all participating partners were strongly encouraged to participate in the various training programs that were offered over the course of the initiative, participation was not required or enforced. Therefore, in an effort to ensure high rates of provider participation, the collaborative
offered on-site training for specific practices and MCOs, conducted multiple sessions of training programs in mutually convenient locations and at different times of the day, and provided continuing medical education (CME) credits for different professional groups. While competing professional commitments did prevent some partners from participating in the training sessions, they were not as significant as initially anticipated, and participation rates in the training remained high over the course of the initiative.

We note that all types of providers, including physical health practitioners, social work staff, care managers, and behavioral health specialists, have expressed high levels of interest in ongoing training on maternal depression, including related best practices, local referral processes, and enhancing consumer engagement in care. Creating opportunities for care managers to directly engage with consumers at high risk for maternal depression outside of the formal health care setting (e.g., at consumer support groups) could enhance their ability to connect with these women and make referrals to community services and treatment. Many local behavioral health providers, in particular, are not accustomed to treating depression in pregnant or postpartum women and are eager to receive more specialized training on evidence-based treatments—including pharmacological interventions—for maternal depression.

**Listening and Responding to Consumers’ Needs**

**Intensive Consumer Outreach and Specialized Care Management.** The collaborative designed the initiative protocol to focus on linking high-risk consumers with their physical health MCO care managers, who would work to ensure that these women received the supports, services, and treatment they need. Using the results of consumer focus groups conducted with women in our target population and other local research, the collaborative was aware of the range of social, economic, cultural, and experiential factors that can prevent low-income women from seeking help for maternal depression. Given these circumstances, the need for intensive outreach strategies and specialized care management is well established.

Indeed, these consumer needs appear to have been well anticipated when the Office of Medical Assistance Programs developed its requirements for the physical health MCOs. As noted in detail in Chapter Two, the HealthChoices agreement has numerous requirements intended explicitly to ensure “mutual intensive outreach efforts to Members identified as needing service” and “provisions which govern referral, collaboration and coordination of diagnostic assessment and treatment, prescribing practices, . . . and other treatment issues necessary for optimal health.”

Although the data showed that timely linkages between physical health MCO care managers and high-risk consumers were associated with enhanced rates of engagement in behavioral health treatment, the number of high-risk consumers who were successfully linked with their physical health MCO care managers remained disappointingly low. Once consumers left the physical health practice where they screened high
for maternal depression, physical health MCO care managers could not reach close to half of their high-risk members by phone. Even when the women could be reached, only some went on to receive treatment. We note that the physical health MCO care managers reported facing similar challenges with other members who screened at high risk for other chronic conditions and for whom care management and treatment are simply not a priority. Developing and testing alternative strategies for reaching and engaging these members should be a top priority for the local MCOs.

**Systematic Screening for Enhancing Provider-Patient Communication.** Importantly, physical health providers reported that systematic screening for maternal depression using a validated instrument has helped to “open the door” to talking with women about maternal depression as a universal issue rather than as a problem that is somehow unique to them. Providers felt more comfortable introducing maternal depression screening to women as “something they were now doing for all pregnant or new mothers,” and women appeared to be less anxious about being screened because they were not being “singled out” for any particular reason. This more open process of communication has also led to discussions of other important and often related issues, such as alcohol or drug abuse and intimate-partner violence, which were much more difficult to broach when screening for maternal depression was not a standard part of the clinical encounter.

**“Warm Transfers”—Good in Theory, Not Workable in Practice.** During these consumer-provider communications, some women expressed interest in being connected to a care manager or receiving behavioral health treatment. The collaborative attempted to capitalize on this situation by encouraging providers to “strike while the iron is hot,” i.e., to connect high-risk women with their MCO care managers while they were at the physical health practice. For many reasons, including lack of time, lack of consumer interest, and inability to make a phone connection, the physical health providers were unable to successfully execute this “warm transfer” strategy. As discussed in “Pathways and Infrastructure to Support Integrated Care,” additional efforts to co-locate care managers at pediatric practices and behavioral health specialists at OB/GYN practices show some promise for better meeting consumer needs in a more direct and timely fashion, but they are not without their own challenges.

**Consumer-Level Barriers.** In most cases, women with maternal depression face multiple stressors in their lives that make it difficult for them to focus on and seek care for behavioral health conditions. The physical and behavioral manifestations of their condition, on top of pregnancy or the responsibilities associated with parenting a newborn, result in unacceptably low treatment engagement rates for all women. The situation is even more complicated for low-income women. Some women believe that depression is a natural consequence of their life circumstances rather than a clinical condition and, therefore, not amenable to treatment. Others are wary of admitting they have a problem in case someone views them as unfit and attempts to take their children away. Still others are reluctant to take medications because they are concerned
that the side effects will impair their parenting, or they have not had positive behavioral health treatment experiences in the past, causing them to distrust the system. There is also the possibility that the types of treatment options currently available do not meet their preferences. Of course, in many cases, the decision not to seek treatment might just come down to competing priorities: “Do I catch the bus to get to my appointment on time, or do I wait in this line a little longer so the heat will be turned back on at home and the kids will be warm tonight?”

**Use of Evidence-Based Tools and Protocols for Screening**

**Increasing Identification of At-Risk Women.** A core initiative strategy for improving the identification of women at high risk for maternal depression was to support the implementation of regular screening with the use of a validated tool at high-volume Medicaid physical health practices in Allegheny County. The collaborative focused on OB/GYNs, pediatricians, and family-medicine practitioners because these health care professionals have regular access to pregnant women and mothers with children under age 1 and, as such, are in a unique position to intervene early and find out how they are doing. The collaborative provided participating practices with screening tools and other resources for triaging and referring women as appropriate and conducted on-site training programs related to these processes.

At the end of the initiative, providers from all participating practice types affirmed the value of routine maternal depression screening using a validated tool and shared their plans for continuing to conduct screening. This outcome illustrates an important progression in Allegheny County through which the boundaries of well-child care are expanding to include parental behavioral health issues. Prior to the initiative, maternal depression screening was considered by the physical health MCOs to be part of the standard intake process only for pregnant women and not for those with children under the age of 1 who are visiting their child’s pediatrician. Moreover, the use of validated screening tools was not required. Based on the results of the collaborative’s work, it is clear that women were identified as at high risk for depression who otherwise would not have been and that screening led to engagement in treatment for many women who would not otherwise have been served.

**Variations in Screening.** While all participating practices worked to incorporate regular screening using validated tools into their standard clinical processes, the way in which the screening protocol was implemented varied by practice. Most practices used the ten-question EPDS to detect a woman’s risk for depression, but they adopted various threshold scores for determining which women were positive and in need of referral. Cutoff scores ranged from 10 to 14 points, which falls within the range utilized in most validation studies. Based on all screens conducted, the prevalence of maternal depression among our target population was 25 percent using a cutoff score of 10 or higher and 12 percent using a cutoff score of 14 or higher. As noted previously, the practices participating in the initiative were reluctant to use a lower cutoff score
because of uncertainties regarding the system’s capacity to provide appropriate followup to all high-risk women who might be identified. The family-medicine practices, which utilized a cutoff score of 10, typically have in-house capacity to provide some form of antidepressant medication or behavioral health therapy.

Despite the recognized value of systematically screening all women for maternal depression, none of the practices was able to screen all women according to the schedule planned at the beginning of the initiative. Our largest participating OB/GYN practice found that the use of handheld laptops for women self-screening facilitated more regular screening if there were enough functional computers available. Generally speaking, providers are optimistic about the role of health information technology in supporting more widespread maternal depression screening, particularly if validated screening tools are incorporated into practice-based electronic medical records so that providers are automatically cued to conduct the screen during specific patient visits. Online scoring with links to referral options for those cases in which scores indicate the need for additional evaluation would make both the screening and referral processes close to automatic. For pediatric practices, issues related to incorporating a mother’s depression screen into a child’s medical record will need to be addressed.

**Strategies for Increasing Screening.** One strategy for improving the detection of maternal depression by health care providers who do not have time to administer the full EPDS would be to consider incorporating a brief maternal depression screening scale into regular health maintenance visits. Partway through implementation, the family-medicine providers participating in the initiative began using the PHQ-2 as an initial brief screen for maternal depression; the providers administered the EPDS only to patients who scored positive on the PHQ-2. Since the collaborative’s data collection was limited to use of the EPDS, we could not assess whether the initial use of a brief screen enhances overall screening rates, but it is reasonable to assume that this is the case. Moreover, it is possible that using a briefer version of the EPDS might actually prove to be a better way of identifying high-risk patients. In a recent study comparing the reliability, stability, and construct validity of the EPDS and three subscales of the EPDS (EPDS-3), researchers found that the three-question anxiety subscale of the EPDS exhibited the best screening performance characteristics and identified 16 percent more mothers as being depressed than did the full EPDS (Kabir, Sheeder, and Kelly, 2008). Future research involving a larger cohort of women spanning a wider age range is still required, as is establishing the criterion validity for the EPDS-3 by comparison with a psychiatric interview to ensure that the EPDS-3 did not identify other mental health problems (i.e., anxiety disorder) in the cohort of mothers that was studied.

Some payers have begun to reimburse providers for screening their patients with a standardized instrument. To pay for this service, states can reimburse providers for screening under the provisions of an existing federal Medicaid policy that allows providers to conduct risk assessments of children and pregnant women. Physicians who
identify women suffering from maternal depression also have access to free consultations with experts, information about referral services, and web resources through Medicaid. We note that, while the lack of specific reimbursement codes for maternal depression screening did not emerge as a barrier among the participating providers in the Allegheny County Maternal Depression Initiative, it is likely that reimbursement for screening would further enhance overall screening rates. In certain circumstances in which billing systems permit, it also has the added benefit of enabling monitoring of screening rates via claim data rather than chart review sampling, which is the current procedure in Pennsylvania.

Other strategies for advancing more widespread screening of low-income women can be readily envisioned. Such strategies might include training professionals to screen with validated instruments in other settings frequented by low-income women, such as Women, Infants, and Children centers, Temporary Assistance for Needy Families offices, and family support centers; incorporating screening into various types of home-based service programs; and organizing screening opportunities at health fairs and other related events in the community. In all cases, efforts to increase screening for maternal depression must be accompanied by actions to ensure adequate capacity for supporting, referring, and treating women who screen positive. Indeed, nothing more than additional screening will be accomplished unless there is a clearly defined referral process leading to an array of readily available services.

Pathways and Related Infrastructure to Support Integrated Care

To support systems partners in meeting their shared responsibilities and goals, the collaborative established clear communication pathways and information-sharing agreements among providers and plans and experimented with infrastructure supports to link high-risk consumers with appropriate services and treatment options.

**Improving Communication.** Generally speaking, the results of the evaluation confirm that it is easier to improve communication within systems (i.e., between physical health providers and physical health plans) than across systems (i.e., between physical and behavioral health plans), but both are challenging. Effective communication depends first and foremost on developing close working relationships across relevant stakeholder groups. The best way to develop these relationships is through ongoing face-to-face contact.

The method of communication is also critical. Fax transmissions between physical health providers and physical health MCOs, although useful for the initiative’s evaluation efforts, were not an effective way to communicate referrals of high-risk members (e.g., forms got lost, took too long to get to the right people).

Physical health providers said they would be willing to continue referring high-risk patients to physical health MCO care managers if a more reliable and efficient process could be used. Some MCOs suggested using existing tools, such as the obstetrical...
needs assessment form (ONAF),\(^1\) which was designed with a technology called TeleForm that allows the information to be faxed directly into a database, eliminating the need for manual data entry. Use of the ONAF would not be optimal from a systems perspective because only providers who treat pregnant women (not pediatricians) are required to use it, but it does offer an opportunity to capitalize on existing processes for part of the system to sustain some of the initiative’s activities. Over time, as health information technology continues to evolve, electronic communication (e.g., via an electronic medical record) with appropriate safeguards for protecting patient confidentiality might end up being the preferred method. Use of health information technology to improve communication and care coordination related to maternal depression would be wholly congruent with the federal government’s guidelines regarding “meaningful use” of information technology in health care (Hogan and Kissam, 2010).

**Care Coordination: A Two-Pronged Problem.** Another fundamental dilemma in effectively integrating care across systems is how best to coordinate the activities of all systems partners whose involvement is critical for the patient’s and family’s health. This dilemma has two dimensions. The first dimension relates to the number of steps that must be completed in order for the desired end result to be achieved. The second dimension relates to the “diffusion of responsibility,” which can occur when the involvement of many people is required in order for the desired end result to be achieved.

*“The Weakest Link in the Chain Is Also the Strongest; It Can Break It.”* The initiative’s desired end result was to get more women who are at high risk for maternal depression the help they need. Accomplishing this goal in a managed care system in which physical and behavioral health care are separate can require numerous steps because women are identified and referred in the physical health care system and typically treated in the behavioral health care system. Bridging this gap is challenging under any circumstances, but even more so for women who are suffering from depression, pregnant or the mother of a newborn, juggling multiple and perhaps higher priorities, and lack resources and support.

The initiative’s strategy of relying on the physical health MCO, in collaboration with Community Care, to provide a safety net for consumers as they attempt to bridge this gap offers important benefits for some women but clearly not most. The chain of hand-offs is simply too long, and there are too many potential weak links between consumer identification and successful engagement in treatment.

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\(^1\) The three local physical health MCOs developed a standardized ONAF in an effort to improve the way providers supply required information and to benefit providers by allowing them to complete only one form, regardless of which MCO the patient had chosen. Completion of this form alerts the MCOs of their members’ potential special needs and initiates case management. It also serves as a method for collecting data elements that the MCOs are required to report. Completion of the form is required at least three times after the initial diagnosis of pregnancy: at the first obstetrical visit (new form); at 28–32 weeks (update); at the six-week postpartum visit or if the patient is not seen within 12 weeks postpartum (update); and any time that the patient’s risk level changes (update).
The question then becomes this: Strengthen the links, or shorten the chain? The collaborative designed and tested strategies for both, and our conclusion is that neither is foolproof. More work can clearly be done in terms of strengthening the links: Referrals could happen more quickly via electronic communication; providers could be incentivized to complete warm transfers; MCO care managers could be incentivized to complete connections with high-risk consumers; and consumers could be incentivized to connect with their MCO care managers and engage in behavioral health treatment.

For shortening the chain, some alternative pathways to consider, with the high-risk woman’s consent, are direct referrals from the physical health provider to either Community Care or a local behavioral health provider or home-based service program. The former would be the preferred option for physical health practices, since it requires making one phone call for all women, but it still adds a link to the chain, which makes it prone to the same weaknesses as the physical health MCO link (i.e., inability to reach the consumer via phone, lapsed time between identification and treatment). The latter would place the entire responsibility for connecting high-risk women to appropriate services or treatment on the physical health practice, which would not only be burdensome in terms of time but would also require a level of knowledge about local service and treatment options that very few individual physical health practices currently have.

It is important to note that referrals of any type are unlikely to happen without in-house social work or care management support at the physical health practice. For example, CHP averaged ten referrals per month during phase 1 of the initiative when it had a full-time social worker on staff. Its referral rate dropped by half (down to five per month) during the first six months of phase 2, when the practice lost its social worker, but climbed back up to eight per month during the last six months of phase 2, when the social worker came back part time and a Community Care care manager was present. Even with such infrastructure supports, referral processes that require physical health care staff to select among numerous options, particularly those that are available outside of the formal health care system (e.g., home-based service programs), are not easy to incorporate into a clinic setting. Significant time and effort must be invested in educating physical health practice staff about the types of options that are available and how to access them and providing face-to-face networking opportunities for relevant staff to build closer working relationships. This can be a difficult feat when there are numerous programs and treatment options available, all with different eligibility criteria, target populations, and areas of focus. Some initiative partners have recommended establishing a central clearinghouse for receiving referrals of high-risk women and families from physical health providers and physical health MCOs and triaging them to the appropriate local home-based service program.

Another way to shorten the chain is to co-locate care management and behavioral health services in a physical health practice. While this strategy has the potential to meet the needs of high-risk women in a timely, family-friendly fashion, it is not guar-
Integration of new staff and functions into the workflow of any practice takes time, as does achieving a high enough volume of patients served to make these efforts sustainable over time. Ideally, care management staff should be in a position to support all high-risk women regardless of which MCO they have, and behavioral health specialists should be equal members of the care team with unrestricted access to the patient’s medical records.

“No One Raindrop Thinks It Caused the Flood.” The second dimension related to the challenge of effective cross-systems care coordination is the diffusion of responsibility. The diffusion of responsibility is a social phenomenon that occurs when many people are responsible for achieving the same desired end goal but responsibility is not explicitly assigned, monitored, and enforced. HealthChoices appears to have anticipated this challenge when it created the mechanisms and procedures for ensuring coordination among providers and MCOs and targeted them as “an area for review by the [behavioral health] MCO’s Quality Assurance Program and the [physical health] MCO’s Quality Management Program.”

Diffusion of responsibility is observed in three ways. The first way is when a group of people who, through action or inaction, allow events to occur that they would never allow if operating alone (Text Box 3.1 in Chapter Three). The second way is when a group of people working on a task lose motivation because other people working on the same task are unable to fulfill their responsibilities (e.g., physical health providers choose not to refer high-risk members to physical health MCO care managers because care managers are unable to connect with them). The third way is when staff are fulfilling their responsibilities to the best of their ability, supervisors are issuing the appropriate directives, and executives are meeting their contractual obligations, but the desired end result is still not achieved (e.g., physical health MCOs must have coordination agreements with providers ensuring “mutual intensive outreach efforts to Members identified as needing service . . . and the measurement of the outreach efforts,” yet 47 percent of high-risk members referred are not reached).

Through the establishment of a countywide initiative protocol, the collaborative made great strides toward explicitly clarifying the roles and responsibilities of key stakeholder groups in the context of managed care for maternal depression. As described in more detail under “Establishing Common Performance Measures and Shared Data Collection to Inform Ongoing Improvement,” the collaborative also helped to reinforce a sense of shared responsibility among systems partners through its ongoing data-collection, monitoring, and information-sharing activities.

Two areas that extended beyond the collaborative’s sphere of influence were establishing common standards for minimally acceptable performance and holding systems partners accountable for meeting these standards. These issues are addressed in Chapter Five, in which we present our recommendations to key stakeholder groups.

Information Sharing. A final set of issues that must be resolved if care is to be effectively coordinated across the physical and behavioral health care systems is related
to allowable information sharing under the Health Insurance Portability and Accountability Act of 1996 and related Pennsylvania legislation. While a physical health provider does not need a patient’s consent to share certain types of health-related information with her physical health MCO, the ability of multiple providers and plans to share patient or family information is limited without the patient’s consent. Although most stakeholders would agree that these distinctions are arbitrary and typically not in the best interest of patients or their families, heightened confidentiality concerns, particularly in relation to behavioral health records, require that extra attention be paid to these issues. In Allegheny County, under certain circumstances and within specific plans, these distinctions have been minimized, allowing open sharing of information across the physical and behavioral health systems.

The situation is even more complicated for pediatricians. Since the child is the pediatric provider’s patient, pediatricians cannot share health information about the mother without her consent. In addition, only some types of information related to the mother’s health status can be entered into the child’s chart. For example, a note that a screening for maternal depression took place and a referral was made can be recorded in the child’s chart. However, information about what takes place when the mother seeks care postreferral cannot. As our systems move toward a more coordinated, family-centered approach for addressing important health issues, such as maternal depression, it will be important for health care providers and plans to work together and with the full involvement of the mother and family to develop information sharing agreements for information that affects the health of the mother and of the child.

**Establishing Common Performance Measures and Shared Data Collection to Inform Ongoing Improvement**

As part of the evaluation of this initiative, the collaborative established performance measures for tracking improvements over time in relation to its three aims and developed collaborative processes for data collection and information sharing that involved patients, physical health practices, and the four local MCOs. The RUPHI project team collected the required data separately from each participating partner and aggregated and analyzed the information at regular intervals over the course of the initiative. The results and lessons learned were discussed at periodic all-partners meetings and among specific stakeholder groups. Using the information learned during these discussions, the collaborative designed and implemented various adaptations to its systems-change strategies over time.

**Seeing the Whole Problem, Not Just the Parts.** By providing systems partners with this unique opportunity, the collaborative was able to address important systems challenges that cut across individual practices and plans and to motivate all partners to address these challenges in a coordinated and collaborative fashion. Although some form of ongoing data collection and measurement is essential to the success of any quality-improvement effort, it is very rare that all partners in a system (especially those
who are market competitors) have the opportunity to collect and share information that highlights the performance of key components of the system as well as the system as a whole.

**Ongoing Quality Improvement.** As a general rule, all of the additional information that was collected by the initiative partners was also meant to support ongoing quality improvement within or across these organizations. For example, prior to the initiative, all OB/GYN practices in Allegheny County were required to send the ONAF for every pregnant patient to her physical health MCO, including information about whether the patient screened positive for depression. However, these forms did not include the actual screening score. In accordance with the initiative protocol, all participating physical health practices sent the EPDS score for high-risk women, along with additional information about whether, when, and how she would like to be contacted, to her MCO care manager. The MCO care managers found this information to be extremely helpful in connecting with and talking to their high-risk members. Since much of the data collection and all of the aggregation and analysis were handled by the RUPHI project team, these processes are unlikely to continue in their present form beyond the official end of the initiative.

**Ongoing Performance Measurement and Lines of Responsibility and Accountability.** Given these challenges related to care coordination and the diffusion of responsibility and the obvious need for continued improvement in all areas related to maternal depression screening, referral, and engagement, it is critical to strengthen and expand performance measurement and information sharing at both the state and county levels. Ideally, such activities should reinforce explicit stakeholder roles and responsibilities, establish minimally required performance standards, and hold all groups accountable for meeting those standards. Specific recommendations for achieving these goals are presented in Chapter Five.

Finally, it is important to note that, while the initiative’s shared data-collection process relied in large part on information that key stakeholders were already collecting as part of routine clinical care, in many cases, they were not collecting the data in a way that was amenable to evaluation or analysis, nor were they often using the information for ongoing improvement at the practice or plan level, either generally or in the specific context of maternal depression. The collaborative is hopeful that implementation of the recommendations presented in Chapter Five will motivate these organizations to enhance their internal quality-improvement efforts. Such efforts should be further facilitated as health information technology is more fully integrated into the maternal and child health care system.
Top Ten Lessons Learned

In order to identify and prioritize the most important lessons learned through this initiative, the RUPHI team compared the results of the stakeholder group discussions held at the end of the initiative with quantitative and qualitative results that were collected over the course of the initiative. The resulting lessons, listed in this section, should serve as useful guideposts for other community stakeholders seeking to improve their local systems of care so that more women at high risk for maternal depression can be identified and treated.

1. **There is no such thing as too much education or training on issues related to maternal depression, but training is not enough.** Some important areas of continued focus for provider education are use of evidence-based screening tools, referral and treatment options, and consumer engagement strategies, such as ongoing motivational interviewing skills and the use of patient-centered care principles. To improve overall service provision, these efforts must be part of a comprehensive quality-management system for all health care professionals.

2. **Numerous factors influence the needs and preferences of women who are at high risk for maternal depression.** Adequately addressing them will require multiple, responsive strategies that provide tangible and immediate benefits to families and treatment options that align with consumers’ belief systems and norms.

3. **Families’ negative views of or disappointing previous experiences with mental health services or referrals are pervasive and strong.** The best approach for changing the negative views already held by some women is to reengage with them in a way that is relevant, accessible, and culturally informed. To prevent additional women from developing negative views, efforts must be made to tackle the root of these problems through provider education and training and the development and application of quality measures to ensure that all women receive high-quality care.

4. **Physical health practices can integrate routine screening for maternal depression into the clinical care process.** Systematic screening using a validated tool—technologically supported, if possible—ensures early identification of women at high risk for maternal depression, normalizes the screening process for both consumers and providers, and opens the door to discussing important behavioral health and other issues that might otherwise not be recognized.

5. **Referrals within and across systems are difficult to execute.** Success depends on having the requisite practice-based infrastructure, building close working relationships among systems partners, fostering a deep sense of shared responsibility, and facilitating routine interactions. These components can be reinforced through the development of information-sharing agreements as needed and
appropriate, the use of available information technology, and a robust quality-management system.

6. **The more links in the chain from screening to referral to engagement in treatment, the more likely the chain is to break, but shortening the chain is not a guaranteed solution.** New strategies must be explored for strengthening critical linkages between physical health MCO care managers and high-risk consumers and between physical and behavioral health providers, practices, and plans. Forging these links requires trust, open communication, and access to all relevant information.

7. **Co-location can work if co-located providers are truly integrated into the care team.** Co-location is more convenient and thus patient-centered, but all providers must be able to access resources and information and maintain communication.

8. **Diffusion of responsibility in complex systems might not be completely avoidable, but it is remediable.** All systems partners must be fully supported in their efforts to carry out explicitly assigned roles and responsibilities and held accountable for their performance through routine assessment.

9. **Effective health care requires transparency and sharing of information among providers and patients.** Collaborative information-sharing approaches that include the mother and family while incorporating strict and appropriate privacy safeguards are required.

10. **Clear expectations, performance measurement, agreed-upon quality standards, and mechanisms for accountability are key drivers of systems improvement.** These activities should be advanced to the fullest extent possible at all levels, across systems, and with all available technology.

**Comparisons with Other Related Initiatives**

To inform the initiative’s activities and recommendations, and to provide a basis for comparison of our process and outcome results, the collaborative has closely followed related initiatives at the national, state, and local levels. A variety of efforts have relevance to the collaborative’s work on many levels. In terms of scope, they range from a broad set of strategies focused on the integration of behavioral and physical health, to a more focused orientation on depression in general, to a targeted focus on maternal depression. They also vary in the extent to which they deal with change at the practice level versus the systems level. In this section, we provide a summary of the legislation and initiatives that are of particular interest and relevance to the Allegheny County Maternal Depression Initiative.
National

Legislation. The Melanie Blocker Stokes Mom’s Opportunity to Access Health, Education, Research, and Support for Postpartum Depression Act was signed into law on March 23, 2010, in section 2952 of the Patient Protection and Affordable Care Act (Pub. L. No. 111-148) (MedEdPPD, 2010). The new law encourages research and public awareness for postpartum depression, requires a study on the benefits of screening, and creates a grant program to enhance services for women with or at risk for postpartum mental health conditions.

Out of State

Legislation. Several states have passed legislation that addresses maternal depression. In 2006, the New Jersey legislature passed a law mandating screening and education for depression for all new mothers (Senate, State of New Jersey, 2006). Currently, New Jersey is the only state with such a mandate. Other states considering legislation to mandate screening include New York, Connecticut, and Massachusetts; Minnesota passed a law in 2005 that requires health care professionals providing prenatal care to have information about postpartum depression available to their patients; and, in 2007, Illinois passed legislation requiring the director of Public Health to work with providers in the state to develop policies and procedures related to the prevention, treatment, and diagnosis of postpartum mood disorders in women (Perinatal Depression Information Network, 2009).

Quality Improvement. Beyond the 2007 legislation, Illinois is pursuing a number of strategies to address maternal depression that involve the Illinois Department of Healthcare and Family Services (HFS) and the University of Illinois at Chicago Perinatal Mental Health Project and its Director, Laura Miller. In late 2004, HFS began reimbursing Medicaid primary care providers for perinatal depression screening using an approved screening tool for pregnant women and women with children under the age of 1. The reimbursement pays for screening not only for pregnant and postpartum women who are covered by Medicaid, but also for those who are not eligible but whose infants are covered. The use of specific Current Procedural Terminology (CPT®) codes for maternal depression screening has the added benefit of enabling monitoring of screening rates via claim data rather than chart review sampling, which is the current procedure in Pennsylvania. The Perinatal Mental Health Project is providing consultation services and training to support provider screening and treatment. This includes a toll-free consultation line for physicians that Illinois has made available to Pennsylvania providers as well. We are not aware of efforts to monitor the use of the CPT codes or the consultation line.

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2 The CPT code set describes medical, surgical, and diagnostic services and is used to communicate information about medical services and procedures among physicians, patients, accreditation organizations, patients, and payers for administrative, financial, and analytic purposes. The set is maintained through the American Medical Association.
Miller is also leading several studies aimed at improving the detection and treatment of maternal depression. In one such study, she tested the feasibility of on-site diagnostic assessment and use of an algorithm to guide the treatment of women screening at high risk in a federally qualified health center (Miller, Shade, and Vasireddy, 2009). In this study, only 1.4 percent of patients refused the diagnostic assessment, and 72 percent received a diagnostic assessment on site. This compares very favorably with rates of engagement when women are referred to mental health sites for assessment and treatment, as well as the initiative’s engagement rates. She is also testing self-care methods that are based on cognitive-behavioral therapy and interpersonal therapy.

The DIAMOND Initiative in Minnesota is run by a broad-based collaborative seeking to address the identification and treatment of depression at a systems level by providing reimbursement for practice-based care management techniques based on the IMPACT model (Oftedahl, Solberg, and Trangle, 2007). Participating practices are recording the patient’s screen score at the time of diagnosis, the percentage of patients seen for follow-up at three and six months, and the screen scores at these points. A formal evaluation is currently under way. Since the Allegheny County Maternal Depression Initiative did not collect data on patients longitudinally, the collaborative is most interested to see whether this approach has a positive impact on patient outcomes.

The quality-improvement initiative that is perhaps most similar in terms of goals and approach to the Allegheny County Maternal Depression Initiative is the Cleveland Regional Perinatal Network’s Perinatal Depression Project in Ohio (Cleveland Regional Perinatal Network, undated). This project, beginning in 2005, followed from a local 2002 study that identified gaps in identification, access to care, and mental health services. Similar to the Allegheny County Maternal Depression Initiative, the network provided training to providers and developed a protocol for triaging women after screening. Additionally, a task force made up of Medicaid MCOs and perinatal and mental health providers addressed problems with referrals and access by developing a mental health referral fax form, reducing wait times for appointments and making available in-home intake for mental health services. The group tested prenatal screening and referral procedures at one site and plans to add a second site to its study. Although the numbers are quite low, the screening rate at the site (53 percent) was closely comparable to the initiative’s overall screening rate (54 percent). The Cleveland project is using a score of 12 or higher on the EPDS as an indication of high risk, and the proportion of high-risk screens at the study site was about 10 percent, consistent with the practices in the initiative that used the same cutoff point for the EPDS. To our knowledge, the network has not yet taken the next step of determining the rate at which patients identified as being at high risk actually engage in mental health treatment.
Pennsylvania

Legislation. There are two important bills related to maternal depression counseling and screening currently under consideration by the Pennsylvania legislature.

Senate Bill 151, the Prenatal and Postpartum Counseling and Screening Act, was introduced on January 30, 2009, by state senator Stewart Greenleaf (R-Montgomery) and 11 cosponsors. This bill requires a hospital, birthing center, physician, nurse-midwife, or midwife to provide to pregnant women, or at delivery, a fact sheet that includes common symptoms of the medical conditions of prenatal depression, postpartum depression, and postpartum psychosis and for emotional traumas associated with pregnancy and parenting. As of April 2010, it is being considered in the Public Health and Welfare Committee.

House Bill 1122, the Prenatal and Postpartum Counseling Act, was introduced on March 26, 2009, by state representative Vanessa Brown (D-Philadelphia) and 20 cosponsors. This bill, which is very similar to Senate Bill 151, requires that a hospital, birthing center, neonatal intensive care unit, pediatric ward, pediatric intensive care unit, physician, nurse-midwife, or midwife who provides prenatal care to a pregnant woman during gestation or at delivery of an infant or provides health care to a child up to one year of age must provide the woman with a fact sheet that includes common symptoms of the medical conditions of prenatal depression, postpartum depression, or postpartum psychosis and for emotional traumas associated with pregnancy and parenting. The facilities would also screen the woman for postpartum depression symptoms prior to discharge from the birthing facility and at the infant’s three-month, six-month, nine-month, and 12-month checkups. The Department of Health would adopt and promulgate rules and regulations necessary to carry out the purposes and provisions of this act. As of April 2010, it is being considered in the Health and Human Services Committee.

Performance Measurement. In Pennsylvania, the Office of Medical Assistance Programs established six statewide performance measures (three prenatal, three postpartum) to monitor screening and referral rates for HealthChoices prenatal and postpartum members (IPRO, 2008). Data on these measures have been collected for 2007–2009 by Improving Healthcare for the Common Good (IPRO), an independent not-for-profit health care consulting organization that works with federal and state governments, including the Pennsylvania Department of Public Welfare, and private corporations to optimize the quality of health care programs and the value of dollars spent on health care. Data are collected via chart review on a sample of participating Medicaid physical health practices across the commonwealth.

The collaborative has examined the 2009 Pennsylvania results as a basis of comparison for the initiative screening and referral data (Table 4.1). There are, however, a number of important differences in the types of practices involved in data collection and the definitions used that make direct comparisons between the two difficult. First, Pennsylvania uses separate measures for the prenatal and postpartum periods, while
Table 4.1  
Pennsylvania Perinatal Depression Measures Compared to the Allegheny County Maternal Depression Initiative Measures

<table>
<thead>
<tr>
<th>Screen Type</th>
<th>Measure</th>
<th>Denominator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prenatal and postpartum screening</td>
<td></td>
<td>First prenatal visits for OB/GYN; first prenatal, third-trimester, and postpartum visits (21–56 days after delivery) for family medicine; six specified well-child visits for pediatrics</td>
<td>Overall screening at specified visits = 54%</td>
</tr>
<tr>
<td>Allegheny County Maternal Depression Initiative</td>
<td>EPDS administered at specified intervals</td>
<td>Enrollees with a prenatal visit; enrollees with a postpartum visit (21–56 days after delivery)</td>
<td>2009 prenatal screen rate = 64%</td>
</tr>
<tr>
<td>Pennsylvania Performance Measures</td>
<td>Depression screen using (1) a formal tool, (2) provider questions, or (3) documentation of risk factors</td>
<td></td>
<td>Postpartum screen rate = 51%</td>
</tr>
<tr>
<td></td>
<td>Enrollees with a prenatal visit; enrollees with a postpartum visit (21–56 days after delivery)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-risk screens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allegheny County Maternal Depression Initiative</td>
<td>EPDS score of ≥14 (OB) or ≥12 (pediatrics) or ≥10 (family medicine)</td>
<td>Number of visits at specified visit types</td>
<td>Overall high-risk screen rate = 25%</td>
</tr>
<tr>
<td>Pennsylvania Performance Measures</td>
<td>Diagnostic confirmation of depression, scoring above a threshold, affirmative answers to self-harm questions, affirmative answers to risk-assessment checklist</td>
<td>Enrollees who had a prenatal care visit depression screening; enrollees who had a postpartum-care visit depression screening</td>
<td>Positive prenatal screen rate = 30% Positive postpartum screen rate = 17%</td>
</tr>
<tr>
<td>Evaluation, treatment, or referral</td>
<td></td>
<td>All</td>
<td>Positive screen for depression and evidence of referral = 57%</td>
</tr>
<tr>
<td>Allegheny County Maternal Depression Initiative</td>
<td>Documentation of a referral to a physical health MCO care manager, Community Care, social worker, or behavioral health provider</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania Performance Measures</td>
<td>Positive screen at the prenatal or postpartum visit and evidence of further evaluation, treatment, or referral for treatment</td>
<td>Enrollees who screened positive for depression at a prenatal or postpartum-care visit</td>
<td>Positive screen for prenatal depression and evidence of evaluation, treatment, or referral = 52% Positive screen for postpartum depression and evidence of evaluation, treatment, or referral = 68%</td>
</tr>
</tbody>
</table>

NOTE: Data on the Pennsylvania perinatal depression measures were provided to the RUPHI project team by Office of Medical Assistance Programs officials.
the collaborative combined prenatal and postpartum data. Second, the state prenatal screening rate of 64 percent is based on a measure that does not require the use of a formal screening tool and requires screening only at any one visit during the prenatal period.

In contrast, the initiative’s screening rate of 54 percent reflected use of an evidence-based screening tool and screening at the visits outlined in the initiative protocol. Third, the state postpartum screening measure applies only to OB/GYN and family-medicine practices and does not include multiple screens during the child’s first year at a pediatric practice. Fourth and finally, the Pennsylvania referral measure looks at the rate at which women who have screened positive for depression are evaluated, treated, or referred for treatment (52 percent prenatal, 68 percent postpartum). The initiative measured referral and treatment separately with an overall referral rate of 57 percent. This rate is based on the number of high-risk screens and might require multiple referrals for the same individual, whereas the Pennsylvania measure requires only evidence of a single referral during the prenatal or postpartum period. We note that the difference in prevalence rates for maternal depression are likely to reflect variations in the rigor with which these rates were measured: 30 percent using Pennsylvania’s less rigorous measures and 24 percent using the initiative’s more rigorous overall measures.

Several other important initiatives are also under way in Pennsylvania. The Pennsylvania Perinatal Partnership’s (PPP’s) Perinatal Depression Project commenced in January 2006 and focuses on five program components: Provider Training, Resource and Capacity Development, Innovative Approaches to Care, Public Awareness Campaign Planning, and Statewide Planning for Systems Change (Pennsylvania Perinatal Partnership, undated). Members of the PPP include seven Healthy Start projects and ten Title V Maternal and Child Health programs in Pennsylvania.

The component of PPP’s work that is most comparable to the work of the initiative is the Innovative Approaches to Care effort. Through several demonstration projects, PPP has been testing approaches to address delays and barriers to care for women with perinatal depression. In one such effort, nearly 100 maternal and child health workers were trained in dialectical behavior therapy (DBT) skills in order to support women and their families through screening, treatment, and recovery. In Allegheny and Fayette counties, 50 people were trained over 13 sessions in 2004, and additional booster training sessions were provided. While an evaluation of the impact of the training on the women served has not been done, the staff who received the training demonstrated increased knowledge of DBT in post-training testing and reported increased confidence in addressing mental health issues and reduced job-related stress. PPP has also funded demonstration projects to test sustainable models for co-locating mental health and maternal child health services, including the Allegheny County Healthy Start demonstration.

Another component of the PPP’s work was piloting a psychiatric consultation line to support physicians treating pregnant and postpartum women who might need
psychiatric medications as a part of treatment for depression. In order to test the potential demand, PPP partnered with the Perinatal Mental Health Project to give Pennsylvania physicians free access to the Illinois consultation line. The service was advertised during PPP-sponsored audio conferences and training sessions and through the Allegheny County Maternal Depression Initiative. Despite this advertising, there were only eight calls from Pennsylvania providers in 2007. The PPP concluded that this low volume did not warrant an investment in the establishment of a Pennsylvania service as long as the Illinois line continued to be available to Pennsylvania providers.

The IMPLICIT Network is a collaboration of 18 family medicine residency programs initiated in the fall of 2003 to reduce the rates of prematurity and low birth weight. The four family-medicine practices in Allegheny County that are participating in IMPLICIT are also partners in the Allegheny County Maternal Depression Initiative. Identification and treatment of maternal depression is one of IMPLICIT’s six targets for continuous quality improvement. Data were gathered at baseline and at regular intervals thereafter to measure changes in screening rates resulting from the implementation of guidelines, regular meetings, and other activities. Data collected through 2007 indicate that the practices were able to substantially increase the rate at which they screened patients at the 15-week prenatal visit (80–90 percent) but did not show similar gains in postpartum screening, which stayed essentially flat (50–60 percent) (Bennett, Coco, Anderson, et al., 2009). The network has continued to work on the postpartum screening rate and will have additional results to report. The IMPLICIT Network also published findings on the validity of the PHQ-2 to identify women at high risk for maternal depression so that a more extensive assessment of women unlikely to have major depression could be avoided (Bennett, Coco, Coyne, et al., 2008; see also Chapter Two). This is an important finding as busy practices consider whether to initiate universal screening and what type of instrument they might use.

Finally, the Pennsylvania Chronic Care Management, Reimbursement and Cost Reduction Commission was formed under Governor Ed Rendell’s Prescription for Pennsylvania in 2007 and charged with developing a strategic plan to implement elements of the Chronic Care Model and the Patient-Centered Medical Home™ on a region-by-region basis across the state (Chronic Care Management, Reimbursement and Cost Reduction Commission, 2008). The commission decided to begin with a focus on diabetes and its related comorbidities, including depression, and pediatric asthma. The first regional roll-out of the project started in May 2008 in the southeast, the second occurred in June 2009 in the south-central region, and planning is under way in the southwest and northeast. Each region will have a learning collaborative made up of providers and insurers (at least two for each collaborative) to share knowledge and practices, and providers will utilize a common registry. Early results indicate that there have been improvements in a number of aspects of diabetes and asthma care, but results on care for depression or other comorbidities have not been released. This initiative has the potential to improve care for depression through greater integration of
physical and behavioral health, care management, and the use of tracking tools, such as registries.

**Allegheny County**
Locally, the collaborative has looked to work by the Healthy Start program to increase engagement of pregnant women in treatment of depression by co-locating a behavioral health provider at a Healthy Start office (Sit et al., 2009). While there was a marked improvement in engagement rates over standard referrals to behavioral health, only about half of the women identified as being at high risk came for an assessment, and only half of those came for any follow-up care.

Another local initiative of interest is the HealthChoices primary care and behavioral health integration effort. This group, made up of the three physical health MCOs and the behavioral health MCO operating in Allegheny County (which are also key partners in the Allegheny County Maternal Depression Initiative), is working to address common issues through multiple improvement projects. RUPHI team members from the initiative have taken part in several of the group’s meetings, and the dialogue among the MCOs has informed the collaborative’s ongoing work.

**Limitations**

**General Limitations of Community-Based Quality-Improvement Initiatives**
By definition, community-based quality-improvement initiatives do not adhere to the gold standard of research: They are not conducted in carefully controlled laboratories, and they do not randomly assign participants to treatment or control groups. For the most part, community-based quality-improvement initiatives are designed to solve a unique problem in a specific location or to understand what changes are required in order to solve it. Although it is not likely that any one community-based initiative can be replicated in its entirety in another community or that the exact results will be achieved, it is possible that the lessons derived from a community-based quality-improvement initiative can be used to solve similar problems in different contexts and to advance broader efforts to improve overall systems performance.

It is to this end that the collaborative designed the Allegheny County Maternal Depression Initiative, paying careful attention to document, implement, and evaluate a clear set of methods and strategies that can easily be adapted and applied to other communities in Pennsylvania that seek similar improvements, and to disseminate detailed findings regarding what worked, what did not work, and why, which are intended to inform policy and practice change at the state level.

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3 This information was obtained through participation by two RUPHI team members at one of the group’s meetings to discuss the Allegheny County Maternal Depression Initiative.
Specific Limitations of the Allegheny County Maternal Depression Initiative

These efforts notwithstanding, there are several limitations with regard to the design of the initiative, which we report in this section.

First, because depression screening scores were not tracked at the individual level, the RUPHI team was unable to evaluate whether high-risk women’s depressive symptoms improved over time or after exposure to the specific elements of the initiative protocol (e.g., contact with a physical health MCO care manager, engagement in behavioral health treatment). This tracking system also prevented the results of the initiative evaluation from offering definitive guidance on the most appropriate cutoff score for the EPDS. Such a determination would require individually tracked screening scores and associated follow-up diagnostic information in order to calculate the sensitivity and specificity of various cutoff scores. Since the collaborative’s primary interest was to improve the processes related to screening, referral, and engagement, and not necessarily the progression of any individual woman’s depressive symptoms in relation to those processes or the diagnostic utility of an evidence-based screening tool, these limitations were not of major concern to the collaborative.

Second, there were a number of limitations associated with the initiative’s primary data-collection activities. The surveys used to assess the organizational indicators in the evaluation relied on samples of convenience: The snowball method of sampling used for the provider and care manager surveys capitalized on the involvement of those stakeholders who were most willing and able to share their perspectives on initiative activities. Further, the provider surveys focused on provider attitudes and behaviors associated with the initiative protocol and offered less information about provider attitudes toward the target population. This additional information might have been useful in deriving recommendations about continued training and education related to cultural competency. The training evaluations were relatively narrow in their scope and primarily measured participant satisfaction with the training. Data on the impact of the training on provider practice behaviors would have yielded more definitive information on the effectiveness of the initiative training. While the initiative benefited greatly from hearing the perspectives of the women from the target population who were represented in the consumer focus groups, additional opportunities for consumers’ voices to be heard might have provided further insights into the initiative activities and resulting recommendations. Finally, the initiative activities were setting-based rather than population-based. Our results are accordingly influenced by the characteristics and specifications of the settings in which the initiative took place. As such, the results associated with the organizational and clinical indicators might not be fully representative of the larger groups (e.g., target population, providers, care managers) to which these individuals belong, both within their organizations and across the county and the commonwealth.

Third, the collaborative used claim data from Community Care to measure engagement; therefore, we had to confine our definition of engagement to only those
services for which Community Care pays. As these services do not include all possible behavioral health services made available through the initiative (e.g., involvement with local home-based service programs) and in which a member might be involved, the engagement rates presented in this study might underestimate the degree to which the target population was involved with a wider variety of supports, services, and treatment. Though the initiative did include activities related to increasing the accessibility of behavioral health care through two co-location efforts, the timing and scope of these activities prevented their inclusion in the larger evaluation of the initiative results.

Finally, as noted earlier, the initiative was not designed to generate data that could be used to make causal inferences. High-risk women were not randomly assigned to specific conditions; rather, all women served by the participating physical health providers in the Medicaid population in Allegheny County were exposed to the initiative protocol during the time it was active. While the lack of random assignment limits the degree to which we can infer whether the implementation of protocol activities caused outcomes associated with screening, referral, and engagement, this naturalistic approach increased the degree to which the activities are likely to be sustained, which was a primary goal of the collaborative’s work.
Over the course of the Allegheny County Maternal Depression Initiative, many individuals have worked to effect changes in the local systems of care that would benefit women in the community who are at risk for maternal depression. Using the tools and resources already existing or developed for this initiative, we have positively affected the lives of many women in Allegheny County. The task before us now is to increase the likelihood that successful components of the initiative will continue and spread and that the remaining challenges will be effectively resolved. In this concluding chapter, we comment on the forces that have sustained the collaborative’s work over time, present our recommendations for advancing the improvements that have been achieved over the course of the initiative, and outline next steps currently under way to expand the collaborative’s systems-change process in Allegheny County.

**Sustainability of the Collaborative’s Work**

Over the years, the mainstays of sustainability for the collaborative’s work have been our shared vision of an ideal system of care for mothers and young children in our community and the long-term commitment of key stakeholders to continue striving for this vision. The consumers and patients in Allegheny County have kept the collaborative focused on what systems change is really all about—improving the lives of the people the system is intended to serve. Providers, practices, and MCOs in Allegheny County, from both the physical and behavioral health systems, have been willing to work together to tackle tough issues for which solutions are not readily apparent. Local and state purchasers and policymakers and the larger community have provided the steadfast leadership, guidance, and support that have enabled the collaborative to evolve into an important catalyst for systems change both locally and across the commonwealth.

In this role as catalyst, the collaborative can identify and temporarily modify some of the organizational and structural barriers that prevent a system from achieving the desired end results, but it cannot overcome them entirely without additional actions by key policymakers, purchasers, and payers at the state level.
Informed by the results and lessons learned from the Allegheny County Maternal Depression Initiative and other related efforts, the RUPHI team has developed a set of recommendations that, if acted on, would address some of the important remaining systems challenges related to the identification and treatment of maternal depression.

Recommendations for Policy and Practice Change

Given the long-term, significant impact that maternal depression can have on maternal, child, and family health, the priority the state has placed on bridging existing gaps between physical and behavioral health care in the Medicaid system, and the obvious need for continued improvement related to maternal depression screening, referral, and engagement in treatment, the RUPHI team offers four sets of practice and policy recommendations:

- recommendations to improve identification of maternal depression (Table 5.1)
- recommendations to enhance access to available resources and services for women who screen positive for maternal depression (Table 5.2)
- recommendations to increase engagement in behavioral health treatment as needed and appropriate (Table 5.3)
- recommendations to improve overall systems performance in relation to maternal depression screening, referral, and engagement in treatment (Table 5.4).

For each area of policy and practice, we present separate recommendations by stakeholder group as relevant. Stakeholder groups for which recommendations are made include the following:

- Pennsylvania General Assembly
- Pennsylvania Department of Public Welfare, Office of Medical Assistance Programs
- Pennsylvania Department of Public Welfare, Office of Mental Health and Substance Abuse Services
- Pennsylvania Department of Health and the federal Maternal and Child Health Bureau
- HealthChoices physical health MCOs
- HealthChoices behavioral health MCOs
- physical health practices and providers in the HealthChoices network
- behavioral health practices and providers in the HealthChoices network.

The recommendations vary with regard to their level of specificity. These variations reflect the strengths and limitations of the initiative’s evaluation design, the nature of the lessons learned based on the information that was available, current knowl-
Table 5.1
Recommendations to Improve Identification of Maternal Depression

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| Pennsylvania General Assembly | Universal screening is the first step in a comprehensive state strategy designed to ensure that more women with maternal depression receive services as needed and appropriate. However, nothing more than additional screening will be accomplished without adequate capacity and explicit processes for referring women who screen positive for maternal depression to an array of accessible, effective, and culturally informed services that meet their needs and preferences. In this context, we recommend the following:
A. Mandate universal screening for maternal depression, irrespective of insurance coverage.
B. Legislation mandating universal screening should also ensure that (1) the Department of Public Welfare and the Department of Insurance develop adequate capacity for timely referrals and treatment of publicly and privately insured pregnant and postpartum women who screen positive for maternal depression and (2) the Department of Public Welfare and the Department of Insurance, along with the Department of Health, are involved in adopting and promulgating rules and regulations necessary to carry out the purposes and provisions of this legislation. |
| HealthChoices physical health MCOs | A. Establish maternal depression screening requirements for network providers who serve pregnant and postpartum women. These requirements should be consistent with evidence-based screening practices and professional organization standards and specify (1) validated screening tools acceptable for use, (2) appropriate screening intervals, and (3) a common threshold for identifying probable maternal depression.
B. Revise existing perinatal depression measures or create new measures that align with evidence-based practices and standards for maternal depression screening.
C. Set explicit targets for improving the rate of maternal depression screening across network providers who serve pregnant and postpartum women.
D. Establish reporting, monitoring, and feedback systems to assess and improve the maternal depression screening performance of network providers.
E. Develop, implement, and evaluate various strategies to support network providers in meeting and exceeding their performance goals. |
| Physical health practices and providers in the HealthChoices network | A. Accelerate efforts to screen all pregnant and postpartum women with an acceptable validated screening tool, at the appropriate intervals, and using a common threshold for identifying probable maternal depression.
B. To the extent possible, incorporate an acceptable, validated maternal depression screening tool into the practice's electronic medical record. |

edge in the field with regard to related best practices, and careful consideration as to which stakeholder groups are best positioned to make critical decisions. In all cases, the recommendations are consistent with policy statements and guidelines endorsed by national organizations and professional associations, such as the Institute of Medicine, the U.S. Surgeon General’s Office, the U.S. Preventive Services Task Forces, the American Congress of Obstetricians and Gynecologists, the American Academy of Family Physicians, the American Academy of Pediatrics, the American Psychiatric Association, and the American Psychological Association.
Table 5.2
Recommendations to Enhance Access to Available Resources and Services for Women Who Screen Positive for Maternal Depression

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania Department of Public Welfare, Office of Medical Assistance Programs and Office of Mental Health and Substance Abuse Services</td>
<td>The HealthChoices agreement has extensive requirements for written agreements and protocols related to access and coordination among physical and behavioral health MCOs and providers (see Text Box 2.1 in Chapter Two). These requirements are intended to maximize outreach efforts to members identified as needing services and to facilitate referrals and continuity of care as needed. The Department of Public Welfare regularly reviews these agreements and protocols. However, significant challenges remain with regard to ensuring successful outreach to members with maternal depression and their subsequent access to needed services. In this context, we recommend the following: A. Review and revise the current requirements in order to ensure their appropriateness for meeting the outreach and access needs of pregnant and postpartum members who screen positive for maternal depression. B. More explicitly delineate the roles and responsibilities of MCOs and network providers for implementing the revised requirements. C. Strengthen the current review process by establishing performance measures to properly assess the extent to which contractual requirements lead to (1) successful outreach to pregnant and postpartum members who screen positive for maternal depression and (2) improved service access as needed by these members. D. Develop, implement, and evaluate various strategies to support MCOs in meeting the contractual requirements.</td>
</tr>
<tr>
<td>HealthChoices physical and behavioral health MCOs</td>
<td>A. Establish explicit collaborative procedures involving MCO care management staff and network providers for making, receiving, and handling referrals of pregnant and postpartum members who screen positive for maternal depression. These procedures should include (1) an appropriately safeguarded electronic means for sharing necessary patient information among all relevant parties; (2) effective strategies for connecting with members, assessing their needs and health status, and responding appropriately; and (3) provision of timely feedback to referring providers on patient status and relevant outcomes. B. Revise existing perinatal depression measures or create new measures that align with the established referral procedures. C. Set explicit targets for increasing referrals of pregnant and postpartum members who screen positive for maternal depression to MCO care managers and behavioral health or other service providers as appropriate and for improving the process through which these referrals are handled. D. Establish reporting, monitoring, and feedback systems to assess and improve the referral performance of network providers and MCO care management staff. Incorporate measures of provider, MCO care management, and member satisfaction in the ongoing review process. E. Develop, implement, and evaluate various strategies to support network providers and MCO care management staff in meeting and exceeding their performance goals. F. Review member incentive and reward programs for opportunities to further encourage pregnant and postpartum women who screen positive for maternal depression to connect with their MCO care managers on a regular basis.</td>
</tr>
<tr>
<td>HealthChoices physical health MCOs</td>
<td>Revise the ONAF to include the EPDS or other acceptable depression screening score for all pregnant women.</td>
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Evaluate the benefits of placing a behavioral health care manager in large-volume physical health practices. Develop a detailed plan for (1) integrating the individual or function into the practice's workflow and providing access to relevant information systems; (2) fully utilizing motivational interviewing techniques and patient-centered principles, with a strong focus on addressing the member's tangible social support needs (e.g., transportation, child care); and (3) assessing patient and family outcomes for engagement in behavioral health services or appropriate alternatives. To enable physical health providers to become sufficiently familiar with the access requirements and range of services and providers available through the behavioral health network, allow the co-location strategy to achieve its maximum level of implementation (at least one year) before making a final assessment of its value and sustainability (see discussion of co-location pilot results in Chapter Four).

Accelerate efforts to refer pregnant and postpartum women who screen positive for maternal depression to physical and behavioral health MCOs, behavioral health providers, and community resources and services (e.g., home-based service programs) as needed and appropriate.

The HealthChoices agreement has extensive requirements for written agreements and protocols related to access and coordination among physical and behavioral health MCOs and providers (see Text Box 2.1 in Chapter Two). These requirements are intended to facilitate members’ access to diagnostic assessment and treatment, prescribing practices, and other treatment issues necessary for optimal health. The Department of Public Welfare regularly reviews these agreements and protocols. However, significant challenges remain with regard to engaging members with maternal depression in behavioral health treatment as need and appropriate. In this context, we recommend the following:
A. Review and revise the current requirements in order to ensure their appropriateness for meeting the treatment engagement needs of pregnant and postpartum women who screen positive for maternal depression.
B. More explicitly delineate the roles and responsibilities of MCOs and network providers for implementing the revised requirements.
C. Strengthen the current review process by establishing performance measures to properly assess the extent to which the contractual requirements lead to engagement of members with maternal depression in behavioral health treatment.
D. Develop, implement, and evaluate various strategies to support MCOs in meeting the contractual requirements.
A. Establish explicit collaborative procedures involving MCO care management staff and network providers for facilitating engagement in behavioral health treatment among pregnant and postpartum members who screen positive for maternal depression. These procedures should include (1) an appropriately safeguarded electronic means for sharing necessary patient information among all relevant parties; (2) effective strategies for connecting with members, assessing their needs and health status, and responding appropriately; and (3) provision of timely feedback to referring providers on patient status and relevant outcomes.

B. Revise existing perinatal depression measures or create new measures that align with the established engagement procedures.

C. Set explicit targets for increasing engagement in behavioral health treatment for pregnant and postpartum members who screen positive for maternal depression.

D. Establish reporting, monitoring, and feedback systems to assess and improve the performance of network providers and MCO care management staff specific to engaging members who screen positive for maternal depression in behavioral health care. Incorporate measures of provider, MCO care management, and member satisfaction in the ongoing review process.

E. Develop, implement, and evaluate various strategies to support network providers and MCO care management staff in meeting and exceeding their performance goals.

F. Review member incentive and reward programs for opportunities to further encourage pregnant and postpartum women who screen positive for maternal depression to engage in behavioral health treatment as needed and appropriate.

G. In cases in which pregnant or postpartum women who screen positive for maternal depression will not accept a referral for outpatient mental health treatment, utilize and assess the cost-effectiveness of engaging them in home-based service programs or other nonmedical community programs.
The combined negative impact of the attributions of illness, difficult life circumstances (e.g., poverty), demands of infant caretaking, and unfavorable perceptions or past experiences with the behavioral health system too often impede access to treatment for women with maternal depression. Overcoming these barriers would lead to maternal recovery and healthy early child development. In this context, it is critical to ensure adequate, sufficiently skilled psychiatric capacity to meet HealthChoices’ access standards and the treatment needs of pregnant and postpartum members with depression. Strategies to consider include the following:

A. As rates of maternal depression screening increase, retest the utility and cost-effectiveness of a statewide telephone consultation service operated by psychiatrists to support providers (e.g., family-medicine and other primary care practitioners) on issues related to diagnoses, treatment options, medications, and alternative therapies for pregnant and postpartum members who screen positive for maternal depression.

B. Test the effectiveness and long-term viability of telephone and in-home mobile psychotherapy for pregnant and postpartum members who screen positive for maternal depression, as well as more innovative approaches, such as offering web-based cognitive behavioral therapy in multiple, family-friendly settings.

C. Evaluate the benefits of placing a behavioral health specialist in large-volume physical health practices. Develop a detailed plan for (1) integrating the individual or function into the practice’s clinical workflow and providing access to relevant information systems; (2) fully utilizing motivational interview techniques and patient-centered principles; and (3) assessing patient and family health outcomes and satisfaction. Allow the co-location strategy to achieve its maximum level of implementation (at least one year) before making a final assessment of its value and sustainability (see discussion of co-location pilot results in Chapter Four).

D. Develop mechanisms for obtaining input from pregnant and postpartum members who screen positive for maternal depression on alternative service options that meet their needs and preferences.

Explore opportunities to co-locate behavioral health specialists at nearby physical health practices that currently do not have in-house behavioral health capacity. Develop a detailed plan for (1) integrating the individual or function into the practice’s clinical workflow and providing access to relevant information systems; (2) fully utilizing motivational interviewing techniques and patient-centered principles; and (3) assessing patient and family health and satisfaction. Allow the co-location strategy to achieve its maximum level of implementation (at least one year) before making a final assessment of its value and sustainability (see discussion of co-location pilot results in Chapter Four).

<table>
<thead>
<tr>
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<tr>
<td>HealthChoices behavioral health MCOs</td>
<td>The combined negative impact of the attributions of illness, difficult life circumstances (e.g., poverty), demands of infant caretaking, and unfavorable perceptions or past experiences with the behavioral health system too often impede access to treatment for women with maternal depression. Overcoming these barriers would lead to maternal recovery and healthy early child development. In this context, it is critical to ensure adequate, sufficiently skilled psychiatric capacity to meet HealthChoices’ access standards and the treatment needs of pregnant and postpartum members with depression. Strategies to consider include the following:</td>
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<tr>
<td>Behavioral health practices and providers in the HealthChoices network</td>
<td>Explore opportunities to co-locate behavioral health specialists at nearby physical health practices that currently do not have in-house behavioral health capacity. Develop a detailed plan for (1) integrating the individual or function into the practice’s clinical workflow and providing access to relevant information systems; (2) fully utilizing motivational interviewing techniques and patient-centered principles; and (3) assessing patient and family health and satisfaction. Allow the co-location strategy to achieve its maximum level of implementation (at least one year) before making a final assessment of its value and sustainability (see discussion of co-location pilot results in Chapter Four).</td>
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### Table 5.4
**Recommendations to Improve Overall Systems Performance in Relation to Maternal Depression Screening, Referral, and Engagement in Treatment**

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Recommendation</th>
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<tr>
<td>Pennsylvania Department of Public Welfare, Office of Mental Health and Substance Abuse Services</td>
<td>Effective screening, referral, and treatment engagement enhances the quality of life and functioning of women with maternal depression and reduces a risk factor that can negatively affect a young child’s development. These outcomes support the department’s goals of enhancing the development of young children and increasing opportunities for persons dependent on Medicaid to obtain employment. In this context, it is critical to establish maternal depression as a priority in the public mental health system.</td>
</tr>
</tbody>
</table>
| Pennsylvania Department of Public Welfare, Office of Medical Assistance Programs and Office of Mental Health and Substance Abuse Services | A. Accelerate collaborative interdepartmental efforts to encourage the development and proliferation of interoperable electronic health records for improving data sharing and integration and coordination of care throughout the commonwealth.  
B. Enlist MCOs in a coordinated effort to develop common standards, metrics, and incentives for enhancing network providers’ use of health information technology options that support integrated care.  
C. Charge the physical and behavioral health care coordination groups within each HealthChoices zone to develop collaborative strategies for (1) increasing rates of maternal depression screening and (2) improving referral and treatment engagement rates of pregnant and postpartum members who screen positive for maternal depression.  
D. Develop guidelines and strategies to facilitate communication (1) between MCO care managers and pregnant and postpartum members who screen positive for maternal depression and (2) across MCOs to support members’ access to care. To the extent possible, these guidelines and strategies should take full advantage of all available telecommunication and information technologies.  
E. Design, implement, and evaluate a training curriculum that meets the needs of care managers and providers responsible for serving pregnant and postpartum members who screen positive for maternal depression. Training should focus on such topics as use of evidence-based screening tools, referral and treatment options (including behavioral and pharmacological treatments), and consumer engagement strategies (e.g., motivational interviewing skills, use of patient-centered care principles). |
| HealthChoices physical and behavioral health MCOs                          | A. Work together with providers, consumers, and families to develop information-sharing agreements as needed for ensuring full knowledge of issues that affect a woman’s physical and behavioral health or the health of the mother and the child. Specific efforts should be made to develop a standard release-of-information form for use by MCOs and network providers serving similar patient populations.  
B. Create regular opportunities (e.g., in-person workgroups, teleconferences, webinars) for care managers and physical and behavioral health providers to review shared cases of success and failure related to serving pregnant and postpartum women who screen positive for maternal depression. |
| Physical and behavioral health practices and providers in the HealthChoices network | A. Identify appropriate health information technology options that support integrated care and funding opportunities or reduced cost programs for developing them.  
B. Continue to track progress on screening, referral, and engagement in treatment for women at high risk for maternal depression and develop and implement internal quality-improvement programs as needed.  
C. Advance efforts to network with other area providers who are treating pregnant and postpartum women who screen positive for maternal depression to share resources, experiences, and learning. |
Next Steps for the Collaborative

The work of the collaborative described in this report does not represent a predetermined end state or product; rather, it is an ongoing process of community collaboration and systems change. In this spirit, the collaborative has recently embarked on an expansion of the Allegheny County Maternal Depression Initiative, which serves as one concrete next step toward systems integration and holistic interventions for parents and children.

Helping Families Raise Healthy Children

I love both of my boys very much but motherhood has been much more stressful than I ever expected. I had had some emotional problems before my boys were born but they got worse after. . . . It’s hard to get out of bed and stay out of bed. My kids are affected by it; that’s when they go crazy and act out, but I just don’t have the will to deal with them. . . . Transportation is a constant problem for me. . . . This in particular is one of the greatest stresses in my life. It would be so much better if I could have services that come to my home and help with my issues as well as my boys’ learning needs.

—mother, Allegheny County, Pennsylvania

Our new initiative—Helping Families Raise Healthy Children—advances the work of the collaborative in three ways. First, it builds important linkages with an additional sector that provides services to families with children ages 0 to 3 in Allegheny County—namely, the early-intervention system. Second, it expands maternal depression screening to all primary caregivers with young children who enter the early-intervention system because of developmental concerns related to medical or environmental risks (e.g., very low birth weight, elevated blood lead levels). Third, it seeks to address primary-caregiver depression and the related challenges of healthy early-childhood development through home-based, family-centered interventions designed to strengthen parenting and the parent-child relationship.

Rationale for New Initiative. Given the documented interconnectedness of parental depression and early-childhood developmental delays, as well as the prevalence of these outcomes in the community, it is likely that many parents with or at increased risk for depression have children at risk for or with developmental delays. It is also likely that many of the children referred for developmental delays have parents at increased risk for or with depression. Currently, local systems of care are set up to serve children at risk for developmental delays and parents at risk for depression as if the conditions and patient groups are independent of each other.

The Individuals with Disabilities Education Improvement Act of 2004, Part C for Infants and Toddlers, supports many opportunities for local collaboration in caring for very young children. A current initiative in the child welfare system, for exam-
ple, is standardized screening for the early identification of developmental and social-emotional concerns among young children substantiated for abuse or neglect. In addition, Pennsylvania’s liberal requirements for early intervention (25-percent delay or clinical opinion) have enabled a significant portion (73 percent) of children who are assessed for developmental delays to receive treatment. Beyond that, the development of infants and toddlers not currently eligible for intervention services can be monitored over time if certain risk factors are present. However, the early-intervention legislation does not provide for parental depression screening within the early-intervention system, nor does it recognize parental depression as an eligible risk factor for tracking early childhood development. Moreover, there are no established practices for referring parents and children across the two systems. As a result, we are missing many opportunities to identify at-risk parents, infants, and toddlers and engage them in appropriate care.

**Activities of New Initiative.** Over the next three years, service coordinators at the Alliance for Infants and Toddlers, which manages the early-intervention program in Allegheny County, will screen for parental depression and assess family functioning in the early-intervention system. In collaboration with other systems partners, the alliance will enhance access to social supports and services for primary caregivers at risk for depression and infants and toddlers at risk for developmental delays by establishing a cross-systems referral process. Teams of early-intervention service providers and in-home, family behavioral health specialists in Community Care’s network of service providers will serve families dealing with parental depression and early-childhood developmental delays by providing integrated, family-centered interventions that focus on strengthening parenting and early parent-child relationships. Helping Families Raise Healthy Children started in August 2009 and is scheduled to end in July 2012. The initiative is supported by the Robert Wood Johnson Foundation Local Funding Partnerships program, with matching funds from a consortium of local funders and the Pennsylvania Department of Public Welfare. Community Care is the grantee, and the Alliance for Infants and Toddlers and RUPHI are subcontractors to Community Care.

**The Collaborative’s Long-Term Commitment to Systems Change**

The Allegheny County Maternal and Child Health Care Collaborative has made a long-term commitment to building a model system of care for parents and young children in the community. While we have made significant progress in the past eight years, there is still much work to be done. We hope that this report will inspire others to mobilize forces in their communities and beyond to strengthen the systems responsible for ensuring the health and well-being of all families across the commonwealth.

Depression is real after childbirth—for both mothers and fathers. It is the people who touch the lives of new parents that can make a difference in a family’s life.
It is the people that we trust that can make us feel safe enough to talk about the unhappy feelings that sometimes occur after a new baby comes into our life. . . . This project can make a difference . . . for the health of our future—our families.

—mother, Allegheny County, Pennsylvania
APPENDIX A

Organizations and Leaders Participating in the Allegheny County Maternal Depression Initiative
Physical Health Practices and Providers

Children’s Hospital Primary Care Center
Debra Bogen
Evelyn Reis
Marnie Weston*

Magee Women’s Hospital
Andrea Aber
Peggy Brady
Diane Dado*
Pamela Dodge*
Christine Eismom
Veta Farmer
Lisa Karow
Candace Manspeaker*
Terri McKenzie
Connie Nelson
John Silipigni
Cynthia Slosar*
Nina Sowiski*
Margaret Watt-Morse*
Christina Weiss

UPMC Family Medicine Practices
Terri Rosen
Jeannette South-Paul

UPMC Family Medicine–McKeesport
Tracey Conti
Shari Holland
Jeanne Puskaric
Nina Tomaino*

UPMC Family Medicine–Saint Margaret’s
Jonathan Han
Linda Mischen
Sukanya Srinivasan
Melissa Williams

UPMC Family Medicine–Shadyside
Seth Rubin*
Lisa Schlar
Lisa Treganowan
Ann O’Donnell

West Penn Allegheny Health System
Linda Chirillo*
Marian Jonnet
Laurel Milberg
Katherine Neely
Rowena Pingul-Ravano

Behavioral Health Practices and Providers

Mercy Behavioral Health
Carol Frazer
Paula Scandrol

Milestone
Kieran Giovannelli
Ken Wood

Mon Yough Community Services
Noreen Fredrick
Gina Gargarella
Carol Lingsch
Leanna Plonka

TCV MH/MR
Gail Kubrin
Louise Meleshenko
Josie Ulrich

Western Psychiatric Institute and Clinic
Jack Cahalane
Jewel Denne
Frank Ghinassi
Roger Haskett
Carolyn Hughes
Kelly O’Toole
Katherine Wisner

Joseph Sheridan
Peggy Tate
Sheila Ward

Westmoreland County MH/MR
Sara Gumola

UPMC for You
Kim Fedor
Wendy Hoffman Raviotta
John Lovelace
Debra Smyers

Local Medicaid Managed Care Organizations

Community Care Behavioral Health
Susan Carney
Mary Doyle
James Gavin
Julie Hoyt
Kristen Johnson
John Lovelace
Kimberly Riley
James Schuster
Sherry Shaffer
Carole Taylor
Deborah Wasilchak

Value Behavioral Health
Laverne Cichon
Mark Fuller
Mary Johnston
Cynthia Kemerer
Karyl Merchant
Angie Sarneso

Gateway Health Plan
Michael Blackwood
Patricia Boody
Pedro Cardona*
Michael Coughlin*
Leslie Hawthorne
Stacey Hudak
Vicki Huffman
Mona Jordan Hawkins
Renee Miskimmin
Maria Moutinho
Patricia Soltan
Chris Ann Uhler

Local and State Payers and Policymakers

Allegheny County Department of Human Services, Office of Behavioral Health
Marc Chernia
Regina Janov
Patricia Valentine
Karen Webb
Gwen White

Allegheny County Health Department, Maternal and Child Health Programs
Bruce Dixon
James Gloster
Pamela Long
Roberta Patrizio

Unison Health Plan
Demetrois Marousis
Diane Reilly

Pennsylvania Department of Health
Melita Jordan
Pennsylvania Department of Public Welfare

Jane Boyer
Mary Diamond
Joanne Grossi
Cecilia Johnson*
David Kelley
Barbara Molnar
Estelle Richman*
Linda Zelch

Community Organizations

Birth Circle
Irene Frederick
Cynthia Salter

Early Head Start (COTRAIC)
Deborah Gallagher

Early Head Start (University of Pittsburgh)
Vivian Herman

Every Child, Inc.
Susan Davis*
Dennis Falo
Sean Meredith

Family Resources
Charma Dudley
Andi Fischhoff*
Marcia Warren

Healthy Start
Cheryl Squire Flint
Joanne White

Local Foundations and Other Supporters

Eden Hall Foundation
Sylvia Fields
Jordana Stephens

FISA Foundation
Dee Delaney*
Kristy Trautmann*

Highmark Foundation
Yvonne Cook
Christina Wilds

Staunton Farm Foundation
Joni Schwager

UPMC Health Plan
Diane Holder
Kevin Kearns*
John Lovelace

RAND–University of Pittsburgh Health Institute
Jacob Dembosky
Ray Firth
Sarah Frith*
Donna Keyser
Sandraluz Lara-Cinisomo*
Susan Lovejoy
Sajith Pillai*
Harold Alan Pincus
Dana Schultz
Gina Snyder
Shannah Tharp-Taylor

* Organizational affiliation and/or position has changed since the start of the initiative. List compiled June 1, 2010.
APPENDIX B

Protocol for the Allegheny County Maternal Depression Initiative
Allegheny County Maternal Depression Initiative:
Bridging the Silos of Medicaid Managed Care
Protocol for Identification, Access, Engagement and Treatment

I. Overview

This protocol is based on several important assumptions that are derived from the literature as well as information obtained from local stakeholders during the planning phase of the initiative. It also takes into consideration the implications of confidentiality requirements and the assignment of risk within HealthChoices.

A. Numerous barriers may prevent the consumer from successfully engaging in behavioral health (BH) treatment. These include logistical issues (e.g., transportation, child care) as well as personal/cultural issues (e.g., location of treatment, type of treatment), among others. Addressing these issues requires respectful listening by all and a willingness to address individual consumer concerns, at times with new approaches to engagement and treatment.

B. To enhance outcomes, the Medicaid BH system recognizes the need to be more accessible to the consumer’s PH provider, PH MCO, and the consumer herself. Increased efforts at engagement (e.g., co-located services, motivational interviewing, training on evidence-based treatment, and effective communication among all parties) will be explored.

C. Effective collaboration and communication within and between the PH and BH systems will be a lynchpin of the initiative’s success. In spite of significant efforts by all four MCOs to work with PH/BH providers and each other, various providers are still not aware of the care management services available or whom to contact when support services are needed by consumers. The result has often been less than optimal use of available resources. In some cases, providers no longer contact the MCOs for assistance because past efforts have not been successful. This can prevent the resolution of certain problems that Medicaid regulations and contracts are explicitly designed to address (e.g., timeliness of services). Even in cases where providers and MCOs have established relationships, systems “glitches” still occur because of the lack of cross-system safety nets and clearly established pathways of communication. To prevent these glitches, the respective PH MCO care manager must always be informed about what is happening for an individual consumer.

D. The PH MCO care managers will be aggressive in their efforts to arrange services and follow up with the consumer, advising Community Care customer service if the member is not receiving services consistent with the level of urgency response time and the consumer’s needs and preferences. Through consultation with Community Care, PH MCO care managers will also support the member in receiving the appropriate Medicaid BH benefits (e.g., assurance of timely services, choice of providers, access to range of services).
E. All partners are expected to communicate with the PH MCO care managers so that they may effectively fulfill their responsibilities.

F. PH providers (i.e., physician, nurse practitioner, or social worker) will make every attempt to obtain the consumer’s consent to share information among the PH practice, both the PH MCO care managers and Community Care, and the BH provider when possible.

In sum, this protocol is designed to enhance engagement and improve outcomes by providing a safety net around the consumer that crosses both the PH and BH systems and by establishing the PH MCO care manager as the single point of contact. Although some components of the protocol may appear to introduce redundancies into the system, such redundancies are necessary in order to achieve optimal cross-system performance.

II. Roles and Responsibilities of the Physical Health Providers

A. Screening
   i. Ob/Gyn practices will screen patients at least three times using the EPDS tool: at the first prenatal visit, in the third trimester, and at the postpartum visit.
   ii. Pediatric practices will screen mothers at each well-child visit from birth through 6 months and at 12 months using the EPDS tool.
   iii. Family medicine practices will screen pregnant women at three times using the PHQ-2 and EPDS tool and will screen mothers at the 0, 6 and 12 month well child visits.

B. Actions To Be Taken Based on Screening Results
   i. If the patient/mother scores at high risk for depression with the potential for suicide (i.e., EPDS score >= 10, 12 or 14; suicide item #10=1, 2, or 3), the PH provider confirms the risk through additional conversation with the patient/mother, arranges immediate psychiatric evaluation and subsequently notifies the appropriate PH MCO care manager (Scenario 1).
   ii. If the patient/mother scores at high risk without suicidality (i.e., EPDS score >= 10,12 or 14; suicide item #10=0; infant > 2 weeks; or the consumer reports a significant history of depression, bipolar disorder, or schizophrenia), and the mother agrees to a referral, the PH provider may refer for treatment or provide treatment in several different ways:
      a. Connecting her directly to a BH provider either within the practice or outside the practice (Scenario 2)
      b. Connecting her to the relevant PH MCO care manager to assist in obtaining an appointment for timely, appropriate BH services and other necessary supports from the PH MCO (Scenario 3)
      c. Contacting Community Care customer service to assist in making a referral to a BH provider
d. Connecting her to their own practice-based social worker for additional care management
e. Prescribing appropriate medication to pharmacologically manage the consumer’s depressive symptoms

iii. In all situations, the PH provider will inform the relevant PH MCO care manager of the screen result and any action taken.

C. Dealing with Consumer’s Perceptions of Barriers
i. Reasons why a consumer might not engage in BH services should be identified when the results of the screening are shared with her (Scenario 4). Identifying these barriers and developing effective strategies to overcome them (i.e., motivational interviewing) is predictive of adherence to treatment.

ii. Once the consumer and/or clinician identify the barriers to treatment, specialized supports as well as family and community resources should be accessed to overcome them (Scenario 4).

D. Informed Consent
i. The PH provider (i.e., physician, nurse practitioner, or social worker) will attempt to obtain the consumer’s consent to share information among the PH provider, both the PH MCO care manager and Community Care, and the BH provider using the Protocol Release of Information form.

ii. If obtained, the PH provider will fax the signed Protocol Release of Information form to the PH MCO care manager, Community Care or the BH provider.

III. Roles and Responsibilities of the PH MCO Care Managers

A. The PH MCO care managers will receive information on 100% of all of their members who are screened for perinatal depression and determined to be at high risk either due to their score on the EPDS and/or due to a significant history of depression, bipolar disorder, and/or schizophrenia; actions will be taken consistent with the member’s level of risk, as follows.

B. For members who have scored at high risk for depression with the potential for suicide, the member’s physician will have attempted to arrange for a psychiatric evaluation either at an emergency room or via Allegheny County’s mobile psychiatric team, currently known as ACES.

i. If the member has been evaluated and admitted to the hospital, the PH MCO care manager will inform her treatment team of their involvement with the member for purposes of care planning and linkage with the member’s obstetrician and/or primary care provider.

ii. If the member has been evaluated and not admitted, an outpatient appointment should have been arranged for the member. Support to the member should be provided as outlined in Section C.

C. If the member scores at high risk without suicidality:

i. Engage member in motivational interview as indicated.

ii. Confirm member’s view on barriers and initiate plan to address those barriers.

iii. Facilitate engagement of member in BH services (which may include consulting with a Community Care customer service representative to arrange
an appointment, or with Community Care care managers to assist with provision of services and/or supports as needed to overcome barriers to engagement).

iv. Confirm timely appointment at member’s BH provider of choice; identify or attempt to identify barriers if indicated.

v. Inform BH provider that the PH provider is involved; willing to support; wants to receive initial report to maximize collaboration between systems.

vi. Initiate support services as indicated (e.g., home visits, Nurse Family Partnerships, Early Head Start).

vii. If difficulties arise obtaining a timely BH appointment or feedback from BH provider, contact Community Care care manager.

viii. Link children to needed supports if indicated.

ix. If difficulties arise obtaining a timely BH appointment or feedback from BH provider, contact Community Care care manager.

x. Link children to needed supports if indicated.

xi. Aggressively follow member through course of pregnancy and/or postpartum period as needed, including first few visits with BH provider (Scenario 5).

xii. Receive recommendations from BH provider and facilitate timely feedback and/or collaboration between PH and BH providers.

D. When the patient/mother is not currently eligible for HealthChoices Medicaid benefits, is currently uninsured, or has other health insurance, the PH MCO care manager, as a service to the patient/mother and PH provider, will advise them whom to contact for a referral (Scenario 6).

i. If the mother’s child is a HealthChoices member, the MCO care manager will consider a referral to their Special Needs Unit.

ii. If the mother has no health insurance, she and/or the PH provider will be given the Allegheny County Office of Behavioral Health’s (OBH) liaison’s contact information.

iii. If the mother has another health insurance policy, she will be assisted in identifying the phone number for that policy’s BH services.

IV. Roles and Responsibilities of Community Care

A. Community Care will identify BH care management liaisons for PH MCO care managers who have a specialized expertise in appropriate referral sources, and are available to work directly with the PH MCO care manager, the PH provider, the member, and the BH provider in arranging an appointment appropriate to consumer needs and urgency standards.

B. Customer service will verify with the member and treatment providers that all Medicaid BH benefits (e.g., assurance of timely services and choice of providers) are available to the member.

C. Offer training on key issues identified as needed by BH providers and in partnership with PH MCO care managers.
D. The care managers, in conjunction with the BH provider, will identify “alternative” therapies and strategies to address perinatal depression.

E. When called upon by the PH MCO care manager, PH provider, BH provider, or consumer, the care managers will proactively collaborate with the team to address barriers for individual consumers or groups of consumers.

V. Referrals to BH Providers with support from PH Providers, PH MCO Care Managers, or Community Care

A. Consumer Supports
   i. With the consumer’s consent, she may be assisted by others in arranging a BH appointment; addressing barriers to treatment; and providing relevant medical information to the BH provider.
   ii. As a result, the BH provider may receive additional information from the PH provider (i.e., physician, nurse practitioner, or social worker).
   iii. To support their role as a “safety net”/single point of contact, the PH MCO care manager may be working with the consumer to arrange the appointment or be notified by the PH provider of the consumer’s appointment and that referral information has been shared.

B. Types of Information To Be Shared
   i. Information provided by the consumer on the identified barriers to engaging in BH services
   ii. Actions taken by the PH provider to address the identified barriers
   iii. Recommendations for how the BH system can respond to the identified strengths and needs of the consumer
   iv. The EPDS score and consumer-reported history of depression, bipolar disorder, or schizophrenia, which will help to determine the level of urgency for BH health services

VI. Roles and Responsibilities of Behavioral Health Provider

A. Initial Appointment and Intake
   i. Intake will be scheduled based on level of urgency, as initially determined by the EPDS score, suicide items, and other BH history and treatment.
   ii. If ACES is involved, with the consumer’s consent, information will be provided to the PH MCO care manager, and possibly the PH provider (Scenario 1).
   iii. If not an emergency …
      a. If contacted first, the BH provider will offer the consumer timely intake based on level of need and consumer choice.
      b. If a timely intake is not available, they will facilitate a timely appointment at another BH provider; or link consumer to Community Care to obtain timely appointment at another provider.
      c. The PH MCO care manager and/or PH provider may choose to contact Community Care first for assistance in obtaining timely appointment.
d. The PH MCO care manager is always informed of the action taken.
iv. The BH intake worker conducting the interview will have received specialized training on perinatal depression; medications as they relate to pregnancy and breastfeeding; barriers as perceived by the consumer and/or PH provider; and motivational interviewing.

B. Feedback and Development of Treatment Options
i. The timeline for review by the reviewing psychiatrist will be based on level of urgency.
ii. Feedback and potential collaboration with PH provider will occur within a timeframe appropriate to the level of urgency.
iii. PH MCO care manager will also receive feedback, or serve as the conduit for communication between the BH provider, Community Care, and the PH provider.
iv. Examples of information to be shared with consumer’s consent:
   a. Diagnosis
   b. Medication recommendations
   c. Potential consultation to PH provider on medication and treatment options
   d. Continuation or termination of BH treatment
   e. Changes internal to BH provider that might impact consumer’s continued engagement in BH services (e.g., loss of key staff that will delay services)
v. If the BH provider determines that the consumer would benefit from additional supports, after discussion with the consumer, recommendations will be shared with the Community Care care manager and/or the PH MCO care manager.
APPENDIX C

Initiative Release-of-Information Forms
Allegheny County Maternal & Child Health Care Initiative

Participating Partners:
* Children’s Primary Care Center
* UPMC for You
* Magee Women’s Health
* Gateway Health Plan
* Allegheny General Health System--Lifestages
* Unison

AUTHORIZATION FOR RELEASE OF INFORMATION

I hereby authorize ( ) Name of Physical Health Provider ( ) Phone
( ) Fax ( ) Name of Physical Health MCO and Community Care Behavioral Health

Health ( ) Phone ( ) Fax to release information

( ) Phone ( ) Fax to each other from the records of

Name of Patient or Patient’s Mother Birth Date SSN

The information will be released for the specific purpose of improving the quality of maternal and child health care provided by the HealthChoices Program in Allegheny County.

METHOD OF RELEASE (Must check one)

Verbal only
Copies only
Both

The information to be released is: (Check all that apply)

<table>
<thead>
<tr>
<th>Information</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal depression screening dates and scores</td>
<td>Mental health referrals made</td>
</tr>
<tr>
<td>History of mental health disorders</td>
<td>Mental health referrals completed or not completed</td>
</tr>
<tr>
<td>Patient communications regarding:</td>
<td>Reasons for non-completion of mental health referrals</td>
</tr>
<tr>
<td>Maternal depression</td>
<td></td>
</tr>
<tr>
<td>Care management</td>
<td>Course of treatment</td>
</tr>
<tr>
<td>Available treatment options</td>
<td>Medication</td>
</tr>
<tr>
<td>History of mental health treatment, including any prescribed medications</td>
<td>Diagnosis and prognosis of patient</td>
</tr>
<tr>
<td>Treatment recommendations</td>
<td>Progress of patient</td>
</tr>
</tbody>
</table>

I have been told that, in order to protect the limited confidentiality of records, my agreement to obtain or release information is necessary and that this permission is limited for the purpose and to the organizations/persons listed above, and will be effective for up to one year after the date of my signature. I understand that this authorization is revocable by contacting any of the above participating partners in writing, except to the extent that action has been taken in reliance thereon. Treatment, payment, enrollment in any of the managed care organizations involved in this initiative, or eligibility for benefits will not be affected by this authorization. This authorization shall be in effect from __________ to __________.

Date of Signature ____________________ Signature of Patient (14 years of age or older) ____________________

Witness ____________________ Signature of Parent/Legal Guardian/Authorized Representative ____________________

I do ________ do not ________ want a copy of this authorization.

Prohibition of redisclosure: The information has been disclosed to you from records whose confidentiality is protected by Federal Law. Federal regulations prohibit you from making any further disclosure of this information except with the specific written authorization of the person to whom it pertains or as otherwise permitted by such regulations. A general release of medical or other information is not sufficient for this purpose.

Although applicable law may prohibit redisclosure of these records, I understand that it is possible that any of the facilities/persons receiving the information may re-disclose the information, therefore (1) only those facilities/persons involved in the re-disclosure will have responsibility or liability as a result of that re-disclosure and (2) such information would no longer be protected by the Privacy Rule.

ORAL CONSENT (for persons physically unable to sign)

I witnessed that the person understood the nature of this release and freely gave her oral authorization. (Two witnesses are required.)

Date ____________________ Witness #1 ____________________ Date ____________________ Witness #2 ____________________
Allegheny County Maternal & Child Health Care Initiative

Participating Partners:
* Children’s Primary Care Center
* Magee Women’s Health
* Allegheny General Health System—Lifestages
* UPMC for You
* Gateway Health Plan
* Unison
* Community Care Behavioral Health
* Community Care Network Providers

AUTHORIZATION FOR RELEASE OF INFORMATION

I hereby authorize ______________________________ ( ) __________________________ Phone
Name of Mental Health Provider to release information from the records ______________________________ ( ) __________________________
Fax Name of Physical Health Provider
Birth Date SSN __________________________ Name of Patient
Fax __________________________ __________________________
Name of Physical Health MCO, and Community Care Behavioral Health
Fax __________________________ __________________________
Fax __________________________ __________________________
Fax

The information will be released for the specific purpose of improving the quality of maternal and child health care provided by the HealthChoices Program in Allegheny County.

METHOD OF RELEASE (Must check one) _____ Verbal only _____ Copies only _____ Both

The information to be released is: (Check all that apply)

| Maternal depression screening dates and scores | Mental health referrals made |
| History of mental health disorders | Mental health referrals completed or not completed |
| Patient communications regarding: Maternal depression | Reasons for non-completion of mental health referrals |
| Care management | Course of treatment |
| Available treatment options | Medication |
| History of mental health treatment, including any prescribed medications | Diagnosis and prognosis of patient |
| Treatment recommendations | Progress of patient |

I have been told that, in order to protect the limited confidentiality of records, my agreement to obtain or release information is necessary and that this permission is limited for the purpose and to the organizations/persons listed above, and will be effective for up to one year after the date of my signature. I understand that this authorization is revocable by contacting any of the above participating partners in writing, except to the extent that action has been taken in reliance thereon. Treatment, payment, enrollment in any of the managed care organizations involved in this initiative, or eligibility for benefits will not be affected by this authorization. This authorization shall be in effect from __________________________ to __________________________.

Date of Signature __________________________ Signature of Patient (14 years of age or older)

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I do ______ do not ______ want a copy of this authorization.

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I witnessed that the person understood the nature of this release and freely gave her oral authorization. (Two witnesses are required.)

Date __________________________ Witness #1 __________________________ Date __________________________ Witness #2
APPENDIX D.1

Screening Tools: Edinburgh Postnatal Depression Scale
Edinburgh Postnatal Depression Scale\(^1\) (EPDS)

**Type of Visit:** (circle one) \(1^{st}\) prenatal \(3^{rd}\) trimester \(1^{st}\) postpartum

**Score:** ________

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed.

I have felt happy:
- Yes, all the time
- Yes, most of the time
- No, not very often
- No, not at all

This would mean: “I have felt happy most of the time” during the past week. Please complete the other questions in the same way.

**In the past 7 days:**

1. *I have been able to laugh & see the funny side of things*
   - As much as I always could (0)
   - Not quite as much now (1)
   - Definitely not as much now (2)
   - Not at all (3)

2. *I have looked forward with enjoyment to things*
   - As much as I ever did (0)
   - Rather less than I used to (1)
   - Definitely less than I used to (2)
   - Hardly at all (3)

3. *I have blamed myself unnecessarily when things went wrong*
   - Yes, most of the time (0)
   - Yes, some of the time (1)
   - Not very often (2)
   - No, never (3)

4. *I have been anxious and worried for not good reason*
   - No, not at all (0)
   - Hardly ever (1)
   - Yes, sometimes (2)
   - Yes, very often (3)

5. *I have felt scared or panicky for no good reason*
   - Yes, quite a lot (0)
   - Yes, sometimes (1)
   - No, not much (2)
   - No, not at all (3)

6. *Things have been getting on top of me*
   - Yes, most of the time I haven’t been able to cope (3)
   - Yes, sometimes I haven’t been coping as well as usual (2)
   - No, most of the time I coped quite well (1)
   - No, I have been coping as well as ever (0)

7. *I have been unhappy that I have had difficulty sleeping*
   - Yes, most of the time (3)
   - Yes, quite often (2)
   - Not very often (1)
   - No, not at all (0)

8. *I have felt sad or miserable*
   - Yes, most of the time (3)
   - Yes, quite often (2)
   - Not very often (1)
   - No, not at all (0)

9. *I have been so unhappy that I have been crying*
   - Yes, quite often (3)
   - Sometimes (2)
   - Only occasionally (1)
   - No, never (0)

10. *The thought of harming myself has occurred to me*
    - Yes, quite often (3)
    - Sometimes (2)
    - Hardly ever (1)
    - Never (0)

---

Screening Tools: Patient Health Questionnaire 2
PHQ-2

Over the past two weeks, how often have you been bothered by any of the following problems?

Little interest or pleasure in doing things.
0 = Not at all
1 = Several days
2 = More than half the days
3 = Nearly every day

Feeling down, depressed, or hopeless.
0 = Not at all
1 = Several days
2 = More than half the days
3 = Nearly every day

Total point score: _____________________

Score interpretation:

<table>
<thead>
<tr>
<th>PHQ-2 score</th>
<th>Probability of major depressive disorder (%)</th>
<th>Probability of any depressive disorder (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15.4</td>
<td>36.9</td>
</tr>
<tr>
<td>2</td>
<td>21.1</td>
<td>48.3</td>
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<td>3</td>
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<td>81.2</td>
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<tr>
<td>5</td>
<td>56.4</td>
<td>84.6</td>
</tr>
<tr>
<td>6</td>
<td>78.6</td>
<td>92.9</td>
</tr>
</tbody>
</table>

Figure 1. Patient Health Questionnaire-2 (PHQ-2). This questionnaire is used as the initial screening test for major depressive episode.


Thibault JM, Prasaad Steiner, RW. Efficient identification of adults with depression and dementia. American Family Physician, Vol. 70/No. 6 (September 15, 2004)
Educational Tools: Consumer Pamphlet on Maternal Depression
**Emotional Difficulties continued**

**When to Seek Help**

It is in your best interest to seek help if:

- You feel you have either postpartum depression or psychosis.
- You feel your emotional state is interfering with your relationship with your baby or other members of your family.
- You feel you would be better off dead or you have thoughts of suicide.
- You are afraid you will hurt your baby or someone else.

**Help is Available**

*These emotional difficulties can be treated. Treatment usually consists of individual “talking” therapy and family counseling (which includes the baby and other children). Medication may also be prescribed.*

**Who To Contact**

**Women’s Behavioral HealthCARE**

3501 Forbes Avenue, Suite 410  
Pittsburgh, PA 15213  
Toll-Free: 1-800-436-2461  
www.womensbehavioralhealth.org

**For Medicaid patients:**  
Community Care Behavioral Health  
1-800-553-7499  
www.ccbh.com

**If you have no insurance:**  
Allegheny County Office of Behavioral Health  
412-350-4245

**For private or employer insurance carriers,** please use the phone number on the back of your insurance card.
Emotional difficulties are very common during the first three months following childbirth. The three types of emotional distress in the postpartum (post-birth) period are described below:

The Baby Blues

The baby blues occur in about 70 percent of postpartum women. Because the blues are so common and because they are usually short-lived, women and their families are generally able to cope with the symptoms. The blues are characterized by brief episodes of crying, irritability, anxiety, depression, elation, headache, confusion, insomnia, negative feelings toward the baby and forgetfulness. Women usually have some combination, but not all, of these symptoms. Typically, the symptoms begin on the third or fourth day after birth and last for a few hours, or rarely, a few days. Although no one knows exactly what causes the baby blues, hormonal changes are thought to play a role in their occurrence. If you have symptoms which last longer than two weeks, you are unlikely to have the baby blues.

Postpartum Depression

Postpartum depression is a common illness that affects ten to 15 percent of women who give birth. The severity of the illness is variable. Five percent of women have severe symptoms. The onset of depression usually occurs within the first three months after birth, and it is longer and more severe than the blues. Typical symptoms include crying, irritability, anxiety, depression, decreased concentration and inability to sleep (even when baby sleeps).

Women with one previous episode of postpartum depression are at risk for a recurrence. Estimates range from 30 to 60 percent of subsequent pregnancies. A personal or family history of depression is also a risk factor in the development of this illness. Although it is widely believed that there is a biological (particularly hormonal) contribution to postpartum depression, this has not been proven.

Postpartum Psychosis

Postpartum Psychosis is a comparatively uncommon disorder. It occurs in one to two cases per 1000 deliveries. The onset of postpartum psychosis occurs most often within the first and second week after delivery. After several days of normal functioning, the woman experiences one or two nights of difficulty falling and staying asleep and an increase in irritability. The symptoms then progress quickly and can include confusion, disorganization, bizarre behavior, rapid mood changes, rambling speech, distraction, hallucinations and increased activity.
Educational Tools: Resource List for Consumers and Providers
Resource List for Physicians Seeking Community Resources for their Patients/families

As part of the RAND-University of Pittsburgh Health Institute maternal depression project, physicians asked if a resource list could be provided to them for their use with patients.

The response has two components … a short list of resource and referral contacts that serve members of the Medicaid MCO’s and United Way Helpline, and an extensive list of specific resources provided by Dee Dee Greenawalt, Medical Education Coordinator, Magee-Womens Hospital of UPMC.

I. Resource and Referral Contacts

A. For members of the Medicaid MCO’s serving Southwestern PA.

The PA Department of Public Welfare requires the physical health managed care organizations to have a “special needs unit” to support members. This unit provides additional support, including coordination with social service agencies for members with special needs. Each of the MCO’s have indicated they would be glad to assist a physician’s office seeking information on resources for their members. These three plans serve Southwestern PA.

1. Gateway Health Plan. Call the Member Service Department, 1 800-642-3550. Option 1 is the Special Needs Unit. They have a “Community Repository” with information on service providers.

2. Unison. Call Special Needs Unit at 1 877 844-8844.

3. UPMC for You. Call 1 800 286-4242, Option 2, Option 2.

B. United Way of Allegheny County HelpLine has trained information specialist and can be reached at (412) 255-1155.

II. Magee-Womens Hospital of University of Pittsburgh Medical Center Patient Resource List

This is a list of some of the many services available in the Pittsburgh/Allegheny County area. Remember, resources and telephone numbers can change. Please see your social worker or contact the United Way Helpline for information & referral services (412) 255-1155.

For the helpline in surrounding counties call:
Armstrong: 1-800-468-7771   Fayette: (724) 437-6050   Mercer: (724) 981-1884
Beaver: (724) 728-3900   Greene: 1-800-433-1943   Mon Valley: (724) 489-8090
Butler: 1-800-944-1449  Indiana: 1-800-442-8016  Washington: (724) 225-9052
Crawford/Erie: (814) 453-5656  Lawrence: (724) 658-5520  Westmoreland: 1-800-222-8848
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<td>LEGAL SERVICES</td>
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<td>SEXUAL ASSAULT COUNSELING</td>
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<td>SOCIAL WORK/SUPPORT SERVICES</td>
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<td>TRANSPORTATION</td>
<td>9</td>
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</tbody>
</table>
ADOPTION & FOSTER CARE
See your unit social worker for information and referral to agencies providing these services.

BREASTFEEDING HELP
Magee-Womens Hospital — offers a class in prenatal preparation for breastfeeding: (412) 802-8299
Magee-Womens Hospital Lactation Center: (412) 641-1121
WIC Program — lactation specialist available to WIC participants: (412) 350-3163
Breastfeeding Helpline — Allegheny County Health Department: (412) 247-1000
LaLeche League — support for breastfeeding moms: (412) 276-5630

CHILD WELFARE
ChildLine — accepts reports of child abuse: 1-800-932-0313
Children, Youth & Families (CYF) Allegheny Co. — accepts reports of child abuse/neglect: (412) 473-2000
Parents Anonymous — support for parents who are abusive (physically, sexually, emotionally) or who are fearful of becoming abusive: (412) 363-1702

COUNSELING & FAMILY SERVICES
You may need to have approval from your health plan for services that require payment.
Consult the Behavioral Health Agency on the back of the patient’s health insurance card.

Emergency Referral: RE:SOLVE Crisis Network at 1.888.796.8226
In Allegheny County - non-emergency phone number for the Office of Behavioral Health is (412) 350-4457; answered 24 hours/7 days a week and puts you in touch with Allegheny County staff who can provide information, find someone to provide ongoing help, or help you arrange involuntary examination, and treatment when needed.
Catholic Charities — family or individual counseling: (412) 456-6999
Family Services of Western PA — family, individual and child/parent counseling: (412) 281-2328 or toll-free 1-888-222-4200
Jewish Family and Children's Service — family or individual counseling: (412) 422-7200
Allegheny Co. Dept. of Human Services, Office of Behavioral Health: (412) 350-4457; Crisis Hotline: 1-888-424-2287 or see your social worker for referral
Family Links: (412) 343-7166
Families Outside — for relatives and friends of those incarcerated: (412) 661-1670
Family Resources — family & individual counseling, & parenting support: (412) 363-1702
Magee Behavioral Health: (412) 641-1238
Mercy Behavioral Health: South side — (412) 488-4040 North (412) 323-4500
Milestone—MH/MR services: (412) 371-7391
Mon-Yough Community Services — MH/MR and substance abuse services: (412) 675-8855
Pittsburgh Pastoral Institute - interfaith counseling and psychotherapy center – multiple locations across city - 412-661-1239 or toll-free 877-661-9623.
Support Groups — for a list of support groups in your area, call HelpLine/ Self Help Group Network: (412) 255-1155 – multiple locations in Allegheny County and also in Butler, Westmoreland, Fayette and Lawrence Counties
Turtle Creek Valley MH/MR: 412-351-0222
WPIC-Center for Children & Families: (412-624-1000) counseling for children and teens

**CUSTODY/SUPPORT CONCERNS**
Child Support Enforcement: 1-800-932-0211
Allegheny County Family Court Division: (412) 350-5600
Legal Resource for Women’s Program (YWCA) – referral law line 412-255-1246

**DAYCARE INFORMATION**
Information Services of Allegheny County: (412) 261-2273 or 1-800-392-3131
Angel’s Place — provides free daycare to single women who are full-time students
- Brookline: (412) 531-6667
- Northside: (412) 321-4447
- Swissvale: (412) 271-2229
If you receive Public Assistance, contact your DPW caseworker to determine if you are eligible for childcare subsidies.

**DOMESTIC VIOLENCE**
Women’s Center and Shelter — shelter, counseling, legal advocacy, 24-hour hotline:
(412) 687-8005
Womansplace Inc., (McKeesport) — shelter, counseling, 24 hour hotline: (412) 678-4616
Womanspace East, Inc. — shelter, counseling, legal advocacy, 24-hour hotline: (412) 765-2661
Domestic Violence Hotline: 1-800-799-7233 (SAFE) or call your unit Social Worker for assistance.

**EARLY INTERVENTION**
Alliance for Infants (Allegheny County): (412) 885-6000
Early Intervention Connect for all other counties in PA – call (800) 692-7288

**EDUCATION & JOB TRAINING**
**For City of Pittsburgh Residents Only:**
Young Parents Program — GED and job readiness for parents age 18-21 receiving cash assistance:
(412) 392-4484
AC Pittsburgh Partnership JTPA — Job Training Partnership Act: (412) 552-9071
Headstart – Preschool development program: (412) 488-4540
Evenstart – Family Literacy program: (412) 488-4740

**For Allegheny County Residents Only:**
Department of Human Services, Office of Community Services: (412) 350-6611
Greater Pittsburgh Literacy Council — GED prep., job readiness skills: (412) 672-1139
Headstart — Preschool development program: (412) 394-5861

**For City of Pittsburgh & Allegheny County Residents:**
SPOC — (Single Point of Contact) employment/training program for persons receiving public assistance: (412) 565-2146
New Choices/New Options — career counseling through Community College of Allegheny County: (412) 237-4682
GED (General Equivalency Diploma) Classes Only — call your local high school or Community College of Allegheny County
CareerLink — job preparation: (412) 456-6781
Bidwell Training Center, Inc. — vo-tech & short-term training: (412) 323-4000

**EMERGENCY SERVICES HOTLINES**
Contact Pittsburgh — 24-hour crisis line: (412) 820-4357
RE:SOLVE Crisis Network at 1.888.796.8226
Teen Hotline: (412) 820-4357

**EMERGENCY SHELTERS**
 Salvation Army Family Crisis Center — single women, women & men w/ children, youths 18-21:
(412) 394-4817
Bethlehem Haven- single women: (412) 391-1348
Eastside Comm. Collaborative-women/women & children: (412) 371-3475
YMCA McKeesport-single men/women, youths 18-21: (412) 664-9168

**FAMILY SUPPORT CENTERS/FAMILY CARE CONNECTION**
Terrace Village: (412) 682-1140
Braddock: (412) 271-8355
Wilkinsburg: (412) 247-0977, 371-5934 or 371-7349 & 871-7948
Rankin: (412) 271-5022
Turtle Creek: (412) 823-2060
East Allegheny: (412) 829-6171
Hill: (412) 261-0373 or 681-8233
Homestead: (412) 461-8012
Garfield: (412) 665-5200
Lawrenceville: (412) 784-8683
Mt. Oliver: (412) 432-1635
Pitcairn: (412) 374-9010
Southside: (412) 488-2750
Steel Valley: (412) 461-8019
Homewood: (412) 243-6088
Northside: (412) 323-1020, 330-4666 or 766-6730
Duquesne: (412) 469-9870 or 466-5699
Sto-rox: (412) 771-6817 or 771-2810
Clairton: (412) 233-8325
McKeesport: (412) 672-6970, 672-6972 or 672-6122
Tarentum: (724) 224-9006
Monview Heights: (412) 462-4109
Southside/West End: (412) 381-3609 or 363-1702
McKees Rocks/Stowe: (412) 771-6460

**FINANCIAL**
Allegheny Co. Assistance Office, LIHEAP Program — assistance with utility bills: (412) 562-0330
Public Utility Commission (PUC) — utility payment arrangements: 1-800-692-7380
Individual utility companies may have customer assistance funds. Check with your company.
Consumer Credit Counseling Service — assistance with money management/use of credit:
(412) 471-7584
Tri-Valley Energy and Services Center — counsels payment-troubled utility customers:
(412) 462-2230
FINANCIAL ASSISTANCE
PA Department of Public Welfare (DPW) and Medical Assistance (MA) and Food Stamps in Allegheny County: (412) 565-2146

FOOD
Hunger Services Network
   Food for Early Development (FED): (412) 681-1110
   Emergency Food Assistance: (412) 681-1121
Women In Need (formula and diapers): (412) 687-6683
Intersection — on-site lunch program for homeless, food pantry, health clinic, etc.
   McKeesport residents only: (412) 678-6948
WIC Program (Allegheny Co.): (412) 350-5801

HOUSING
Action Housing, Inc. — operates wide range of housing programs/support services: (412) 281-2102
   Homeless Families Service Program: (412) 824-2444
Allegheny County Housing Authority
   Low-rent public housing: (412) 355-8940
   Section 8 housing program: (412) 355-2189
AHRCo — Allegheny Housing Rehabilitation Corp. offers subsidized and non-subsidized housing in certain neighborhoods of the county: (412) 687-6200
Housing Authority, City of Pittsburgh —subsidized housing: (412) 456-5000
Housing Counseling Services:
   city residents (412) 227-4804
   county residents (412) 227-4812
HUD Transitional Housing — housing & case management for homeless: (412) 231-0500
Fair Housing Partnership of Greater Pittsburgh — includes information & referral hotline for housing problems: (412) 391-2535
Roselia Center — residential services for pregnant women: (412) 682-4410
Genesis — residential program for pregnant women: (412) 766-2693
Sisters Place — housing for homeless women and their children: (412) 233-3903
Benedictine Place — bridge housing for women children: (412) 939-2302
Debra House — bridge housing for single women or mothers with children under age 10: (412) 271-5787
Healthy Start House — bridge housing for pregnant women or women with children up to age 10: (412) 466-1191

IMMIGRATION
Welcome Center for Immigrants & Internationals: 1-866-774-2201

INFANT CARSEATS
Arrangements must be made before delivery/discharge.
Free carseat checks (with PA state police) at Magee-Womens Hospital.
   Call Education to register: 412-802-8299.
Magee-Womens Hospital does not rent or provide carseats. Please call numbers listed below.
PA Traffic Injury Prevention Project — referral for loaner programs & consumer information:
1-800-CAR-BELT (1-800-227-2358)
Traveler's Aid Society — rental program only (Pgh. International Airport): (412) 472-3599

INFANT CLOTHING & FURNITURE
The following resources offer low-priced new or used clothing and household items. Please consult your telephone directory's Thrift Shops listing for phone numbers and locations nearest to you.
Goodwill Industries
  St. Vincent DePaul Society
  Salvation Army
  Red, White and Blue Thrift Stores

INFANT/MATERNITY CLOTHING/SUPPORT
Roselia Center: (412) 682-4410
Bethany House Ministry
  North View Heights Residents: (412) 322-2995
  St. Clair Village Residents: (412) 481-5705
Bethany Christian Services: 1-800-238-4269 or (412) 734-2662
Pregnancy Care Center — used furniture, clothing, support services: (412) 687-7767
Genesis Center — furniture, clothing, etc.: (412) 766-4934
Life Line of South West Pennsylvania: (412) 562-0543
Monroeville Pregnancy Care Center: (412) 373-2775
Angie’s Place
  Brookline: (412) 531-6667
  North Side: (412) 321-4447
  Swissvale: (412) 271-2229
Cribs For Kids: See your unit social worker
Wexford Pregnancy Center: (724) 935-6411
South Hills Interfaith Ministries — South Hills residents only: (412) 854-9120
Welcome Little Ones: (412) 391-6862
Wilkinsburg Community Ministry — Wilkinsburg residents only: (412) 241-8072
Women In Need (formula & diapers): (412) 687-6683

INSURANCE INFORMATION
Blue Chip/The Caring Program for Children: 1-800-543-7105
Healthy Kids Helpline: 1-800-986-KIDS
Pennsylvania Insurance Department: (412) 565-5020

LEGAL SERVICES
YWCA of Greater Pgh. — Legal Resources For Women: (412) 391-5100
Mediation Council of Western PA — provides information on separation, divorce and custody issues: (412) 371-8040
KIDS VOICE: (412) 391-3100
Legal Advocacy Office of the Women's Center and Shelter of Greater Pittsburgh: (412) 355-7400
Pittsburgh Mediation Center — offers mediation services to resolve disputes such as landlord/tenant, business/consumer, neighbors, etc.: (412) 365-0400
Neighborhood Legal Service Association (NLS) — for legal questions by appointment: (412) 255-6700
PARENTING CLASSES & SUPPORT
Family Resources Warmline — Information and referral for parents
   (412) 641-4546 or 1-800-641-4546
Family Resources: (412) 363-1702
First Steps
   Rankin: (412) 271-5022
   McKeesport: (412) 678-5130
   South Side/West End: (412) 363-1702
   Bedford Dwellings: (412) 232-0322
The Alliance For Infants & Toddlers, Inc., — developmental screening/assessment:
   (412) 885-6000
Healthy Start: (412) 247-1000
Parentline — Family Links: (412) 995-4189
Parents Without Partners: (412) 321-0198
Mothers of Multiples — please call Helpline for current telephone numbers: (412) 255-1155
Resource Mothers' Project — serves McKeesport, North Braddock and Homestead:
   (412) 664-8886
Healthy Start Male Initiative: (412) 247-1000
Arsenal Family and Children's Center:
   Pittsburgh: (412) 345-0008
   Clairton: (412) 233-8686

POSTPARTUM DEPRESSION
Magee Behavioral Health — (412) 641-1238
Contact Pittsburgh — 24-hour crisis hotline: (412) 820-4357
Women’s Behavioral HealthCARE (research studies): (800) 436-2461

PRENATAL CLASSES
PLEASE BE SURE TO ENROLL IN CLASSES EARLY, AS SPACE IS LIMITED
Magee-Womens Hospital — prenatal and/or Lamaze classes: (412) 802-8299
Magee-Womens Hospital — childbirth classes for teens: (412) 641-3103
UPMC McKeesport, Latterman Family Health Center: (412) 673-5504

SEXUAL ASSAULT COUNSELING
Pittsburgh Action Against Rape: 1-866-363-7273 (hotline)
Center for Victims of Violent Crime: (412) 392-8582 (hotline)
National Organization for Victim Assistance: 1-800-879-6682

SMOKING CESATION
Pittsburgh STOP Program — (Stop Tobacco in Pregnancy): (412) 551-8694
Clean Air PLUS: (412) 692-8564

SOCIAL WORK/SUPPORT SERVICES
For information about social work services at Magee-Womens Hospital Outpatient Clinic and
   Neighborhood Health Centers, call (412) 641-4455.
SUBSTANCE ABUSE INFORMATION
You may need to have approval from your health plan for services that require payment. Consult the Behavioral Health Agency on the back of the patient’s health insurance card

In Allegheny County
Non-emergency phone number for the Office of Behavioral Health is (412) 350-4457. This number answers 24 hours/7 days a week and puts you in touch with Allegheny County staff who can provide information, find someone to provide ongoing help, or help you arrange involuntary examination, and treatment when needed.

PAC (Perinatal Addiction Center): (412) 605-1593
Alcoholics Anonymous Helpline — 24 hours: (412) 471-7472
Narcotics Anonymous Helpline: (412) 391-5247
Community Care — a resource to find outpatient and inpatient drug and alcohol facilities: 1-800-553-7499
Al-Anon and Al-Ateen Groups — for families, friends and teens of alcoholics: (412) 572-5141
Alternatives Program — drug and alcohol intensive outpatient treatment: (412) 381-2100
Connections for Women — outpatient treatment services for substance Abuse: (412) 381-2100
P.O.W.E.R. Connection: (412) 271-0500

TRANSPORTATION
Medical Assistance Transportation Program — call to register for reimbursement program: (412) 350-4476 (Allegheny Co.)
APPENDIX E.3

Educational Tools: “Prescription for Good Health”
Today ________ (date) you scored _____/30 on the Edinburgh Postnatal Depression Scale (EPDS). This means you are having some symptoms of depression. Getting help is good for you and your child. Below are some things that might improve your mood:

___ Ask your family and friends for help with childcare, chores, and errands. And, find time for yourself. Try taking a walk, some light exercise, taking a bath or do something else you find relaxing.

___ Talk with other mothers about your feelings or join a support group.

___ A care manager from your health plan will call you to offer assistance.

___ Contact Community Care at 1-800-553-7499 for help in finding a mental health provider.

___ Contact ____________________________ (name of provider) at ______________________ (phone) who will make a visit to your home.

___ Return to the clinic in ______ weeks.
   Date/Time of Appt: ______________________

___ Meet with the clinic social worker ____________________________ (name). Date/Time of Appt: ______________________

___ Meet with the Behavioral Health Provider at ____________________________ (location). Name: ____________________________
   Date/Time of Appt: ______________________

If you need immediate assistance, please call the mobile crisis team (Re: Solve Crisis Network) at 1-888-796-8226. They are available 24 hours a day, 7 days a week.
APPENDIX F.1

Implementation Tools: Decision Aid for Triaging Consumers at High Risk for Maternal Depression
EPDS RESULTS: TOTAL SCORE: _______ SCORE ON ITEM 10: _____

Screen mothers with EPDS at WCC visits NB, 2, 4, 6, and 12 months

EPDS score < 12
- Suicide item #10 = 0 (never)
- Suicide item #10 = 1, 2, or 3
  - Infant > 2 weeks
    - LOW RISK
  - Infant ≤ 2 weeks
    - HIGH RISK WITH SUICDAILITY
      - Assess risk with additional questions
      - Maternal history of mental illness? □ Yes □ No
      - Suicidal risk confirmed? □ Yes □ No
      - If No → Treat as HIGH RISK
      - If YES → Call Mobile Crisis Team at 888-796-8226
      - If flight risk, call CHP security (412) 692-5191

EPDS score ≥ 12
- Suicide item #10 = 0 (never)
- Suicide item #10 = 1, 2, or 3
  - Infant > 2 weeks
    - LIKELY BABY BLUES
  - Infant ≤ 2 weeks
    - HIGH RISK
      - Assess risk with additional questions
      - Maternal history of mental illness? □ Yes □ No
      - If yes, offer case management – □ Accepted □ Declined
      - If no, Re-screen at future WCC visits
      - If flight risk, call CHP security (412) 692-5191
      - Provide Emotional Difficulties pamphlet
      - Offer care management – □ Accepted □ Declined

Provider Signature: ____________________________

Care Management referral to: □ UPMC For You □ Gateway □ Unison □ Allegheny County □ Private (refer to # on back of insurance card). Additional comments: ____________________________________________________________
______________________________________________________________
APPENDIX F.2

Implementation Tools: Referral Fax Form/Physical Health Managed Care Organizations
ALLEGHENY COUNTY
MATERNAL & CHILD HEALTH INITIATIVE

From: ____________________________ at ____________________________

Woman’s name: ____________________ DOB: ________________________

Woman’s phone #1: __________________ Woman’s Medicaid ID #: __________

Woman’s phone #2: __________________ Best day/time to call: ____________________

Referring Provider’s name: ____________________________

➢ My most recent EPDS score was ____________/30 on ________________________ (date) at (circle one)

☐ 1st Prenatal

☐ 3rd Trimester

☐ 1st Post partum

☐ Other (specify): ______________________

➢ I have a history of (circle all that apply): depression bipolar disorder schizophrenia anxiety

substance abuse domestic violence

Action Items (check all that apply)

At today’s visit:

☐ I made an appointment with a mental health provider (circle one)

At this office ______________________ At another office ______________________

(provider name) on ______________________ (date).

☐ I was referred directly to a mental health provider (circle one)

At this office ______________________ At another office ______________________

(provider name). 

☐ I was referred to my MCO care manager for help in identifying a mental health provider.

☐ I was referred to my MCO care manager for social services only (e.g., transportation, food stamps).

☐ I was referred to a MCO care manager at this office.

☐ I was referred to a social worker at this office.

☐ I was referred to Community Care.

☐ I would like a home visit from a nurse or social worker.

☐ Woman identified as suicidal and referred to Emergency Services.

Res:olve Crisis Network (formerly ACES) number: 1-888-7 YOU CAN (1-888-796-8226)

Assessment of readiness for mental health services:

Comments (e.g., Specific requests, resources, barriers identified):

Fax this form to the woman’s MCO (contact information below)

☐ Gateway

Attn: Perinatal Team

Fax #: 412 255-5639

Phone #: 800 642-3550, Option 2.

☐ Unison

OB/GYN or Family Medicine

Attn: Pregnancy Case Management

Fax #: 412 457-1354

Phone #: 800 414-6580

☐ UPMC for You

OB/GYN or Family Medicine

Attn: Care Management

Fax #: 412 454-7552

Phone #: 800 286-4242, Option 2, Option 2

☐ Allegheny County Office of Behavioral Health

For uninsured or MA not in MCO

Fax #: 412 350-4245

Phone #: 412 350-3476

☐ For mothers with non-Medicaid insurance coverage (e.g., private insurance) call or fax this form to the number on the back of her insurance card or to her child’s MCO

Fax sent on ______________________ (date)
APPENDIX F.3

Implementation Tools: Referral Information on Home-Based Service Programs
## Allegheny County Maternal Depression Initiative

### Referrals to Home-Based Providers for Women at High Risk for Depression

<table>
<thead>
<tr>
<th>Organization</th>
<th>Programs/Services for Perinatal Depression</th>
<th>Prenatal, Postpartum or Both</th>
<th>Insurance/Income Restrictions</th>
<th>Locations Served</th>
<th>Refer to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allegheny County Health Department</td>
<td>Health information, support, assessments, and referrals</td>
<td>Both (during pregnancy and with children 0-2)</td>
<td>Low-income</td>
<td>All of Allegheny County (some programs limited to certain zip codes)</td>
<td>Joyce Connors 412-247-7957 Fax: 412-247-7959</td>
</tr>
<tr>
<td>Early Head Start (University of Pittsburgh)</td>
<td>Child-focused program supporting families with in-home MH therapy</td>
<td>Both (during pregnancy and with children 0-3)</td>
<td>Low-income (Up to 100% of poverty line)</td>
<td>East End, Hill District area, Clairton area communities, McKees Rocks area, North Side</td>
<td>Angela Tookes 412-233-9430 Fax: 412-233-9475</td>
</tr>
<tr>
<td>Early Head Start (Council of Three Rivers American Indian Center Early Head Start)</td>
<td>Child-focused program supporting families with RN and MH consultant</td>
<td>Both (during pregnancy and with children 0-3)</td>
<td>Low-income (Up to 100% of poverty line). Limited number of families over the income limit or families with foster children</td>
<td>South Pittsburgh communities, Hazelwood communities, and Northeast Allegheny County (Route 28 corridor)</td>
<td>Debbie Gallagher 412-488-2750 ext. 230 Fax: 412-488-7527</td>
</tr>
<tr>
<td>Healthy Start</td>
<td>Psychosocial support and therapeutic counseling by social workers</td>
<td>Both (during pregnancy or child 0-2)</td>
<td>None</td>
<td>All of Allegheny County</td>
<td>Pat Glenn 412-247-1000 Fax: 412-247-0187</td>
</tr>
<tr>
<td>The Birth Circle</td>
<td>Doula services for support and assistance in referrals, etc</td>
<td>Prenatal - Early Postpartum</td>
<td>UPMC for You and all OB patients of East Liberty Family Health Care Center and Metro Family Practice</td>
<td>All of Allegheny County</td>
<td>Stacey Atwell-Keister 412-345-0419 Fax: 412-362-2229</td>
</tr>
<tr>
<td>Every Child Inc. (Pregnancy and Parenting Support)</td>
<td>Doula services for physical, emotional and informational support</td>
<td>Prenatal - Early Postpartum</td>
<td>Allegheny County and Medicaid</td>
<td>All of Allegheny County</td>
<td>Jessica Robinson 412-665-0600 Fax: 412-665-0755</td>
</tr>
<tr>
<td>Every Child Inc. (Family Focused Solutions, Family-Based MH)</td>
<td>Therapeutic, case management services to families.</td>
<td>Prenatal (If other child or children are in the home) Postpartum</td>
<td>Medicaid</td>
<td>All of Allegheny County</td>
<td>Jennifer Delosa 412-665-0600 Fax: 412-665-0755</td>
</tr>
<tr>
<td>Family Resources</td>
<td>Therapy, case management, family support if infant at risk</td>
<td>Postpartum</td>
<td>Medicaid</td>
<td>All of Allegheny County</td>
<td>Clinical Administrator 412-363-1702 Fax: 412-363-1724 (Please indicate Family Resources on fax form and ask patient to sign)</td>
</tr>
</tbody>
</table>
APPENDIX G.1

Data-Collection Tools: Focus Group Protocol
Maternal Depression Initiative
Focus Group Interview Protocol

Hello, my name is __________________________. This is (__________) he/she is part of the research team and will be taking notes today.

Thank you for agreeing to talk with us about how stress affects women and mothers. Today we will spend very little time listening to me and a lot of time listening to you. So I'll be asking for your opinion and thoughts about how stress affects women. I'll use the term "you" to refer to you as a group.

The information we collect today will help inform our efforts to improve the quality of care provided to mothers on Medicaid who are experiencing the consequences of stress such as depression. The women we plan to serve are pregnant or had a child in the previous 12 months. Our efforts will have a particular focus on understanding these mothers’ perceptions, their needs, and treatment preferences. We also plan on developing strategies for overcoming the barriers these mothers face when looking for help or treatment.

Before we begin our discussion, I would like to ask for your permission to tape record today’s discussion. The tape recorded information will help us make sure we don’t miss anything. Only members of our research team will have access to the information we collect today.

Before I turn the tape recorder on (if permission granted), I would like to remind you that today’s discussion will be confidential. We would like to ask you to keep what is said here within the group. Also, while we will not ask questions about this, if we receive any information that you or another person, including a child, is in danger, I am required to report this to my supervisor who may report it to the appropriate agency. Finally, your participation is voluntary. You are not required to answer any questions we ask. You may end your participation at any time. To thank you for your time and participation, we would like to offer you a small token of appreciation. Each of you will receive a $75.00 gift card to Giant Eagle.

Does any one have any questions? (Answer questions)

Great! I’m going to turn the tape recorder on now (if permission granted).

Okay, before we begin, can I get a verbal consent from each of you that you are voluntarily agreeing to participate in today’s discussion? (Get consent).

Great! Let’s begin by meeting each other. Can you please give your first name only and tell us a bit about yourself. For example, how you heard about today’s meeting, whether you have children and how many.

Section A: Define Depression and PPD
Pregnant women and mothers can experience a lot of stress in today’s world. We’d like to hear a little bit about the different kinds of stress you think pregnant women and mothers experience. We would also like to spend time talking about the impact stress can have on a mothers that includes pregnant woman and women who had a baby in the previous 12 months.

1. What do you know about stress? What about depression, what is depression?
2. Is there a difference between being depressed and “stressed out?”
3. What kinds of things can cause stress on a mother? (Probe for stress from family, work, economic factors, work, etc.)
4. How can stress affect a mother? (Probe for psychological impact.)

MDI Focus Groups Protocol
5. What is it like for a woman who is experiencing stress? (Probe here for specific symptoms.)
6. What other words would you use to describe a mother who is experiencing a lot of stress? Probe: Would you describe her as depressed? (Note: Ask this only if the term depression is not mentioned.)
7. Do women of all races react to stress in the same way?

Section B: Attitudes about Depression
As we have discussed, mothers can experience a lot of stress and this stress can have different effects on mothers. People have different ideas about (TERM USED BY GROUP or depression).

1. Do you think (TERM USED BY GROUP or depression) runs in families? (PIC)
2. Do you think (TERM USED BY GROUP or depression) is a sign of weakness? (AGH)
3. Can (TERM USED BY GROUP or depression) have a bad impact on a woman’s child or children? (AGH)
4. What other types of changes can (TERM USED BY GROUP or depression) have on a mother? For instance, can (TERM USED BY GROUP or depression) cause changes like pain or headaches? (PIC)
5. Can a mother who experiences (TERM USED BY GROUP or depression) become (TERM USED BY GROUP or depressed) again?

Section C: Treatment Paths, Attitudes and Preferences
Now I’d like us to talk about what can be done for a (TERM USED BY GROUP or depressed) mother.

1. Do you think something that can be done for a mother who is (TERM USED BY GROUP or depressed)?
2. What can a (TERM USED BY GROUP or depressed) mother do?
3. Where can a (TERM USED BY GROUP or depressed) mother go for help?
4. Can (TERM USED BY GROUP or depressed) mother be treated by a professional. For instance, if a mother is (TERM USED BY GROUP or depressed), should she see a doctor? (PIC) If so, what type of doctor and why? If none, why? Probe: Is visiting a doctor when she is depressed helpful? (PIC) If so, how? Why not?
5. If a (TERM USED BY GROUP or depressed) mother chooses to see a doctor, should medication be used? Why or why not?
   5a. Do you think a medication or antidepressants can help a woman who is pregnant or just had a baby?
6. Are medicines good at treating (TERM USED BY GROUP or depression)? (PIC)
7. Do you think a (TERM USED BY GROUP or depressed) mother should see a psychologist? Why or why not?
   7a. Do you think a counselor or psychologist can help a woman who is pregnant or just had a baby?
8. Do you think counseling is good for treating (TERM USED BY GROUP or depression)? (PIC)
9. Which would you say is better to use, medication or a counselor/psychologist for treating (TERM USED BY GROUP or depression)? (PIC)
10. Does a mother who is treated for (TERM USED BY GROUP or depression) feel better over time or will she always be (TERM USED BY GROUP or depressed)? (PIC) Is so, why?
11. Can you think of anything else that can be done for a (TERM USED BY GROUP or depressed) mother?
   11a. How can that (approach) help?
   11b. Can (approach) also help a pregnant woman or a mother who just had a baby?
12. Is there anything else that can help a (TERM USED BY GROUP or depressed) mother that we haven’t discussed?

FOR WILKINSBURG SITE ONLY:
13. What if we had a counselor/therapist/mental health specialist at the clinic? Let’s say your nurse or doctor told you that you had screened at high risk for (TERM USED BY GROUP or depression), would you be interested in talking with a counselor/therapist/mental health specialist here in the clinic?

Section F: Benefits and Consequences of Depression Treatment
Now that we’ve talked about the various things a (TERM USED BY GROUP or depressed) mother can do to get help, I’d like us to talk about some of the benefits and consequences of the various approaches we’ve discussed.

1. We’ve talked a little bit about the reasons for not using medication when a mother is (TERM USED BY GROUP or depressed). Are there other consequences that we haven’t discussed? If so, what are they? *Probe for differential effect on pregnant and postpartum mothers. Also probe for external consequences (e.g., partner reaction, criticism by others, fear of impact on fetus/infant, etc.)*

2. Can you think of good reasons for using medicines/antidepressants for (TERM USED BY GROUP or depression)? (PIC) If so, what are those? *Probe for differential benefits to pregnant and postpartum women.*

3. Do you think medication should be continued after a woman feels better? (PIC) Why or why not?

4. What about seeing a psychologist/counselor, what are some negative consequences? (PIC) *Probe for differential effect on pregnant and postpartum mothers (e.g., partner reaction, criticism by others, fear of impact on fetus/infant, etc.)*

5. Can you think of other good reasons for a (TERM USED BY GROUP or depressed) mother to see a psychologist/counselor? If so, what are they? *Probe for differential benefits to pregnant and postpartum mothers.*

6. Should treatment be it medication or counseling be continued after a woman feels better? (PIC) Why or why not?

7. Are there any negative consequences to (LIST OTHER APPROACHES MENTIONED) for a (TERM USED BY GROUP or depressed) mother? Is so, what are they? *Probe for differential effect on pregnant and postpartum mothers.*

8. Are there benefits to (LIST OTHER APPROACHES MENTIONED)? Is so, what are they? *Probe for differential benefits to pregnant and postpartum mothers.*

Section G: Strategies for addressing barriers to Treatment
We’re almost done. We have just a few more questions about possible challenges to getting a mother help. Can you tell me:

1. What do you think can keep a (TERM USED BY GROUP or depressed) mother from getting the help she needs? *Probe for instrumental barriers (e.g., lack of child care, cost of treatment, lack of health insurance, etc).*
   1a. How can a program help make sure a (TERM USED BY GROUP or depressed) mother gets the help she needs?

2. Do you think all mothers have access to the same kinds of help like medication or counseling? Why or why not?
   2a. How can a program make sure all (TERM USED BY GROUP or depressed) mother get the same kinds of help?
Section H: Brief Background Survey (anonymous)

Those are all of the group questions. Thank you for taking the time to speak with us. This has been very helpful!

We might be holding other focus groups like this one to hear what women have to say about the programs we have planned. I have a sign-up sheet for those of you interested in participating in another focus group.

Before we end, we would like to ask you to complete a brief survey about your background. No identifying information will be collected. After you complete the survey, please fold it and put in the attached envelope. No one outside the research team will have access to the information you provide.

- Distribute surveys
- Get names and phone numbers of those interested in participating in subsequent focus groups.
- Distribute gift cards. Get signatures on receipts.
Data-Collection Tools: Sample Provider/Managed Care Organization Care Manager Survey
# MCHC Baseline Survey for CHP Physicians

## 1. MCHC Survey - CHP Physicians

Please consider your practice experiences over the past 6 months when answering these questions.

1. In the past 6 months, how often did you screen mothers of infants less than 1 month old for postpartum depression, regardless of signs or symptoms?

   - Never
   - Rarely
   - Sometimes
   - Often
   - Always/Almost Always

2. In the past 6 months, how often did you screen mothers of infants 1-12 months old for postpartum depression, regardless of signs or symptoms?

   - Never
   - Rarely
   - Sometimes
   - Often
   - Always/Almost Always

3. In the past 6 months, how often did you use a standard postpartum screening and referral protocol when conducting well child visits for infants?

   - Never
   - Rarely
   - Sometimes
   - Often
   - Always/Almost Always
### MCHC Baseline Survey for CHP Physicians

4. In the past 6 months, how many women have you diagnosed as being “at-high risk” for postpartum depression?

- [ ] 0
- [ ] 1-2
- [ ] 3-5
- [ ] >5

5. In the past 6 months, how often did you utilize support staff in your practice to help address postpartum depression?

- [ ] Never
- [ ] Rarely
- [ ] Sometimes
- [ ] Often
- [ ] Always/Almost Always

6. In the past 6 months, how often did you refer to depression care managers of the local Medicaid managed care organizations (e.g., UPMC for You, Gateway, Unison) for postpartum depression services?

- [ ] Never
- [ ] Rarely
- [ ] Sometimes
- [ ] Often
- [ ] Always/Almost Always
1. In the past 6 months, if you referred mothers for mental health services for postpartum depression, how often did you hear back from the provider or organization to whom you referred?

- Never
- Rarely
- Sometimes
- Often
- Always/Almost Always
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Untreated postpartum depression can have adverse effects on a child’s health.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>2. It is my responsibility to screen mothers of infants less than 1 month old for postpartum depression.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>3. It is my responsibility to screen mothers of infants 1-12 months old for postpartum depression.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>4. It is my responsibility to refer mothers for evaluation and treatment if I suspect postpartum depression.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>5. I am comfortable asking mothers about postpartum depression.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>6. I can effectively screen all mothers of infants in my practice for postpartum depression.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>7. I can effectively refer mothers to a practice-based social worker for evaluation and treatment of postpartum depression.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>8. I can effectively refer mothers to a managed care organization Care Manager (e.g., Gateway, UPMC for You, Unison) for evaluation and treatment of postpartum depression.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>9. I have adequate time during infant well child visits to screen mothers for postpartum depression.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
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</tr>
<tr>
<td>10. I have adequate time during infant well child visits to <strong>refer</strong> mothers with suspected postpartum depression.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>11. I have sufficient staff support in my practice to help me address postpartum depression.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>12. Mothers whom I refer for postpartum depression mental health services reliably follow-up with the referral.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>13. Managed care organizations reliably provide me with feedback about mothers I refer for postpartum depression.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>14. All mothers with postpartum depression have adequate access to and insurance coverage for appropriate mental health services.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>
### MCHC Baseline Survey for CHP Physicians

#### 4. MCHC Survey -- CHP Physicians, continued

1. The prevalence of postpartum depression among US women who delivered in the past year is approximately:
   - 1 out of 2 women
   - 1 out of 10 women
   - 1 out of 20 women
   - 1 out of 50 women

2. The prevalence of the Baby Blues among US women who delivered in past year is approximately:
   - 1 out of 2 women
   - 1 out of 10 women
   - 1 out of 20 women
   - 1 out of 50 women

3. Compared to privately insured women, Medical Assistance (Medicaid)-eligible women have a postpartum depression prevalence which is:
   - lower
   - the same
   - higher

4. What total Edinburgh Postnatal Depression Scale (EPDS) score should prompt further evaluation or referral for postpartum depression?
   - 5 or higher
   - 8 or higher
   - 12 or higher
   - 15 or higher
   - 18 or higher
MCHC Baseline Survey for CHP Physicians

5. Which of the following would place a woman at the highest risk for postpartum depression?
   - A history of Baby Blues
   - A history of bipolar disorder, currently on medication
   - A history of postpartum depression, not currently on medication

6. A woman must have loss of interest or pleasure and depressed mood to meet criteria for postpartum major depression.
   - True
   - False

7. In contrast to women with postpartum depression, women with Baby Blues have symptoms which:
   - do not reach the “at-risk” level on the EPDS
   - cannot be measured by the EPDS
   - resolve within 2 weeks of delivery
   - last more than 2 weeks following delivery

8. Mothers with postpartum depression bring their baby for more acute care visits than healthy women.
   - True
   - False
Finally, please tell us a little about yourself.

1. What is your age?
   - [ ] 18 - 30
   - [ ] 31 - 40
   - [ ] 41 - 50
   - [ ] 51 - 60
   - [ ] 61 - 70
   - [ ] 70+

2. Are you male or female?
   - [ ] Male
   - [ ] Female

3. Which one or more of the following would you say is your race? Please check all that apply:
   - [ ] White
   - [ ] Black/African American
   - [ ] Asian
   - [ ] American Indian/Alaskan Native
   - [ ] Native Hawaiian/Other Pacific Islander

4. Are you Hispanic or Latino?
   - [ ] Yes
   - [ ] No

5. What is your position?
   - [ ] Resident
   - [ ] Nurse Practitioner
   - [ ] Faculty
### MCHC Baseline Survey for CHP Physicians

#### 6. MCHC Survey -- CHP Physicians, Residents, continued

1. **What is your level of training?**
   - PL-1
   - PL-2
   - PL-3
   - PL-4
   - PL-5

2. **What type of residency are you in?**
   - Pediatrics
   - Med-Peds
   - Triple Board

3. **Where do you have your Continuity Clinic?**
   - PCC - Oakland or Turtle Creek
   - Private Practice
   - Neighborhood health center

4. **What is the average number of patients you see each week in your continuity clinic practice?**
   - < 10
   - 10 - 19
   - 20 - 29
   - 30 - 39
   - 40 - 49
   - >= 50

5. **What percentage of your patients are Medical Assistance (Medicaid) insured?**
   - < 25%
   - 25% - 49%
   - 50% - 74%
   - 75% - 100%
<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is the average number of patients you see each week in your primary care practice (do not include patients you see with trainees)?</td>
<td>&lt; 10&lt;br&gt;10 - 19&lt;br&gt;20 - 29&lt;br&gt;30 - 39&lt;br&gt;40 - 49&lt;br&gt;( \geq 50 )</td>
</tr>
<tr>
<td>2. How many years have you been in practice?</td>
<td>&lt; 5&lt;br&gt;5 - 10&lt;br&gt;11 - 15&lt;br&gt;( &gt; 15 )</td>
</tr>
<tr>
<td>3. What type of residency did you complete?</td>
<td>Pediatrics&lt;br&gt;Med-Peds&lt;br&gt;Triple Board</td>
</tr>
<tr>
<td>4. What percentage of your patients are Medical Assistance (Medicaid) insured?</td>
<td>&lt; 25%&lt;br&gt;25% - 49%&lt;br&gt;50% - 74%&lt;br&gt;75% - 100%</td>
</tr>
</tbody>
</table>
**MCHC Baseline Survey for CHP Physicians**

**8. MCHC Survey -- CHP Physicians**

Thank you for completing this survey!
MCHC Baseline Survey for Magee

1. MCHC Survey – Magee

Please consider your practice experiences over the past 6 months when answering these questions.

1. In the past 6 months, how often did you screen patients at their first prenatal visit for depression, regardless of signs or symptoms?
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always/Almost Always

2. In the past 6 months, how often did you screen patients at their third trimester visit for depression, regardless of signs or symptoms?
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always/Almost Always

3. In the past 6 months, how often did you screen patients at their first postpartum visit for depression, regardless of signs or symptoms?
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always/Almost Always
4. In the past 6 months, how often did you use a standard depression screening and referral protocol when conducting prenatal or postpartum visits for patients?

- Never
- Rarely
- Sometimes
- Often
- Always/Almost Always

5. In the past 6 months, how many patients have you diagnosed as being “at high risk” for depression?

- 0
- 1-2
- 3-5
- >5

6. In the past 6 months, how often did you utilize support staff in your practice to help address perinatal depression?

- Never
- Rarely
- Sometimes
- Often
- Always/Almost Always

7. In the past 6 months, how often did you refer to depression care managers of the local Medicaid managed care organizations (e.g., UPMC for You, Gateway, Unison) for perinatal depression services?

- Never
- Rarely
- Sometimes
- Often
- Always/Almost Always
# MCHC Baseline Survey for Magee

## 2. MCHC Survey -- Magee, continued

1. In the past 6 months, if you referred patients for mental health services for perinatal depression, how often did you hear back from the provider or organization to whom you referred?

   - [ ] Never
   - [ ] Rarely
   - [ ] Sometimes
   - [ ] Often
   - [ ] Always/Almost Always
## MCHC Baseline Survey for Magee

### 3. MCHC Survey -- Magee, continued

1. Untreated depression can have adverse effects on pregnancy outcomes.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

2. It is my responsibility to screen patients at their first prenatal visit for depression.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

3. It is my responsibility to screen patients at their third trimester visit for depression.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

4. It is my responsibility to screen patients at their first postpartum visit for depression.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

5. It is my responsibility to refer patients for evaluation and treatment if I suspect perinatal depression.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

6. I am comfortable asking patients about depression.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

7. I can effectively screen all patients in my clinic for depression at their first prenatal, third trimester, and first postpartum visits.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

8. I can effectively refer patients to a managed care organization Care Manager (e.g., Gateway, UPMC for You, Unison) for evaluation and treatment of perinatal depression.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

9. I can effectively refer mothers to a mental/behavioral health provider for evaluation and treatment of perinatal depression.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

10. I have adequate time to screen patients for perinatal depression.
    - [ ] Strongly Disagree
    - [ ] Disagree
    - [ ] Neutral
    - [ ] Agree
    - [ ] Strongly Agree

11. I have adequate time to refer patients with suspected perinatal depression.
    - [ ] Strongly Disagree
    - [ ] Disagree
    - [ ] Neutral
    - [ ] Agree
    - [ ] Strongly Agree
<p>| | | | | | |</p>
<table>
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<tbody>
<tr>
<td><strong>MCHC Baseline Survey for Magee</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>12. I have sufficient staff support in my clinic to help me address perinatal depression.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td><strong>13. Patients whom I refer for perinatal depression mental health services reliably follow-up with the referral.</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td><strong>14. Managed care organizations reliably provide me with feedback about patients I refer for perinatal depression.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td><strong>15. All patients with perinatal depression have adequate access to and insurance coverage for appropriate mental health services.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>
Finally, please tell us a little about yourself.

1. **What is your age?**
   - [ ] 18 - 30
   - [ ] 31 - 40
   - [ ] 41 - 50
   - [ ] 51 - 60
   - [ ] 61 - 70
   - [ ] 70+

2. **Are you male or female?**
   - [ ] Male
   - [ ] Female

3. **Which one or more of the following would you say is your race? Please check all that apply:**
   - [ ] White
   - [ ] Black/African American
   - [ ] Asian
   - [ ] American Indian/Alaskan Native
   - [ ] Native Hawaiian/Other Pacific Islander

4. **Are you Hispanic or Latino?**
   - [ ] Yes
   - [ ] No

5. **What is your position?**
   - [ ] Faculty physician
   - [ ] Resident
   - [ ] RN
   - [ ] Social Worker
   - [ ] Nurse practitioner/Nurse midwife/Physician's assistant
### MCHC Baseline Survey for Magee

6. At which Magee locations do you work? Please check all that apply:
- [ ] Oakland
- [ ] Wilkinsburg
- [ ] Clairton

7. How many years have you been in practice?
- [ ] < 5
- [ ] 5 - 10
- [ ] 11 - 15
- [ ] > 15

8. What is the average number of patients you see each week?
- [ ] <10
- [ ] 10-19
- [ ] 20-29
- [ ] 30-39
- [ ] 40-49
- [ ] >=50

9. What percentage of your patients are Medical Assistance (Medicaid) insured?
- [ ] < 25%
- [ ] 25% - 49%
- [ ] 50% - 74%
- [ ] 75% - 100%
### MCHC Baseline Survey for Magee

#### 5. MCHC Survey -- Magee

Thank you for completing this survey!
APPENDIX G.3

Data-Collection Tools: Sample Training Evaluation
Allegheny County Maternal Depression Initiative Training

Evaluation

*Please rate each item as Strongly Agree = 1; Strongly Disagree = 5*

<table>
<thead>
<tr>
<th>Agenda items</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The overview of the RAND Initiative was useful.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The overview of the demonstration protocol was useful.</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The presentation of maternal depression was useful.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>The presentation on barriers and engagement strategies was useful.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The role play of motivational interviewing was useful.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Presenters</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The presenters were knowledgeable.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The presenters made an effort to understand my interests/needs.</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The presenters engaged the audience in discussion.</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
The training was a worthwhile event.

I gained valuable knowledge about engaging the Medicaid population in behavioral health treatment.

I learned things I didn’t know about maternal depression.

I learned things I didn’t know about engaging women in behavioral health treatment.

The purpose of the training was clear.

- What did you like most about the training?

- What did you like least about the training?

- Please suggest topics for subsequent training
  - Motivational and ethnographic interviewing?
  - Treatment options?
  - Other?

- Additional comments?
# MCHC3 DISCUSSION GUIDE

<table>
<thead>
<tr>
<th>Participants</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical and behavioral health providers</td>
<td>Collaborative leadership</td>
<td>Physical and behavioral health managed care organization care managers</td>
<td></td>
</tr>
</tbody>
</table>

## Statement of confidentiality and permission to quote
RAND will use the information you provide during this interview for research purposes only. You do not have to participate in the interview, and if you participate, you should feel free to decline to discuss any topic that we raise. RAND will keep confidential the identities of those who participate in the interview and will not attribute any comments to any specific individuals. In the notes from the interview, we will not record individuals’ names associated with comments made. With your permission, we may use quotes from this discussion in our future reports. These quotes will be anonymous and not attributed to any individuals.

- Do you have any questions about the interview?
- Do you agree to participate in our research interview?
- Do you give your permission for us to anonymously quote this interview in future reports?

## Question 1
### SCREENING
- What are some of the successes or benefits related to systematic screening?
- What are some of the challenges to systematically screening 100% of the time?
- What would you need to systematically screen 100% of the time?
- What recommendations do you have related to systematic screening for depression? For PH practices considering screening? For policy makers and payers?

### SCREENING
- Given the 14% high-risk prevalence estimate and an overall screening rate of 55%, what recommendations do you have related to systematic screening for depression?

### SCREENING
- What are some of the successes or benefits related to systematic screening?
- What are some of the challenges to systematically screening 100% of the time?
- What would you need to systematically screen 100% of the time?
- What recommendations do you have related to systematic screening for depression? For PH practices considering screening? For policy makers and payers?

(Consider not asking this as only Terri McKenzie will be able to answer?)

## Question 2
### REFERRAL
- What are some of the successes or benefits related to referring high risk screens to PH MCO care managers?
- What are some of the challenges to referring high risk screens 100% of the time?
- What would you need to refer high risk screens to PH MCO care managers?

### REFERRAL
- What recommendations do you have related to referrals of women at high risk for depression given . . .
- . . . the 53% high-risk referral rate from PH providers to PH MCOs?
- . . . the very small number of PH referrals to BH providers?
- . . . the 11% prevalence of warm

### REFERRAL
- What are some of the successes or benefits related to referring high risk screens to PH MCO care managers? To receiving those referrals?
- What are some of the challenges to referring high risk screens 100% of the time? To reaching the high risk women referred? To following-up with
<table>
<thead>
<tr>
<th>Question 3</th>
<th>ENGAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Given all of your Initiative activities, what are your thoughts about our overall engagement rate of 31%</td>
<td>ENGAGEMENT</td>
</tr>
<tr>
<td>What would it take to engage 100% of high risk women?</td>
<td>Given all of the Initiative activities, what are your thoughts about our overall engagement rate of 31%</td>
</tr>
<tr>
<td>What are some of the successes or benefits related to having a co-located BH provider or a co-located BH liaison?</td>
<td>What would it take to engage 100% of high risk women?</td>
</tr>
<tr>
<td>What are some of the successes or benefits related to utilizing on-site BH providers or on-site BH liaisons?</td>
<td>. . . should utilization of on-site BH services be incentivized? How?</td>
</tr>
<tr>
<td>What would you need to utilize on-site BH providers or liaisons 100% of the time?</td>
<td>. . . should utilization of home-based service providers be incentivized? How?</td>
</tr>
<tr>
<td>What are some of the successes or benefits related to utilizing home-based service providers?</td>
<td>ENGAGEMENT</td>
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<tr>
<td>What are some of the challenges to utilizing on-site BH providers or on-site BH liaisons?</td>
<td>ENGAGEMENT</td>
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<td>What are some of the challenges to utilizing on-site BH providers or on-site BH liaisons?</td>
<td>Given all of your Initiative activities, what are your thoughts about our overall engagement rate of 31%</td>
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<tr>
<td>What are some of the challenges to utilizing on-site BH providers or on-site BH liaisons?</td>
<td>What would it take to engage 100% of high risk women?</td>
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<tr>
<td>What are some of the challenges to utilizing on-site BH providers or on-site BH liaisons?</td>
<td>What are some of the successes or benefits related to having a co-located BH provider or a co-located BH liaison?</td>
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<td>Question 4</td>
<td>SUSTAINING INITIATIVE ACTIVITIES</td>
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<tr>
<td><strong>SUSTAINING INITIATIVE ACTIVITIES</strong></td>
<td>Do you plan to continue Initiative activities after the demonstration period ends?</td>
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<tr>
<td>• Do you plan to continue screening?</td>
<td>Do you plan to continue referring high risk screens to PH MCOs?</td>
</tr>
<tr>
<td>• Do you plan to continue referring high risk screens directly to BH providers?</td>
<td>Do you plan to continue referring high risk screens to PH MCOs?</td>
</tr>
<tr>
<td>• Do you plan to continue to serve as a liaison between BH and PH practices?</td>
<td>Do you plan to continue referring high risk screens directly to BH providers?</td>
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<tr>
<td>• Do you plan to continue to collect and analyze aggregate data on screening and referral rates?</td>
<td>Do you plan to continue to serve as a liaison between BH and PH practices?</td>
</tr>
<tr>
<td>• What would you need to continue Initiative activities?</td>
<td>Do you plan to continue to collect and analyze aggregate data on screening and referral rates?</td>
</tr>
<tr>
<td>• What elements of staff structure are integral to carrying out Initiative activities?</td>
<td>Do you plan to continue to serve as a liaison between BH and PH practices?</td>
</tr>
<tr>
<td>• What recommendations do you have related to continuing Initiative activities? For PH practices? For policy makers and payers?</td>
<td>Do you plan to continue to collect and analyze aggregate data on screening and referral rates?</td>
</tr>
<tr>
<td>Question 6</td>
<td>PROGRESS IN LINKING BH AND PH</td>
</tr>
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<tr>
<td>depression?• What recommendations do you have related to focusing an Initiative on depression? For PH practices? For policy makers and payers?</td>
<td>depression?• What recommendations do you have related to focusing future Initiatives on depression?</td>
</tr>
<tr>
<td>PROGRESS IN LINKING BH AND PH • Do you think that your participation in this Initiative created a stronger link between PH and BH care for your practice?</td>
<td>PROGRESS IN LINKING BH AND PH • Do you think that your participation in this Initiative created a stronger link between PH and BH care in Allegheny County? • The Initiative brought together multiple stakeholders in order to increase support for women with perinatal depression. At times, some stakeholders thought that this led to having too many “hand-offs” in care – too many places where a consumer could “fall through the cracks.” • . . . What recommendations do you have, if any, regarding how to integrate PH and BH care while avoiding the problem of too many hand-offs?</td>
</tr>
</tbody>
</table>


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