Perinatal Mood and Anxiety Disorders: Strategic Plan for Fresno County

"A Call to Action"

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**SART refers to Screening, Assessment, Referral and Treatment of pregnant and postpartum women for perinatal mental health issues, substance abuse and co-occurring disorders.

We have made every effort to list everyone, and regret if we inadvertently did not list a participant.

EXECUTIVE SUMMARY

Problem Statement

A growing body of research addresses the prevalence of perinatal mood and anxiety disorders (PMAD) and their effects not only on the mother and the mother/child bond, but also on the child's health and behavior in the long term. New research has shown that PMAD can lead to difficulties like preeclampsia during pregnancy and can affect the in-utero baby's cognitive function later in life. With an incidence rate of PMAD that is higher than the national average, it is apparent that Fresno County needs to address the lack of integrated care for mothers and babies affected by PMAD. This report is the product of a strategic planning process developed in part through significant community involvement. The process is intended to result in a strategic plan that will improve the capacity of the current system of care, both public and private.

Aim and Goals

Aim: To draft a strategic plan that will, if implemented, build service capacity in prevention, early intervention, and improve systems of care for PMAD in Fresno County regardless of culture, economic status and geographic location.

Goals:

- Develop a series of recommendations to improve the capacity of current systems and services for women and families seeking care for perinatal mood and anxiety disorders
- Develop education and training activities for new and experienced medical providers, behavioral health clinicians, and other health care and social service professionals that will increase early screening and detection so that medical and social services can assist patients in navigating the systems of care
- Recommend a strategy for implementation of a public awareness campaign that will de-stigmatize PMAD and educate the community about signs of PMAD and available resources and services

Next Steps

The goals described in this plan are reasonable, cost-effective, and evidence-based, and most can be implemented in a short period of time through collaborative efforts by a broad range of stakeholders and community members. These goals are also supported by the findings in the data collected among 629 parents, 117 providers, 18 focus group participants and 9 key stakeholders.

The stakeholders involved in this planning process cited capacity as the primary barrier to treatment, so increasing capacity became the primary objective of this planning process. The providers stated that they would be more likely to screen for PMAD if there were services in place for women. Most of them agreed that a consultation service would help with education, referral and treatment by providing them with means to educate themselves on treatment options and resources and giving them a place to refer women who need services. The consultation service would also help integrate services by acting as a central location for information dissemination and referral information and resources.

As more providers become educated on PMAD and screening becomes standard, stigma should be reduced. However, to further reduce stigma and also help integrate services, consumer education is needed. United Way – Fresno County/211 Information Line and the crisis hotline of the Marjaree Mason Center have been suggested to assist in offering information to consumers. A media campaign already developed by Fresno County Department of Public Health, can be modified and used to help further educate the public.

Table of Contents

Overview

Postpartum depression is a common and serious disorder that is highly treatable, particularly with early diagnosis. While postpartum depression is the most widely known mood disorder related to pregnancy and birth, mood disorders can occur anytime during pregnancy or up to one year following birth. As a whole, the group of disorders associated with pregnancy and postnatally is called Perinatal Mood and Anxiety Disorders (PMAD). The incidence rate of women affected by PMAD varies, with some estimates as high as 22% (Gaynes et al., 2005). Furthermore, as less than 50% of women are actually screened for PMAD (Kelly et al., 2001); the number of women and families affected by PMAD is probably much higher than the documented incidence rate.

Fresno County's incidence rate of PMAD is believed to be higher than the national average because of the presence of several risk factors. It has been found that incidence rates are higher for Latinas (Pascoe et al., 2006) and adolescent mothers. Additionally, the incidence rate among women living in low-income situations is between 37% and 52% (Maternal Depression in Oregon, May 2009 and LA Best Babies Network; Landscape Report, May 2009). Many mothers in Fresno County fall into one or more of these groups among which the incidence rate is higher.

If untreated, PMAD can affect the mother/child bond, the child's physical health and its long-term behavioral and emotional health. Maternal depression during pregnancy has been shown to relate to low birth weight, a higher rate of preeclampsia and an elevated risk of pre-term delivery (Kurki et al., 2000). In the long term, untreated PMAD can affect a child in a number of ways. It is associated with anxiety and depression in toddlers, behavioral and learning disabilities in school-aged children, and mood disorders later in life (Zuckerman et al., 1990).

Chapter 1. Introduction

History of the Project

In April 2010, the third annual conference on perinatal mental health was held by a local Fresno group, Central California Perinatal Mental Health Collaborative, to educate providers on perinatal mood disorders. Following the conference, Fresno County's Babies First SART[1] Leadership Group, First 5 Fresno County and WestCare hosted the first Fresno County Perinatal Mental Health Summit. One of the purposes of the summit was to identify the necessary elements to create an integrated model of care to serve women with PMAD and their families. The participants in the summit were community stakeholders providing perinatal services in Fresno County. Prior to the conference and summit, First 5 Fresno County had funded a research report on maternal depression. Upon this report's release and following the summit in May, First 5 Fresno County chose to fund a grant to develop a strategic plan for an integrated model of care, inclusive of all pay types, for women in Fresno County with PMAD.

The report completed in 2010 titled *First 5 Fresno County Maternal Depression Research: Final Report 2010* stated that perinatal environments might impact child development and emotional wellbeing as much as the child's genetic makeup. It aimed to provide an overview of national and state perinatal depression programs and to specifically define and evaluate the availability and efficacy of existing maternal depression programs in Fresno County. A number of issues were identified in the First 5 Fresno County report, as were the risk factors cited in Section 1 of this report, which suggest that mothers in Fresno County are particularly vulnerable to PMAD.

The First 5 Fresno County report cited two notable problems, affecting California as a whole and including Fresno County: (1) lack of communications among organizations and even among programs within single organizations, and (2) the perceived dearth of services for PMAD. The report also presented a strategy and recommendations for integrating services. Part of strategy was to involve the entire community and was intended to engage a broad group of key stakeholders to enhance capacity for PMAD services. It was also recommended that a single, organization (Lead Agency) be selected to facilitate the development of the strategic plan.

[1] SART refers to Screening, Assessment, Referral and Treatment of pregnant and postpartum women for perinatal mental health issues, substance abuse and co-occurring disorders.

The California Health Collaborative (CHC) was selected as the Lead Agency to bring together the stakeholders and coordinate the development of the strategic plan for increasing capacity and creating a path for an integrated model of care for women with PMAD.

In October of 2010, three main workgroups began meeting with CHC. Participants in these workgroups included community stakeholders, service providers and interested community members. The invitation to participate in the workgroups went to all SART LEADERSHIP GROUP and Central California Perinatal Mental Health Collaborative members as well as many other stakeholders and interested community members. Some were invited through word-of-mouth. A wide variety of community members and service providers were represented, and the participants had a deep knowledge base. The three workgroups were as follows:

- Professional Preparation and Consumer Education: This group examined provider education, how to screen and what type of training is necessary to prepare providers to identify and treat PMAD. Community and consumer education was also evaluated by this group, as there is a need to provide the public with information on symptoms and prevention as well as decrease the stigma associated with PMAD.

- Services and Systems: This group researched and examined existing services and programs in Fresno County. They also analyzed other models of care and existing programs in other states and counties.

- Finance and Policy: Members of this workgroup examined what other states have accomplished in terms of policy and legislation associated with PMAD. They also researched funding possibilities such as grants and established funding streams.

Workgroup members were active participants in the process of developing the strategic plan and met more than 15 times over the course of several months. The strategic plan was possible because of the outstanding level of cooperation and collaboration by all involved.

Other Model Programs

There are a number of exemplary models for coordinated and effective care for PMAD. One, from the State of Illinois, is particularly good because it provides reimbursements for routine perinatal screening (i.e., $14.60/screen) (Illinois General Assembly, 2007). Providers are encouraged to screen during prenatal and postpartum visits and infant well child visits. Support is available for providers via a

toll-free number that links primary care clinicians to psychiatrists and to information about medications that may be used in the management of PMAD both during and after pregnancy. Patients also have access to a toll-free helpline. The State's website is a good source of information about perinatal depression and provides patient handouts, a clinician guide to treatment decisions and an e-mail alert system so that providers can receive practice updates.

The University of North Carolina recently opened a 5-bed inpatient facility strictly for women with perinatal mental health issues. It is the first of its kind and it will be interesting to see the program's progress over time. This model is mentioned in more detail later in the report.

In Rhode Island a Day Hospital program has been developed which includes group psychotherapy, individual therapy, medication intervention, family education and counseling. Other services are provided through consultation such as nutrition, lactation, health education and infant development. It is hoped by the time a woman is discharged (usually in 7 days); she will be able to successfully transition to weekly outpatient care. There is on-site nursery staff to care for infants while the mother attends class, but the program was designed to be flexible so that the mother can nurse anytime or have their baby with them during the many programs. This program has been in place for six years and has successfully been incorporated into the existing perinatal mental health services in Rhode Island (Howard, 2010).

Barriers to Care

Barriers to screening and treatment services for PMAD occur at the individual, provider and system levels. Individual barriers include things like stigma, culture, language, and not knowing enough to recognize symptoms of depression. Preventive measures, such as education and routine screening, appropriately address these issues.

Provider barriers to screening include cost (Segre et al., 2005), time and competency. Health care providers also face a number of barriers when a patient has a positive PMAD screen, mainly due to limited capacity (limited availability of resources for further evaluation and treatment). One of the factors that reduces capacity in many parts of the U.S. is the limited number of providers who accept Medicaid (Heneghan et al., 2006). In Fresno County, providers have reported that capacity is limited for both Medi-Cal and private Insurance. Another barrier is provider competency; primary care providers may not be adequately trained to discuss maternal psychosocial issues or have the tools necessary to screen patients.

Emerging Issues

The literature on PMAD shows that symptoms of depression and anxiety exist throughout pregnancy and following birth (i.e., up to one year postnatally) and that screening improves treatment rates (Georgiopoulos et al., 2001). Therefore, screening and intervention services should be available beginning with the first trimester of pregnancy and at regular intervals for up to one year following birth. PMAD is prevalent across all socio-economic levels and ideally treatment should involve families and partners, and use a stepped model of care. One level in the stepped model of care is support groups. Support groups can reach many women early, aiding prevention and getting women help as soon as they need it and are also cost effective. Additionally, a warm-line can be used to provide information to parents and a consultation service would be a valuable asset to providers.

Workgroup Findings

The workgroups convened many times and established that several of the emerging issues described in the literature affect Fresno County. They also identified issues unique to Fresno County. The Systems and Services Workgroup found that several issues are related to the need to increase capacity. For example, provider education about PMAD screening and treatment, the integration of services, and the need for providers to know about available resources are all issues that can impact capacity. Furthermore, it was felt that if providers had access to a consultation service they would have a better sense of available resources as well as treatment options, and would be more inclined to screen. Support groups were also considered by this group as another way to add capacity.

The Professional Preparation and Consumer Education Workgroup found that the public's lack of knowledge about PMAD was leading to stigma and to families failing to seek treatment in a timely manner, or seek treatment at all. If treatment is provided early in PMAD, the need for more costly crisis care is reduced. The group also addressed provider education, which (as mentioned above) impacts capacity.

Lastly, the Finance and Policy Workgroup found that capacity might be improved through policy change. Provider reimbursement for screening was discussed as a way to increase screening. The group also examined the question of whether preventive care costs less than crisis care.

Chapter 2. Research Findings

Summary

In connection with strategic planning process, CHC researched in depth the service needs and gaps in services for PMAD in Fresno County. Based on initial research and the findings of the workgroups, this research ultimately focused on four questions: (1) What are the most common attitudes about PMAD among the professionals and paraprofessionals who provide related services, and how do these providers respond to incidences of PMAD? (2) What experiences do parents with children aged zero to one-year report having during and after pregnancy, as related to incidence, screening and treatment for PMAD? (3) What are the perceived gaps in services? (4) What types of programs and protocols for detection and intervention do key stakeholders believe would be most effective?

Introduction

In June 2010, a report was submitted to First 5 Fresno County documenting the state of services for maternal depression in Fresno County. Data were collected in survey format and through semi-structured interviews with first-line providers of maternal health care. This helped characterize local provider attitudes and behaviors associated with services for maternal depression. Researchers assessed the state of existing services for maternal depression and attempted to determine needs and gaps in services as perceived by reported leaders on maternal depression issues in Fresno County. This research suggested that providers believe maternal depression to be common enough and serious enough to warrant screening; however, only a little over 50% of the providers appeared to be conducting formal screening. Survey and semi-structured interview responses indicated that providers have an adequate understanding of formal screening instruments, but that screening may not be uniformly conducted because respondents are not familiar with referral sources. Also noteworthy were reports of perceived prevalence rates for maternal depression, ranging from mild to severe, that were much higher than the 15% prevalence rate generally reported in the literature.

The First 5 Fresno County study was informative and helped to guide the present strategic plan, but it did have limitations, including low response rates from providers and lack of feedback from parents about their perceived needs. One purpose of CHC's research was to ameliorate these weaknesses and provide a more complete picture of the issues at hand. The following section describes the methods and results of research

CHC conducted to better understand the experiences and attitudes of parents and primary and allied care providers.

Procedures

Most women receive some form of maternal care during pregnancy and postpartum. They are seen by various health providers (e.g., obstetricians/gynecologists, nurses, family physicians, neonatologists and pediatricians) both prenatally and postnatally. The nature and regularity of these visits provide a unique opportunity to advise and support parents, and to connect them with the services that they may need. Similarly, human service and family support providers—such as WIC, nutritional programs, women's support groups, parent support groups, and Early Head Start—can play critical roles in improving maternal and infant mental health. These and similar service providers regularly see parents and form meaningful relationships with them. They are well positioned to identify PMAD and to refer parents who need services.

For the reasons listed above, we targeted both health providers and human services/support providers to assess the attitudes and practices of those involved in direct services for PMAD. We also asked parents about their experiences, the types of services they preferred, and the types of services they would have liked to have which weren't available to them. The research protocol was comprised of surveys, focus groups, and semi-structured interviews with key stakeholders.

Stage 1: Instrument Development

Three surveys were developed by the Perinatal Mood Disorders Strategic Planning Workgroup: (1) the health provider survey was designed to assess providers' attitudes and behaviors regarding PMAD (28 questions; *Perinatal Mood Disturbance Survey [Health Provider]*; (2) the human service and family support providers survey aimed to determine what services parents were referred to or given by providers (22 questions; *Allied Provider Survey on Perinatal Mood Disturbance*), and (3) the parent survey (33 questions; *Parent Survey*), which examined parents' experiences. Four questions to assess primary care physicians' practices and beliefs related to PMAD were also included in a larger questionnaire that was distributed electronically by the county. In this report, these four questions are referred to as the *Primary Care Physician Survey*.[2]

[2] Special acknowledgement is given to Pouran Nowzari for graciously including these items specific to PMAD in her countywide survey.

The surveys aimed to answer four broad questions: (1) What are the most common attitudes about PMAD among the professionals and paraprofessionals who provide related services, and how do these providers respond to incidences of PMAD? (2) What experiences do parents with children ages zero to one-year report having during and after pregnancy, as related to PMAD symptoms and available information and services? (3) What are the perceived gaps in services? (4) What types of programs and protocols for detection and intervention do key stakeholders believe would be most effective, and what are the anticipated barriers new programs?

Survey Instruments

As noted previously, the Perinatal Mood Disorder Strategic Planning Workgroups developed three questionnaire-style surveys. The respondents were asked a broad range of questions about socio-demographics, practices, and beliefs. The *Perinatal Mood Disturbance Survey [Health Provider]* was designed to determine the attitudes and practices of physicians and other health care providers in reference to PMAD. The first part of this instrument attempted to assess experiences via questions like "Did you receive training specifically for perinatal mood disorders?" The second part of this survey assessed attitudes about PMAD and treatment behaviors. Questions included the following: "I possess adequate knowledge about maternal depression" and "New mothers are referred for further evaluation for depression."

As stated above, four supplemental questions were added to a county survey that solicited responses from primary care physicians on a broader range of health-related topics. The *Primary Care Physician Survey* asked physicians about their confidence in, and/or comfort with: diagnosing postpartum depression, treating and managing postpartum depression with either counseling or medication, and dealing with the overall needs of patients with postpartum depression. Responses were scored on a five-point Likert scale, with one being the lowest and five the highest level of confidence or comfort.

The *Allied Provider Survey on Perinatal Mood Disturbance*, sought to determine existing services for PMAD provided by human service and parent support providers in Fresno County. Sample questions are "How many women did you see during their prenatal/perinatal/postpartum periods during the last three months?" and "At which stage in the gestational period is a woman screened for signs and symptoms of maternal depression, if at all?"

The *Parent Survey*, attempted to determine needs and gaps in services for new parents in Fresno County.

In addition to a variety of demographic questions, the survey asked questions like "How much has [sadness and crying] bothered or upset you during or following pregnancy?" and "Does your health provider spend time talking about your emotional health?" Again, this part of the survey scored items on a Likert scale, with zero being strongly disagree and four being strongly agree.

Focus Groups

The semi-structured focus group interview script was developed in part based on the information collected from the *Parent Survey*. The focus group survey included 7 questions which were designed to provide information about the following topics: (1) the nature of the mood or mental state of parents during or following pregnancy; (2) whether support services were available to parents, and whether they knew where to find services should they need them; (3) whether parents felt that their doctor and/or their baby's doctor spent sufficient time and displayed sufficient cultural sensitivity that parents were willing to discuss issues or concerns with the doctor; and (4) whether parents would have liked to receive services that were not available to them. The questions were asked verbatim, but were posed in open-ended fashion so as to allow for the flexibility to follow a topic in depth.

Key Stakeholder Interviews

The existing literature lacks a comprehensive examination of barriers to screening and treatment for perinatal mood disorders. Therefore, in addition to inquiring about emerging issues and desired programs and services, we sought to determine whether perceived barriers to care for perinatal mood disorders involved patient, physician, and organizational domains. The interviews generally consisted of a set of questions to guide the interaction between interviewee and interviewer. The precise questions were asked verbatim, with the aim of the interviews being systematically delivered. Again, the questions were posed in open-ended fashion so as to allow for the flexibility to follow a topic in depth.

Stage 2: Survey Administration and Interview Methods

Thirty-four *Perinatal Mood Disturbance Surveys [Health Provider]* and 27 *Allied Provider Surveys on Perinatal Mood Disturbances* were returned after being distributed electronically and through the mail to health care providers and parent services/support providers. Fifty-six *Primary Care Physician Survey* items were returned, for a total of 117 provider survey participants.

The *Parent Survey*s were distributed electronically (via Survey Monkey) and at public events at 17 sites

throughout Fresno County. A total of 629 parents responded to the survey (see *Appendix A* for the detailed site distribution listing).

In order to provide a rich and complete picture of parents' needs and perceptions of services, four parent focus groups were conducted. The groups represented a stratified sampling across ethnicity and socioeconomic sections in Fresno County. A total of 18 parents participated in the focus groups.

To determine the barriers to the assessment of and care for perinatal mood disorders as perceived by providers, target individuals were contacted by phone and/or email and were solicited for interviews. A total of nine interviewees represented the following organizations: SART Leadership Group, various county programs, Spirit of Women, Obstetrics and Gynecology for UCSF-Fresno Medical Education Program, Community Women's Health Clinic.

Results

Surveys

Providers were surveyed using three survey instruments: the *Perinatal Mood Disturbance Survey [Health Provider]*, the *Primary Care Physician Survey*, and the *Allied Provider Survey on Perinatal Mood Disturbance*. A total of 34 diverse health care providers, 56 primary care physicians, and 27 human service and family support providers responded, respectively, to these three surveys. It should be noted that many of the surveys were incomplete, and some questions received more than one response. Thus the number of responses to each question does not always correlate to the number of participants. The reported percentages are based on the total number of responses to the question.

Results of the *Perinatal Mood Disturbance Survey [Health Provider]*

Providers who responded to the surveys fell into the following specialty categories.

*Pediatrics: 3.85%,
*Internal medicine (family practice): 3.85%,
*Nursing (nurse practitioner): 7.69%
*Family practice: 46.15%
*Obstetrics/gynecology: 42.31%
*Mental health (other than licensed marriage and family therapy): 3.85%
*Licensed marriage and family therapy: 11.54%

When asked whether they possess adequate knowledge about maternal depression, 56% (n=19) of the respondents reported to agree and 26.5% (n=9) reported to strongly agree. One respondent strongly disagreed (2.9%). When asked whether new mothers are formally screened for maternal depression, 61.8%

(n=21) reported to agree or strongly agree, leaving about 32.4% (n=11) reporting to disagree or strongly disagree. Looking at screening by profession, 50% of the OB/GYN respondents and 65% of the family practice reported that they screen.[3] Most (41.4%) use the Edinburgh Postnatal Depression Scale (EPDS). When providers were asked whether they or their organization educate parents about potential mental health issues during pregnancy, 82% reported that they did. Regarding treatment for postpartum depression, 32.4% reported feeling uncomfortable providing treatment, and 28.4% reported feeling uncomfortable providing treatment because of potential language and/or cultural barriers. Approximately 75% of the respondents, including behavioral health providers and marriage and family therapists, reported not having been trained to address perinatal mood disorders. Approximately 30% of the providers stated that they possessed*" adequate knowledge of referral resources for maternal depression*" and (6% strongly agreed and 24% agreed). When asked about perceived prevalence of PMAD, 35.3% of the providers perceived the prevalence to be quite low, less than 10%, and 6% believed prevalence rates to be over 50% (see Figure 2).

Results of the *Primary Care Physician Survey*

Survey Items	Percent reporting below average level of confidence
Dealing with the needs of patients who have postpartum depression.	44.3%
Diagnosing postpartum depression	26.8%
Treating & managing postpartum depression with medication.	38.1%
Treating postpartum depression with counseling.	61%

Table 1: Primary Care Physician Survey (n=56)

The *Primary Care Physician Survey* was appended to a broader county survey. A total of 56 responses to the *Primary Care Physician Survey* were received. Questions aimed to determine the level of perceived confidence in diagnosing and treating PMAD. Responses were scored on a five-point Likert scale, with one being the lowest and five the highest level of confidence or comfort. The results indicate that nearly half of the primary care physicians lack overall confidence in dealing with the needs of patients with postpartum depression. Only 13% reported being highly comfortable dealing with those patients' needs, although most (almost three-quarters) reported feeling comfortable with diagnosing postpartum depression (see Table 1). In terms of treatment for postpartum depression, primary care physicians reported feeling, in general, more comfortable treating patients with medication rather than counseling. But, approximately one third reported low confidence when treating patients with medication.

[3] Only one pediatrician responded to this item. S/he reported s/he does not screen for PMAD.

Results of *Allied Provider Survey on Perinatal Mood Disturbance*

The results of this survey differ from those of the two other provider surveys. The types of providers who participated in this survey were as follows:

*Doula: 4.4%
*Educator: 30.4%
*Program Manager/Supervisor: 13%
*Licensed Vocational Nurse (LVN): 4.4%
*Registered Nurse (RN): 4.4%
*Comprehensive perinatal health worker: 17.4%
*Child development specialist: 4.4%
*Childcare worker: 4.4%
*Social worker: 4.4%
*Counselor: 4.4%

When family support providers were asked whether they or their organization provide education about potential mental health issues during pregnancy, 90.5% reported that they did. Approximately 64% of the providers reported having received training in PMAD, compared with just 26% of the health providers. About a quarter of these providers (27%) reported that they had seen more than 75 perinatal mothers in the past three months. Although family support providers reported to screen for mood disorders mostly during the first trimester (32%) only 7% reported that they screen nine to twelve months postpartum, and slightly less than half of the providers (45.5%) reported they were certain to use formal screen instruments. Most providers (78.6%) indicated that when they identify a mother as at risk or as having perinatal mood disturbances, they make a referral to another program or agency. When providers were queried further about the nature of the referral, the most common response (28.6%) was that they most likely refer the family to a social worker, psychologist, or other mental health counselor. Some (14.3%) reported that they are most likely to refer the family to parent education classes. Differences emerged, however, when comparing the *practices* of human service providers with their perception of which services *parents preferred*. One notable difference was that providers perceived parents to prefer being referred to peer support groups, but the practice of referring parents to support groups was relatively low. Our survey did not query whether and to what extent providers were aware of relevant resources, but the fact that Fresno County has historically reported a lack of relevant resources may be one reason providers do not refer parents to support groups even though they believe parents would prefer this (see Figure 1).

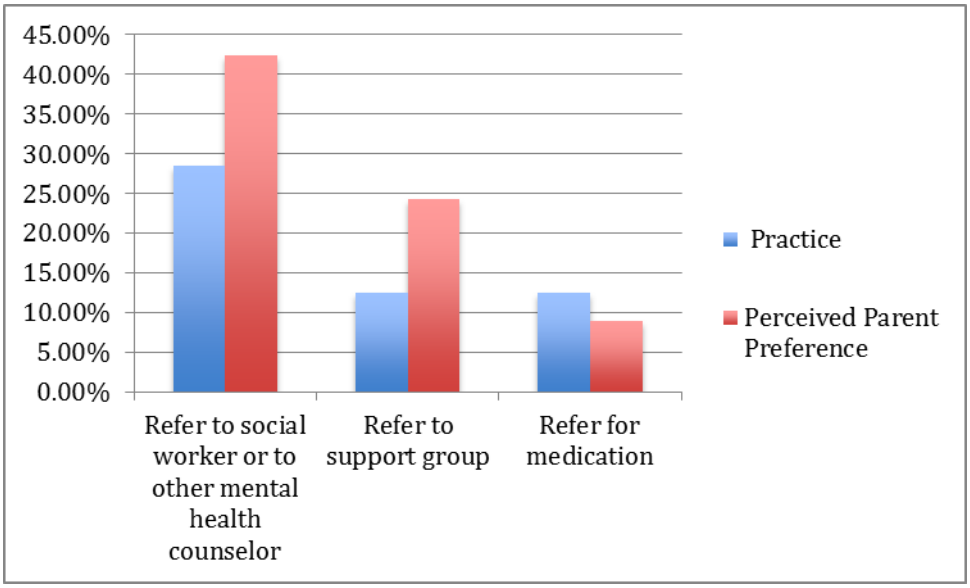


Figure 1: Human service and family support provider responses regarding treatments most often recommended to women with perinatal mood disorders and perceived preferred treatment by women who have perinatal mood disorders

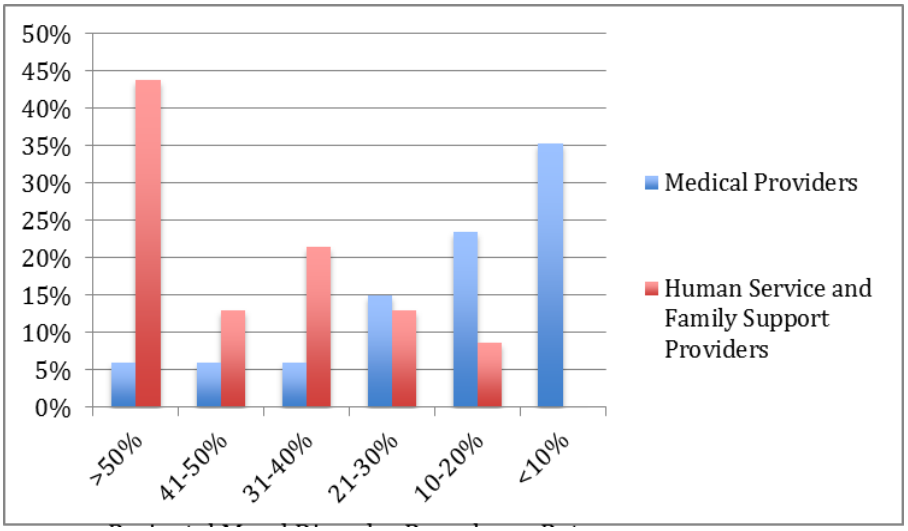


Figure 2: Comparison of perceived prevalence of PMAD by medical providers and human service and family support providers

As shown in Figure 2 above, human service and family support providers also differ from medical providers in their perception of the prevalence of PMAD. Human service and family support providers perceive the prevalence to be quite high: 43.5% reported that they believe rates to be over 50% and none reported that they believe the prevalence to be under 10%.

Results of the *Parent Survey*

A total of 629 parents responded to our survey (4% men and 96% women). The data set included parents who were pregnant, had at least one child under the age of one year, or both. Our sample was stratified across ethnicity/race, age, level of education, and residence (i.e., urban, suburban, and rural). As stated above, recruitment was undertaken at 17 sites throughout the county, and 15 of those sites yielded responses from parents (see Appendix A). Parent participants indicated they are residents of Fresno City and the following regions in Fresno County: Fresno, Orange Cove, Parlier, Raisin, Malaga, Laton, Biola, Clovis, Sanger, Huron, Mendota, Reedley, Kerman, Firebaugh, Fowler, Selma, Del Rey, San Joaquin, Caruthers, Auberry, Burrel, Kingsburg, Tranquility, and Squaw Valley. Approximately 10% of surveys were collected from participants living outside of Fresno County, primarily in Los Angeles County, who attended events in Fresno County. Translations of this survey into Spanish were done by translation and back-translation, and were reviewed and edited. Demographic data were collected to provide a more complete picture of our participant sample and are summarized in Table 2.

Demographic Variable	Percent(%) Mean (AVG) Mode (MO)
Gender	
Male	4% (n=25)
Female	96% (n=606)
Ethnicity	
Latina(o)	65.21%(n=388)
White	21.34%(n=127)
African American	4.84% (n=29)
Asian/PI	5.21% (31)
Native American	0.34% (n=2)
Other	3.03% (n=18)
Age	20-29years (MO)
Level of Education	High School/GED (MO) (53.16%) BS/BA (25%)
Language Spoken	
English	53% (n=314)
Spanish	43.2% (n=256)
Punjabi	2.5% (n=15)
Hmong	0.17% (n=1)
Marital Status	
Married	36.6% (n=228)
Single	41.8% (n=261)
Live Together	21.6% (n=135)
Number of Children at Home	2.3 (AVG) 1 (MO)
Residence	
Urban	36%
Suburban	24%
Rural	40%

Table 2: Demographic description of parents (n=629)

The mean age was 23.6 years, with ages ranging between 14 and 56 years. Most participants were Latino(a) (see Figure 3), and most respondents spoke English as their primary language (53%). The largest number of participants lived in the combined suburban and urban areas, with the highest concentration in southwest Fresno (n=172) (see Figure 4). The largest group of parents were single (41.8%), with an average of two children between 0 and 5 years old living at home. The mode age of children living at home is one year old.

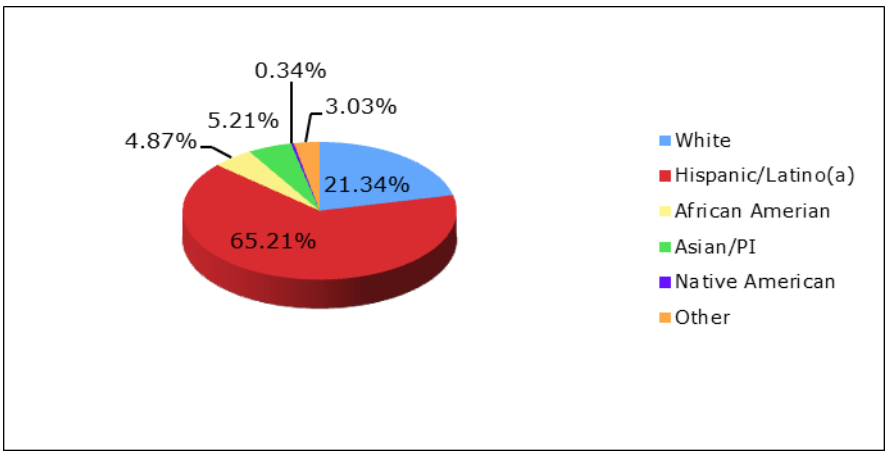


Figure 3: The ethnic distribution of parent participants (n=629)

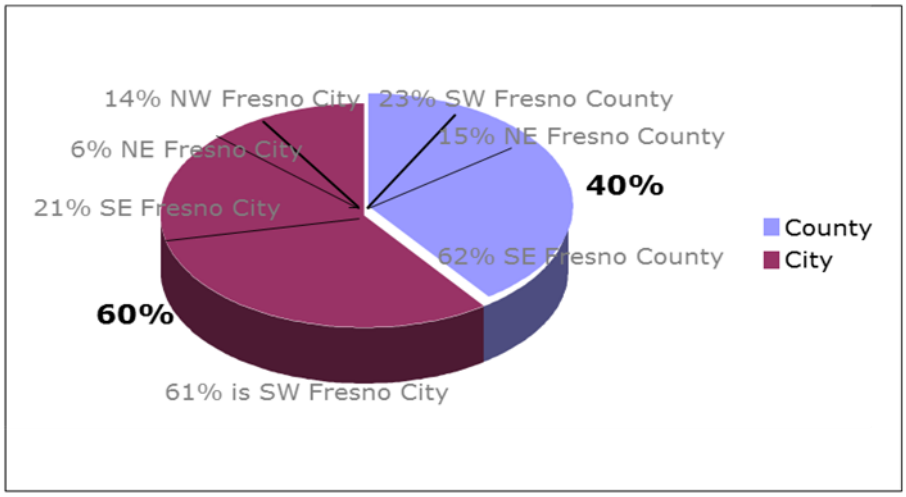


Figure 4: Parent participants by region

Parents reported that unexplained sadness and crying was the most bothersome during and/or following pregnancy (see Figure 5), with approximately 36% of the parents reporting somewhat to extreme discomfort with sadness (somewhat 17%; quite a bit 11%; extreme 8%). Consequently, this particular parameter was the focus of subsequent analyses. Sadness was examined as a function of education, how much time spent with provider, social support, marital status, ethnicity, age, living location, and the number of children living at home. Unexpectedly, analyses did not reveal statistically significant associations or differences between categories (in cases where ANOVAs were conducted) within respective variables (all $p>.05$). For example, parents with less than a high school degree did not differ in their reported sadness from those who had BS/BA or graduate degrees. Nor did we find differences in the reported sadness for teen parents versus more mature parents. Although the differences in sadness among county regions did not differ significantly, it is noteworthy that more parents from southeast Fresno County reported being quite a bit to extremely disturbed by sadness (20%) relative to those in other county regions (e.g., northeast Fresno County 7%; southwest Fresno County 13.%). Within the Fresno metro regions, parents from

northwest Fresno reported the highest rates of quite a bit to extreme sadness (35%), and this is nearly double that of other metro regions (northeast, southeast and southwest Fresno all ranged between 18-18.75%). The small sample size of African American participants (n=30) made it difficult to identify statistically significant differences between African Americans and other racial/ethnic groups. However, a noteworthy finding is that the African American mothers reported experiencing more sadness relative to other ethnic groups. Approximately 31% of African Americans reported being quite a bit to extremely bothered by sadness in comparison to the 18% of both Whites and Latinas reporting these degrees of discomfort with the their sadness.

Finally over half of the parents reported receiving information about mood disorders during pregnancy (67%) and/or postpartum periods (56%), and they overwhelmingly believe that receiving *written* PMAD *information* is particularly important (95%). When parents were asked whether they knew where to go for help in dealing with uncomfortable feelings during after pregnancy, approximately 52% said "*yes*", and approximately 34% knew to call "211" if they needed additional information or resources. The only statistically significant findings in these analyses were for parents who experienced complications with pregnancy, labor, or after birth with the baby; these parents reported significantly more extreme sadness ($t(599) = 3.017$, $p < .05$). Indeed, approximately 70% of the participants who reported complications also reported feeling quite a bit of sadness or extreme sadness.

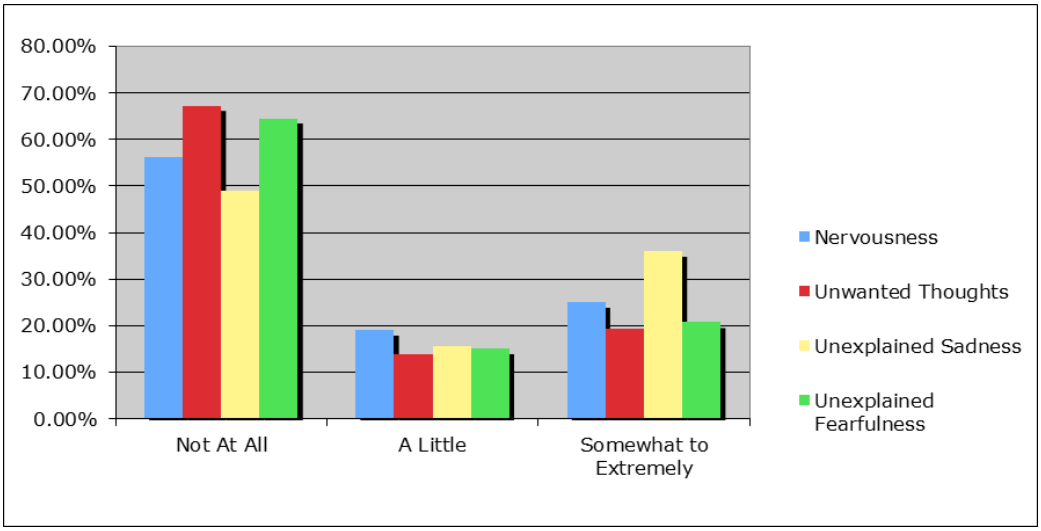


Figure 5: Responses to the question "How much have [the following experiences] bothered or upset you during or following pregnancy?" Data are collapsed across items to provide clarity (n=629)

Focus Groups

Four parent focus groups were conducted to allow for elaboration of questions asked in the surveys. Questions asked during the focus groups are presented in Table 3. We attempted to conduct a stratified sampling across ethnicity and socioeconomic sections, with groups including East Indian women (n=4), women in substance abuse treatment (n=5; 4 Latina, 1 White), Hmong women (n=2), and African American women (n=7). A total of 18 mothers participated in the focus groups, and facilitators assisted with the interviews for the African American and East Indian groups.

One of the most salient outcomes from the focus groups was that they revealed differences among mothers from the different groups. For example, the East Indian mothers were very uncomfortable with questions asking about their needs and reported they were content with all aspects of motherhood; whereas, mothers undergoing substance abuse treatment easily discussed needs, but had great difficultly reporting what they enjoyed about being a parent. Both the facilitator for the East Indian group and the staff at the substance abuse center explained their constituent or client responses in terms of culture. East Indian women, from their cultural perspective, believe they may disgrace their families with their participation in discussions about discomfort or discontent. Indeed, they greatly appreciated their doctors who were also East Indian, who understood cultural norms and would not ask probing or intrusive questions that might bring dishonor. When asked about whether they would participate in mother support groups, one of the women reported that she and many second generation East Indian women would appreciate participating in a support group, but that the group constituents would have to be diverse, and not from the tight-knit East Indian culture. The first-generation East Indian women indicated that they would not participate in support groups. When asked about the types of services that they would like to have, these participants reported more educational classes.

Conversely, treatment staff and the recovering substance abuse mothers, themselves, explained that these mothers were so accustomed to focusing on, and talking about, the issues around their addiction that their focus was on the difficulties in their lives, and the positive experiences were less apparent. This group reported experiencing high levels of stress, and many issues involved their anticipated difficulties when leaving the recovery program. Services that they would like to have included home visitation and a 12-step program that included children.

Many of the women in all four groups were very concerned with financial issues, and they feared juggling work and motherhood. A total of 67% reported experiencing difficult feelings and/or thoughts related to

finances. Within the four groups the women were generally in agreement regarding whether their doctors spent sufficient time with them, but there were differences between the four groups. The East Indian mothers and those in the treatment center uniformly reported that their doctors spent sufficient time with them and talked to them about their wellbeing. In contrast, eight of the nine women in the other groups reported not getting enough time with their doctors. When asked if they knew where to go if they needed help, most initially reported that they would go to a family member or friend. When the question was clarified to mean a professional, or someone other than a friend or family member, 78% reported not knowing where to go. The remaining participants said they would call "211" or ask their provider for help. This is inconsistent with responses from the full group of survey respondents. See Table 3 for a summary.

Items to Assess Needs	Responses
What do you like best about being the parent of a newborn?	*Bonding and attachment with baby (89%; n=16)* *Watching baby grow and change (11%; n=2)* *Breast feeding (17%; n=3)* *Being a mother/feeling like a mother (44%; n=8)* *Love and attention" and" reason to live" (28%; n=5)*
What is the most difficult thing about being the parent of a newborn?	*No sleep (56%; n=10)* *Loss of freedom (61%; n=11)* *Family (33%; n=6)* *Unprepared for motherhood (22%; n=4)* *No help (17%; n=3)* *Worry about pregnancy or baby's health (28%; n=5)* *Being pregnant and ill (28%; n=5)*
Did/do you have any difficult feelings during pregnancy or after the birth of your baby that may have surprised you? Please describe some examples.	Yes (61%; n=11) ***Sample responses:*** Unexpected ("erratic") mood swings (28%; n=5) *"I was afraid of being unable to care for the baby. I thought it come naturally and it didn't."* *"Everything was not what it was supposed to be—I didn't feel like I was supposed to feel."* *"I felt sad that I didn't enjoy the pregnancy like other mothers. My mother said she never had any problems like me."* *"I was surprised that I could hold it together during the pregnancy. I'm glad my doctor put me on meds."* *"I thought a lot about how God punished me for the past, my baby was disabled."* *"I missed a lot of work, and I wasn't there enough for my baby. I failed at everything."* *"I was surprised at how motivated I was during my pregnancy, and how much energy I had. I had a reason to live."*
Did you discuss difficult feelings with anyone? What was or would have been most helpful to you when handling difficult feelings that you may have had?	***Discuss feeling with***: partner (61%; n=11), mother (38%; n=7), sister (28%; n=5) WIC (n=2), ***Would have been most helpful:*** Having somebody tell me that mood swings are normal Home visits for the baby Having someone check on me after the baby came home Someone other than family to talk to Exercise, meditation, bike riding, spending time with partner Peer support groups Having someone to talk to who does not know my family

Do you feel that your doctor and/or your baby's doctor provided sufficient time and cultural sensitivity for you to discuss any issues or concerns that you might have?*	Yes 56%; n=10) No (44%; n=8) ***Sample negative comments:*** *"No, I never saw the doctor until 8th month".* *"My doctor doesn't even look at me. My doctor would not answer my call, and I don/t know who to contact with questions."* *"My doctor's old and dismissive. He doesn't want to understand woman like me [African American]."* *"I think she [doctor] judges me."*
What information or services do you think would be most helpful for parents with new babies?	*"I think more information about preterm labor and the role of controlling stress for the sake of the baby is important."* *"It would be helpful if the doctor talked to my partner and my parents so that they know that I need to eat certain foods and take the vitamins."* *"My partner should be able to stay in the hospital with me, and they should take the baby long enough for me sleep."* *"More education classes and more support group classes, with some that include swimming, walking and yoga."* *"I would like a Doula"*
Would you know where to go if you needed to talk with someone outside of your immediate circle of family and friends?	Yes, I know who I would contact (28%; n=5) No. (72%; n=13) For "Yes" responses: *"I would call 211"* *"The WIC people would tell me who to call."* *"My doctor would have a referral."*

Table 3: Focus Group Responses

Key Stakeholders

Three stakeholders meetings were held, and key stakeholders were interviewed as individuals, or in groups of two to six. Questions included (1) What are the perinatal mental health issues in Fresno County? (2) What services are needed? (3) What are the obstacles to providing effective PMAD services? Results from interview meetings were as follows.

Several issues emerged when discussing Fresno County's PMAD issues, but the central theme, as reported by many of the stakeholders (n=5), was that providers are unaware of resources and they lack appropriate mental health training. Some of the comments included, "there's no place to send mothers with PMAD"; "Providers don't want to ask [patients/clients] about mental health issues because they don't have a referral", and "They don't feel comfortable with the it [mothers who may be experiencing PMAD], and they don't know how to handle it". These responses are consistent with findings from the Primary Care Physician Survey, where only 13% of the physicians reported to be highly comfortable dealing with parents who have postpartum depression. It is also consistent with the health providers, who overwhelming reported (74%) that they didn't receive training for PMAD. In reference to provider training, other comments included that the "mother/infant dyad, as a unit, needs to be the focus of postpartum treatment" and that specific attention needs to be given to the culturally specific needs of the individual. Finally,

stakeholders discussed the need to build PMAD training and education into medical and nursing students' curricula. The argument was that by giving the mental health sufficient attention during early training, PMAD would become validated as medical issue. One stakeholder stated, "When looking at the national level, OB/GYN has nothing in the way of curriculum." Finally, substantial discussion was given to the notion of creating a PMAD coordinated system of care and information hub that extends beyond the county limits, to include all of Central Valley.

When considering PMAD services, concerns regarding capacity building became salient. Stakeholders believed that: more PMAD-trained providers are needed; a resource list needs to be broadly distributed, mother support groups are needed, providers need to be trained to use formal screening instruments, and a universal protocol is needed for steps to be taken for the prevention, referral and treatment for PMAD. Other needed services were reported to be cultural competency training as well as training for PMAD for community providers at all levels.

Stakeholders reported a number of barriers to the prevention for, and delivery of, PMAD services. First, stakeholders reported that no systematic approach is currently taken (by the provider community) to screen and refer mothers and their families for services; as a consequence, providers don't know what should be done and how other providers are handling PMAD. To address this issue, stakeholders believed that a coordination of care among providers is needed, and that this system must be timely and reliable. Second, training and education for providers must be sufficient, and if not, compliance with any protocol would be diminished. Stakeholders stated that "Providers would be willing to expand mental health care if they had "minimal [short duration], quality" mental health training that were easily accessible. Other related discussions addressed the need for providers, at all levels of mother/provider intersections, to understand the nature and prevalence of PMAD. Stakeholders concluded that providers would be more willing to screen if they became more aware of the need to do so. As one respondent summarized the current thinking among physicians, "it [PMAD] is something that happens to other physicians' patients, and not mine." As was seen in the "Results" section, this notion seems to be supported by the health providers' reported perceptions of generally low prevalence rates for PMAD, which is in contrast to the perception of front-line providers (i.e., human service and family support providers). Finally stakeholders reported that any systemic change could not be mandated. Physicians are unlikely to routinely screen unless they are reimbursed for doing so. It was also reported that physicians feel overwhelmed with duties and information, and won't want to deal with mental health issues unless they understand that the inclusion of PMAD services will ultimately result in better health care, and cost savings for providers.

Discussion

The overall findings presented in this chapter are consistent with earlier reports (First 5 Fresno County Maternal Depression Report, 2010), and with some of the Perinatal Mood Disorders Strategic Planning Workgroups' conclusions. At the heart of it is that Fresno County appears to lack the capacity for both detection and treatment of PMAD. Screening is not routinely conducted, as evidenced with the 50-61% screening rate, varying between provider types. Furthermore, formal screening instruments are not routinely used (see provider survey results). This is consistent with the roughly 50% screening rates, and the use of informal screening practices, that had been previously reported for both the national and local levels (First 5 Fresno Count Maternal Depression Report, 2010). Two explanations that had been previously suggested to explain the reported screening rates were that providers were not familiar with referral resources, and that providers perceived screening to be costly and time consuming. Results in this present study support the former explanation with only about 30% of the health providers feeling confident with their understanding of available resources. The lack of awareness of PMAD services, in addition to "cost" of screening, were noted barriers to PMAD services in stakeholder discussions, lending support for both explanations for the low PMAD screening rates. In contrast, the findings from the consumer perspective initially appeared to be somewhat more encouraging, showing approximately 52% of the parents knowing where to go for help in dealing with PMAD. However, when consumers were probed further during the focus group interviews, it became clear that parents were unaware of direct resources for treatment for PMAD, but they believed their providers (e.g., physician or human service and support provider like WIC) could refer them to the appropriate source.

Another issue raised by the Service and Systems Workgroup was that of capacity building through provider education and training. Our provider survey results were that most (74%) of our health providers had not received training. This finding was supported by the stakeholder results, who agreed that providers were not adequately trained, but that providers would be willing to participate in PMAD education if it were accessible and effective. They also reported that such training would enhance providers' ability to provide both, for a better understanding of PMAD so that screening would be conducted, and for enhanced confidence in their ability to deal with cases of PMAD so that services would be rendered. The need for the latter was underscored by the Primary Care Physicians Survey data, where approximately 44% respondents reported having relatively low confidence in "dealing with the needs" of mothers with depression. The former belief is supported by the Health Provider respondents who reported low prevalence rates for PMAD (35% reported <10% prevalence), which is in stark contrast to reports by the family support providers, who reported relatively high rates of PMAD (43.5% reported >50% prevalence).

The parent responses were particularly illuminating, but there are also some caveats associated with these findings. The parent survey and focus group responses provided a snap shot of the parents' experiences, and the types of services that they would like to have. Parent responses were that they experience sadness, but that they receive high levels of support, primarily from partners or other family members (data not shown). The focus group discussions, however, were that family support is not always helpful, and that other forms of support are desired. Also, the focus groups, in their discussion about experiences with providers, illustrated that cultural issues were important in providing quality care. It should also be reiterated that 28.4% of the health providers reported feeling uncomfortable providing PMAD care due to cultural or language barriers. Limitations with the findings from the parent survey are that, although parents reported experiencing symptoms of depression, and in some cases were extremely bothered by these experiences, these are self-reports, and are likely to be an attenuated picture of what parents truly experience. They do provide a glimpse at what parents experience, but they do not provide an indication of PMAD prevalence, nor do they suggest that some groups, for example the African American mothers or residents of certain regions in the community, are not at a higher risk for PMAD.

Chapter 3. Recommendations

Overview

In development of the final set of recommendations provided in this section, CHC was significantly influenced by the input of the medical community; public/behavioral health, substance abuse, social work, and human service providers; community stakeholders; and consumers. We also relied heavily on the medical and research literature available regarding model programs and best practices. In general, these recommendations are guided by the following key factors.

- There was a consensus among our community partners that the key for success would be to address the need for increasing service capacity in prevention, early intervention, and urgent care to women at risk. The first recommendation (consultation service) is the key to building greater capacity in our community for serving women and their families. These recommended strategies, if implemented, would reduce the number of women seeking care in an extreme crisis or emergency. This would result in reduced burden and costs to our public hospitals and county behavioral health, health, and social service programs.

- The recommendations were organized sequentially with the consultation service being the foundation that would establish the infrastructure for the remaining steps to be implemented. When the consultation service is completed and tested, the provider community would be assured that a model for referral, services, support, and information was in place and ready for operations. The establishment of the consultation service would also help address the need to form a clear path for a more integrated and coordinated model of services and care for women and their families.

- There was consensus among our groups that these recommendations, if implemented, should be organized and designed in a manner appropriate to the cultural, economic, and geographic diversity of Fresno County. It is critical that the consultation service, provider education and training programs, consumer information and helplines, support groups, and media campaign be designed to address the diversity of culture and language and the accessibility needs of women in Fresno County regardless of their economic and insurance status.

- These recommendations outline an evidence-based rationale, proposed steps for implementation, potential partners for the development and implementation of the strategy, policy and legislative issues that will impact institutionalization and sustainability, and a projected cost for the implementation. The total estimated cost for implementation of these seven recommendations is about $302,000. This is a conservative estimate based on the minimal amount of investment needed to implement the recommendations. We believe this is a modest and achievable funding level that will address the immediate needs for improving and building service capacity.

- The recommendations were also designed with an acute awareness of the financial and economic conditions currently limiting the capabilities of many public and private health and community service organizations. It is our belief from multiple discussions with local county and community stakeholders that many of these strategies can be implemented using a combination of existing or blended funding streams while also leveraging others that may bring additional state or federal money to increase service capacity in Fresno County.

- Our recommendations were designed to address immediate needs and service issues with a projected timeframe for implementation of 12 months or less.

Area of Recommendation: Increase Access to Services and Systems Integration

Recommendation 1	***The development and implementation of a perinatal mental health provider consultation service.***
Rationale	We have reviewed other states that have successfully implemented plans to increase capacity and services for women in need of perinatal mental health programs. Our work indicates that in the State of Illinois there is a consultation service program that can be replicated and used in Fresno County. Many of the participants in our planning workgroups have voiced support for the adoption of this concept in Fresno County. The use of a consultation service model enables providers to be more confident in screening and more accurate in providing referrals, providing treatment, and prescribing medication. The service would be available to all providers, in both urban and rural settings, and would integrate with current tele-psychiatry activities in Fresno County.
Proposed Strategies of Implementation	The primary mechanisms for implementation of this recommendation include the following. 1. Identification and contracting with a host organization to develop, pilot-test, and maintain this service program. The development of the consultation program would require implementation of specific protocols that would be used for responding to calls for consultation and services. 2. After pilot testing, implementation of a targeted outreach and education campaign to local medical and health care providers. This would include a program orientation and examples of how to maximize the use of these services. 3. Assurance that the service would be a culturally competent model of care regardless of a woman's geographic location and health insurance status.
Potential Partners and Lead Agencies	The potential partners for development of the consultation service could include but are not limited to the following. 1. Community Regional Medical Center 2. University of California San Francisco – Fresno 3. Children's Hospital of Central California 4. Fresno Family Counseling Center 5. Fresno County Departments of Health, Behavioral Health and Social Services 6. Central California Perinatal Mental Health Collaborative 7. SART LEADERSHIP GROUP The Illinois model used a local hospital as the host organization, ensuring access to trained staff and quality clinical oversight of the program.

Policy and/or Legislative Changes	To assure the institutionalization and sustainability of this service, we believe funds from the Mental Health Services Act account can be authorized to support its creation and ongoing operation. If there is a need to create more specific language that allows the use of these funds, state elected officials can revise and update the enabling legislation. As in other states, funding for the consultation service can be blended from diverse sources.
Cost	In reviewing the cost information from the Illinois Model, we have estimated the consultation service start-up costs to be as follows. Project Director: Coordinates and oversees the program, provides training to providers, and manages follow-up to patients and providers. Annual salary and benefits estimated at $65,000. Provider costs: Licensed staff that provide consultation and clinical support services. A daily on-call fee estimated of $100 per day for 240 workdays equals $24,000 annually; a consultation fee of $100 per call for 25 calls per month equals $30,000 annually. Patients requiring extended services would be directed to appropriate providers and agencies in the community. The host organization would be responsible to follow-up on these patients to assure that they are connected to a provider for services. Telephone line costs and charges: Monthly cost is estimated to $150 for 12 months, or $1800. Other Operating Costs: Office equipment, supplies, etc. Estimated to be $4500 annually. Indirect costs: Estimated to be 10% of the total project, or $12,530 annually. **Total estimated cost: $137,830**

Area of Recommendation: Increase Access to Services and Systems Integration	
Recommendation 2	***Implement a navigation protocol to: assist providers with identifying women of diverse populations with perinatal mood disorders, refer these women to appropriate services, and assist these women in navigating the services available.***
Rationale	Our review of the research literature indicates that in order to achieve an integrated, comprehensive, and coordinated system of care, it is critical to employ a strategy that uses navigation protocols consistent with patient needs and the capacity of the existing delivery system. The programs reviewed included the stepped model of care, which is evidence-based and has demonstrated promising results for improving the coordination and quality of care with patients (Gjerdingen, 2003). The local workgroups identified the need for building a coordinated system of care, and using a navigation protocol is one major step in that direction. If adopted, the navigation protocol enables existing providers to coordinate their efforts and work more effectively and efficiently. *This recommendation is also applicable to professional preparation.
Proposed Strategies of Implementation	The primary mechanisms for implementation of this recommendation would include the following. 1. Identification of an agency and/or core group of licensed professionals that can provide train-the-trainer programs on the navigation protocol for health and medical providers. This strategy could include on-site training for all staff and the integration of training into existing professional medical and nursing training programs. 2. Development of training materials, both print and electronic, for use in the programs. 3. The coordination and implementation of training for medical professionals could be done by the host agency providing the consultation service.
Potential Partners and Lead Agencies	The primary partners for this recommendation would include, but are not limited to, organizations providing the following programs and services. 1. Fresno County Departments of Behavioral Health and Public Health 2. UCSF Medical Faculty 3. First 5 Fresno County 4. Central California Perinatal Mental Health Collaborative 5. Alameda County WIC 6. Child Care Providers 7. All health, behavioral health, and human service providers caring for parents with children younger than two years of age. 8. SART LEADERSHIP GROUP

Policy and/or Legislative Changes	To assure the institutionalization and sustainability of these services, federal, state, and county contracts could be reviewed and revised to require training and implementation of these protocols for and by providers. Such training would improve the quality of care received by patients and clients in medical, health care, human services, and substance abuse programs.
Cost	It is estimated that to implement this recommendation, the costs would include the development of training program and materials as follows. Estimated cost for project consultant to design training model: $10,000 Estimated cost to provide train-the-trainer program to 50 professional staff at $150 per person: $7500 Protocol and resource cards: $50 x 50 staff = $2500 **Total estimated cost: $20,000**

Area of Recommendation: Increase Access to Services and Systems Integration	
Recommendation 3	***Implement a navigation protocol to assist allied health and human service providers who provide care to gestational mothers from diverse cultural populations. The training protocol will assist providers with identifying women with perinatal mood disorders, referring such women to appropriate services, and assisting women in navigating the services available.***
Rationale	National research and local survey data demonstrate that allied health and human service providers play a key role in the lives of gestational mothers. A review of existing programs in California and other states indicate that training this group of providers can increase early identification and treatment of women impacted by PMAD as well as reach women in rural areas.
Proposed Strategies of Implementation	The primary mechanisms for implementation of this recommendation would include the following. 1. Review and adoption of existing training curriculum for allied health and social service providers (e.g., Early Head Start has a Perinatal Mental Health training, as does Alameda County WIC). This activity can include the investigation of an abbreviated Mental Health First Aid – PMH-specific program for local providers of allied health and human services. 2. Convening with local community-based organizations serving at-risk population to design site-specific plans and protocols for use in their programs.
Potential Partners and Lead Agencies	The primary partners for this recommendation would include but not be limited to organizations providing the following programs and services: 1. Early Head Start 2. WIC 3. Childcare Providers 4. First 5 Fresno County funded programs 5. Tribal Agencies 6. County funded programs serving women 7. Federally Qualified Healthcare Clinics 8. Central California Perinatal Mental Health Collaborative 9. SART LEADERSHIP GROUP
Policy and/or Legislative Changes	To assure the institutionalization and sustainability of this recommendation, the following policy and legislative changes should be considered. 1. Federal funding streams and state departments that oversee WIC or other early childhood education and service programs could require comprehensive and culturally competent training in perinatal mental health services. 2. State licensing and certification for providers can include a mandatory

	provision to participate in PMAD training. 3. There could be links to Childcare & Development Fund and the CAPIT Child Abuse Prevention & Intervention Treatment programs.
Cost	It is estimated that the cost for implementation of this recommendation would be: Training materials at $50 per participant for 100 participants: $5000 Training Consultant: Alameda WIC has offered to provide free training. **Total estimated cost: $5,000**

Area of Recommendation: Increase Access to Services and Systems Integration	
Recommendation 4	***To increase the amount of perinatal mental health support groups available to serve culturally diverse populations in Fresno County.***
Rationale	National data and research suggest that support groups for pregnant and postpartum women is an integral part of a system of care (Gjerdingen, 2009) that is designed to reduce the incidence of perinatal mood disorders which would assist with building capacity. Through prevention and early treatment of PMAD, the need for crisis treatment should be reduced. These support groups can be organized and facilitated for women in urban as well as rural settings and accommodate all levels of diversity and economic status.
Proposed Strategies of Implementation	The primary mechanisms for implementation of this recommendation would include the following. 1. Coordinate with PSI (Postpartum Support International) at a local level to develop a local plan to increase the number of support groups accessible and available to women in the community. 2. Identify a potential sponsor or host organization to facilitate the training and deployment of volunteers and consider the use of paid facilitators. 3. When training and development are complete, perform outreach and education to make program available and known in the community.
Potential Partners and Lead Agencies	The primary partners for this recommendation would include, but are not limited to organizations providing the following programs and services: 1. Postpartum Support International (PSI) 2. Local churches 3. Fresno Family Counseling 4. Birth Circle Support Group 5. Fresno County Department of Behavioral Health 6. Kaiser 7. Mother Resource Center at CRMC 8. Early Head Start 9. PACE Centers 10. Central California Perinatal Mental Health Collaborative 11. SART LEADERSHIP GROUP

Policy and/or Legislative Changes	To assure the institutionalization and sustainability of these services, it is suggested that a host group or agency be identified to coordinate this program. This activity may require the group to adopt policy changes depending upon its current mission, structure and functions.
Cost	We have estimated the project costs as follows: • Support Group Training Books from PSI $50 (10 people)= $500 • On-site training by consultant for initial trainers = $5,000 • Resource Cards and Posters = $1,500 • It is anticipated based on similar models used elsewhere that the support groups would be held at local venues such as churches and community centers with minimal or no rental costs. Also, using a train-the trainer model will keep training cost to a minimum. **Total estimated cost =$7,000**

Area of Recommendation: Professional Preparation	
Recommendation 5	***Provide training for medical, health care and behavioral health professionals who provide care to gestational mothers of culturally diverse populations on perinatal mood disorder screening and treatment protocols.***
Rationale	National evidence and data suggests that providers should be trained in the use of a reliable screening (ACOG Committee Opinion No. 343, 2006) and treatment protocol. The program should include training to deliver information to culturally diverse populations. Use of current evidence based curriculum is recommended.
Proposed Strategies for Implementation	The primary mechanisms for implementation of this recommendation would include: 1. Design and tailor on-site training for providers and staff 2. Sponsorship of conferences that would provide continuing education credits- (CCPMHC conference) 3. Adopting, promotion and implementation of Web-based training – (Stepped Care Model, MedEdPPD and Alameda County's WIC Perinatal Depression Training) 4. Adoption and dissemination of a Provider Tool-kit (Alameda WIC, funded through the State WIC program)
Potential Partners & Lead Agencies	The primary partners for this recommendation would include, but are not limited to organizations providing the following programs and services: 1. Local and State Universities, Hospitals and other Institutions that have the ability and established practice for providing continuing medical and nursing education credits. 2. Central California Perinatal Mental Health Collaborative 3. First 5 Fresno County can partner with local medical, health care and non-profit organizations to develop and assure that the training program is standard and consistent with the needs of the patient population. This would include working with medical and nursing schools to encourage expanding the content of their courses to comprehensively address perinatal mental health. 4. First 5 Fresno County can consider the use of a lead agency to assure that professional preparation recommendation is developed, coordinated and implemented in a consistent and comprehensive manner. 5. SART LEADERSHIP GROUP
Policy and/or Legislative Changes	To assure the institutionalization and sustainability of Professional preparation and training, there are potential policy changes that could be adopted for example: 1. Future State and Federal contracts with counties could require providers to

	participate in perinatal mental health training. The contract could include a provision that future funding can be dependent upon completion of the training and adoption of screening and treatment protocols. 2. Local County Contracts with medical and substance abuse providers can include the mandatory training and protocol requirements. 3. Review and updating of Federal/State Medi-Cal regulations to connect these protocols to services that can be billed in the practice. 4. Child Care & Development Fund (CCDF) provides federally funded childcare. Training in PMAD is not required to participate in this funding stream. 5. Federal Health and Human Service Agencies provide umbrella services overseeing all physical and social health of women and children. Training in PMAD is not always required to participate in these funding streams. This area would require policy changes. 6. WIC (federal) does not require training in PMH for providers and this could be another avenue for policy changes. .
Cost	It is projected that the cost for each of these recommendations would be estimated as the following: • Adoption and Dissemination of Provider Tool Kit - (100) 100 x $60.00 per unit cost=$600 • Web Based Training – (Adoption of existing program) Registration fees are estimated at $75.00 x 100 participants= $7500 • Continuing education conference (registration fee) local conference by CCPMHC is generally $65 x 100 participants= $6500 • On-site provider training –Each training would be tailored to size of practice or program. It is estimated that the cost for delivery for onsite training for up to 10 people would be =$2500 x estimated 5 sites = $12,500 **Total estimated cost=$27,100**

Area of Recommendation: Consumer Education	
Recommendation 6	***Provide a local consumer warm/crisis line that is used to serve culturally diverse populations of consumers seeking information, referral or if needed a telephonic counseling intervention.***
Rationale	In order to assure that consumers have access to information that can facilitate their access and use of perinatal mental health services in an effective manner, the establishment of a central and identifiable number to contact is critical. In addition, Fresno County has in place qualified public and non-profit agencies and programs that with specific training and targeted enhancements in their funding can potentially provide consumer information and telephonic counseling services.
Proposed Strategies of Implementation	The primary mechanisms for implementation of this recommendation would include: 1. Training of personnel who staff the local 211consumer information line in Fresno County. The program director for 211 has indicated their willingness to serve in this capacity. If properly trained, staff responding to calls can use a brief screening tool to assess the need for referral to additional services. 2. A cooperative agreement with a local provider for telephonic services to women (example: the Marjaree Mason Center) to provide warm line and early intervention crisis services for women with signs and symptoms of perinatal mood disorder. 3. These telephone service programs will require a link to the consultation service and other public agency information lines in case of questions or needs for additional services.
Potential Partners & Lead Agencies	The primary partners for this recommendation would include but not be limited to the following organizations: 1. First 5 Fresno County 2. United Way Fresno County - 211 Fresno County 3. Marjaree Mason Center 4. Fresno Family Counseling Center 5. PSI (Postpartum Support International) has an existing warm line 6. Central California Perinatal Mental Health Collaborative 7. SART LEADERSHIP GROUP 8. Fresno County Departments of Public Health, Behavioral Health and Social Services

Policy and/or Legislative Changes	This recommendation builds on the capacity of existing service providers in the community and does not require public policy or legislative changes. It would require organizational policy and procedural changes with the providers of these existing services.
Cost	It is estimated that initial start-up costs for providing training and enhancing the existing capacity of these agencies would be estimated as follows: • Training and consultation services from and individual or a lead agency. Estimated costs for a project consultant = $10,000 • Call service staff person per each agency $10,650 per estimate of United Way Fresno County – 211 $25,000 estimated costs for services- Marjaree Mason Center **Total estimated costs = $45,650**

Area of Recommendation: Consumer Education	
Recommendation 7	***Organization and provision of a comprehensive, culturally diverse media campaign to educate local consumers.***
Rationale	Many local and state perinatal mental health program models that were reviewed included as a critical component the delivery of a targeted media campaign. The campaigns are designed to raise the awareness of the extent of the problem, work to decrease the stigma associated with perinatal mood and anxiety disorders and direct consumers to available resources (Dumesnil et al., 2009).
Proposed Strategies of Implementation	Several years ago, the Fresno County Department of Public Health in collaboration with local community groups and an advertising firm created a Babies First campaign that addresses perinatal mental health issues but due to a lack of capacity for services, was never released. In reviewing the original material, our local task forces believe that much of the material is still relevant and useful today. The campaign includes TV and radio commercials and written materials in English, Spanish and Hmong. Other forms of electronic media could be explored as well, i.e. web banners. Additionally, information about resources and perinatal mood disorders can be included in the First 5 Fresno County "Welcome Baby" bags given out at the hospitals.
Potential Partners & Lead Agencies	The primary partners for this recommendation would include but not be limited to organizations providing the following programs and services: 1. Fresno County Department of Public Health 2. Fresno County Department of Behavioral 3. Local Hospitals 4. 211 program 5. Local Media (TV/Radio) 6. Corporate Sponsorship can be considered 7. SART LEADERSHIP GROUP 8. Central California Perinatal Mental Health Collaborative

Policy and/or Legislative Changes	There are none proposed at this time. This recommendation requires a cooperative effort with the Fresno County Department of Public Health, First 5 Fresno County and other sponsoring agencies and groups for the media campaign to be effective and sustained.
Cost	As part of our strategic planning efforts, we have worked with the Fresno County Department of Public Health to contact the company that has the master video, tapes and materials for the campaign. The cost of editing and updating the materials is estimated to be about $1500-$2500. In order to conduct a three month (90 day) campaign, in our community, using TV and radio for at least two - three languages, it is estimated to cost: • Television (targeted high viewership times) $5,000 per month for two languages (total- $30,000) • Radio - (rotations of ads on stations with content that target at risk populations) $3000 per month per language. (total $27,000) **Total estimated costs= $59,500** *Corporate sponsors and/or foundations could be used to offset cost. *Federal HRSA Grants have been used to fund similar campaigns. *Career & Development Grants may be available for this as well.

Long Term Issues

The recommendations provided in this plan are activities which, if undertaken soon, can be made within a year and with a modest amount of funds. This strategic plan was not designed to address a number of issues that will require much more work and have a longer timeframe for systems change that would need to be considered. One major issue is that of emergency and crisis care for women with PMAD. There continues to be a need to review and improve the coordination of services required by women in an extreme crisis and in need of placement with an inpatient facility. Upon implementation of the recommendations, more women will be screened and therefore it is hoped that women would be identified for treatment earlier reducing the number of cases that require crisis care. It is also believed that as more women are educated, support group utilization and other preventative measures can be taken to alleviate the crisis care need. Furthermore, the activities and work associated with this strategic plan have provided new opportunities for partnerships with local public and private institutions to work collaboratively to enhance coordination and capacity building including crisis and inpatient care.

In anticipation and preparation of these future meetings and work we have reviewed several models that are worth consideration for possible replication in our community. For example, the University of North Carolina opened a 5- bed inpatient facility just for women with perinatal mood and anxiety disorders. It is a facility that offers many services such as individualized assessment and treatment plans with a multidisciplinary team, group therapies, art and mindfulness, biofeedback therapy, mother-infant attachment therapy, family and partner assisted interpersonal psychotherapy, therapeutic activities geared for pregnancy and postpartum women, protected sleep times; lactation, nutrition and Ob-Gyn consultants and extended visiting hours to maximize positive mother-baby interaction. If funding could be secured for similar undertaking in Fresno County, the facility could provide service to the whole San Joaquin region for it would be the first of its kind in the area as well as the only one.

The University of Illinois at Chicago's Department of Psychiatry has a 37- bed inpatient unit and 12 beds dedicated to the treatment of women who suffer from various psychiatric conditions while pregnant and in postpartum. The treatment approach is comprehensive and offers daily patients' rounds, medication adjustments if needed, variety of Group Treatments as well as the assistance of a Social Worker tuned to the needs of women in peripartum. The UIC Department of Psychiatry also has an outpatient clinic to round out the services and they offer the stepped model of care that has proven efficacy in treating PMAD.

When considering a stepped model of care, home visitation is another important component. The focus of this report has been in other areas where immediate changes can result, however, it is important to note that home visitation has a demonstrated track record of effectiveness in the treatment of PMAD. Fresno County has at least one program with home visitation as a part of the model. Future consideration can be given to expanding the number of programs and services that incorporate this type of care.

Provider education has been addressed to a degree in this report; however, further consideration can be given to adding curriculum on PMAD to the required coursework for students in the medical, health and social service areas. It may take time to develop a standards based curriculum and to have it integrated into the required curriculum of academic institutions.

Although the focus of this report is on the system and service needs in Fresno County, we have encountered a great deal of discussion about the need for a regional approach and collaboration with providers in other parts of the San Joaquin Valley. If implemented, a regional collaboration could review and address strategies for cross-county transportation, rural treatment and possibly alleviate some cost through the sharing of resources and ideas. Extending the connections of service to reach outside the Fresno County could reap a great deal of knowledge of available services, potential funding streams, and in general improve our ability to provide service to women and families dealing with PMAD.

We have been fortunate to have had a high level of cooperation and input from current Fresno County agency directors and staff that have indicated some additional areas of capacity building that are already taking place and can be supportive of these plan recommendations. For example:

- Fresno County Department of Behavioral Health has established a Tele-psychiatry program that when fully implemented should offer increased access for services to women and families living in rural area of the County. We expect that this service can be integrated and linked with the proposed consultation service.

- Fresno County Department of Behavioral Health-Division of Substance Abuse has been an active partner in our meetings and work and has discussed potential policy changes in their contracts. These include education of their providers to improve screening, detection and navigation of services for women at risk.

- Fresno County Department of Public Health, which has long been involved with the issue of PMAD and training of providers, has agreed to work with us with a previously developed media campaign. If updated, it could be the implementation strategy for recommendation 7 and help inform consumers of available services and de-stigmatize PMAD.

- Fresno County Department of Social Services has met with us to discuss ways in which they may integrate these recommendations in all of the entry and access points in their systems for women at risk. These discussions have included the topics of staff training and establishing methods for higher levels of coordination and integration of care in their programs.

Chapter 4. Finance and Policy

Policy Barriers

In the course of research conducted for this project, it has become apparent that change is needed in the areas of policy and finance. Although Affordable Healthcare Act addresses prevention and early intervention in mental health, it does little to provide guidance related directly to women of perinatal age. Nor does the Act delineate responsibility for mental health care at the state, county, and local levels—rather, the state and local agencies are left to define policy themselves, resulting in haphazard policy that lacks consistency from state to state, county to county, and even city to city. For example, the Women, Infants, and Children (WIC) nutrition program regularly sees new and expecting mothers. However, there is no policy or directive from either the Federal or State level that *requires* any training for WIC staff to recognize or assess clients for PMAD. Instead, the WIC groups that do provide training or assessment, choose to do so on an office-by-office basis, and as budgets allow. There is minimal training, usually at the County level, that allows some WIC staff to recognize PMAD, but no consistency from one County to the next (Reeves, Holt, Division Supervisor California Department of Public Health, WIC Division). Existing policy at the State and local levels also serves to create barriers through extensive requirements for providers to screen women for mental health. While virtually any provider can screen women for mental health illness, the requirements set forth by the State Medi-Cal program introduce barriers that are often more than what providers are able to reasonably accommodate. The barriers to scheduling, assessing, and billing for the assessment are a major impediment to provider's that are already serving a broad patient base in a minimal amount of time.

Policy is easily adaptable, and with minimal cost. A prime example is the State of Illinois, which changed policy to address perinatal mental health by pooling funding and services across agencies. Many of the ideas in the Illinois policy changes can also be used in California, with minimal to no expense to the State. In the Report to the General Assembly, Public Act 93-0536, the Illinois Department of Public Aid also reviewed the finding of the Mental Health Task Force, in which it was found that perinatal depression is under-recognized and under treated (Georgionpoulos et al., 2001). Illinois further developed policy to ensure early intervention and treatment of perinatal mental health disorders through its compiled Statutes 405 ILCS 95 Perinatal Mental Health Disorders Prevention and Treatment Act, Section 15, by requiring the following:

1. Licensed health care professional providing prenatal care to women shall provide education to women, and with permission, their families, about perinatal mental health disorders.
2. All hospitals that provide labor and delivery services provide new mothers, and if possible, new fathers, complete information about PMAD, including symptoms, methods, and treatment resources.
3. Licensed health care professionals providing prenatal care at a prenatal visit and/or postnatal care shall invite each participant to complete a questionnaire and shall review the questionnaire. Assessment for perinatal mental health when there is a reasonable possibility that the woman suffers from perinatal mental health disorders.
4. Licensed health care professionals providing pediatric care shall invite the mother to complete a questionnaire and shall review the questionnaire, with assessment required as above (Illinois Department of Public Aid, 2004).

Similar policies have also been undertaken in the State of Oregon (Oregon Department of Human Services, *House Bill 2666*, 2003), the State of New Jersey, the State of Massachusetts, and Milwaukee County Wisconsin (Milwaukee County Health and Human Services, *Wraparound Milwaukee*, 2011).

Financial Considerations

What had not been discussed in the 2010 maternal depression report is the very real economic cost of perinatal mood disorders, and mood disorders in general. In one study with 28 European countries, depression was reported to cost €118 billion in 2004, or 1% of their combined GDP (Sobocki et al. 2006). In Canada, estimates have suggested that in 1998 the health burden costs associated with depression and general psychological distress ran to over $14 billion. The annual per capita health and disability costs of depression were reportedly greater than those associated with hypertension and comparable to those associated with heart disease, diabetes, and back problems. In the United States estimates are that 15% of patients seen in primary health care settings suffer from these disorders with average health care costs for such patients over a 6-month period equaling $2,390, compared to $1,397 for patients without such disorders (Simon, Ormel, Van Korff, & Barlow, 1995; Candilis & Pollack, 1997; Greenberg et al., 1999). Still, other estimates suggest that the indirect societal costs of depression (including lost productivity and absenteeism) are at least three times as great as the direct treatment costs for the condition (Zhang, Rost, & Fortney, 1999) and are likely greater than the indirect societal costs associated with common chronic medical conditions (Druss et al., 2000). The National Institute of Mental Health reported similar results in the Journal of the American Medical Association, showing that the cost of depression was high, and that screening was cost-effective, reducing health insurance costs to employers, decreasing absence due to sickness, and increasing job retention and productivity (Wang et al., 2007). This pattern of cost and cost-

effectiveness with screening and treatment is consistent with reports from developing countries as well. According to a recent article by Teh-wei Hu and colleagues in Social Psychiatry and Psychiatric Epidemiology, depression in China costs more than $6 billion, per year at 2002 prices (Hu et al., 2007).

The problem reported by many is that primary care physicians underestimate the seriousness of depression. Recent evidence has demonstrated that psychological interventions can be more cost-effective. Although research on the cost-effectiveness and cost-benefits of psychological intervention is relatively recent, there is growing evidence that supports the cost-effectiveness of interventions such as, for example, multisystemic therapy for distressed youth (Schoenwald, Ward, Henggeler, & Rowland, 2000) and marital therapy as an adjunct to the outpatient treatment of alcoholism. There are also indications that, compared to medical interventions for the same disease/disorder, psychological interventions may have comparable or superior cost-effectiveness (Miller & Magruder, 1999). Of course, interpreting findings such as these provide only an attenuated snapshot of the cost of perinatal mood disorders. Antenatal biochemical aberrations that occur with depression and anxiety can have potentially greater, long-lasting and even permanent effects on the offspring, potentially leading to later social, emotional and learning disabilities, to name a few. Maternal postpartum mental health disturbances have been widely reported to deleteriously affect the emotional, psychological and cognitive wellbeing of the child, and later into adulthood. Cost-benefit analyses confirm ensuring the social, emotional, and behavioral well being of young children produces an additional economic return to society. This occurs over time through a contribution of future labor force skills that generate national economic growth and lower crime rates that keep down taxpayer costs (Heckman & Masterov, 2004).

The Affordable Healthcare Act and the California Mental Health Services Act provide significant opportunity to increase coverage of mental health care for anyone in need of service, including women in the perinatal age group. However, there is little guidance regarding this group specifically. Lack of resources and dwindling budgets have led agencies to a reactive rather than proactive method of service delivery. Left to their own, Counties have resorted to emergency treatment of PMAD, as the emergency room has been a prime point of entry for women into the mental health system. The Mental Health Services Act (MHSA) requires simply that counties submit with their Three-Year Program and Expenditure Plans a listing of all programs for which MHSA funding is being requested that identifies the proposed expenditures for each type of funding (Full Service Partnership, System Development, and Outreach and Engagement) and for each target age group (Adult, Children and Youth, Older Adult, and Transition Aged Youth). Acting reactively, localities have typically addressed the critical few in need at the moment, rather

than working collaboratively among local Departments to coordinate early, preventative care before the crisis point. This has resulted in a great deal of duplicative services (mental health screenings, medications prescribed, etc.) as well as taxing existing resources (social services reacting at the crisis point, often too late to save a family, law enforcement called to investigate and designate 5150 cases at hospital emergency rooms, etc.).

With the State of California's revised Department of Mental Health budget has come a comparable reduction in funding at the regional and local levels. The reduction of $762.6 million in the State's General Fund in 2011-12 for the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) and mental health managed care (MHMC) programs was partially resolved by a shift in funds from the MHSA funds. This is an example of the thinking that has been exhibited and implemented successfully in other programs around the nation. Coordination of funding and services between the several participating agencies involved in any case can result in a great deal of savings. In evaluating the costs for integrated primary care, there are two very compelling and successful trends to choose from. The first is the trend toward lowered medical cost in the presence of psychosocial intervention (Blount et al., 2011). The second is the trend toward wider utilization of mental health services when they are available in the primary care site. Both of these trends address the issue that medical health symptoms are often directly correlated with mental health disorder. In 1981, the Foundation for Behavioral Health (now the Cummings Foundation for Behavioral Health) conducted the Hawaii Medicaid Project (1981-1988), a three-way research/service contract among the HealthCare Financing Administration, the State of Hawaii, and the Foundation for Behavioral health functioning as the Biodyne Institute. That study resulted in the creation of a new delivery system to deliver collaborative behavioral healthcare services to the 36,000 Medi-Caid beneficiaries and the 91,000 federal employees on the Island of Oahu under a randomized, controlled 7-year study, with Nicholas A. Cummings, Ph.D., Sc.D., as the principal investigator and Herbert Dorken, Ph.D. as co-principal investigator. Cummings and his collaborators found that especially when mental health treatment was included in the comprehensive and preventative care, cost reductions were 38% for Medi-caid patients who were not chronically ill (The Cummings Foundation for Behavioral Health, June 23, 2011). This of course includes patients who *accepted* referral to mental health services. This is a common issue with women of perinatal age, and should therefore be accepted as reality, in order to increase the points of entry into the mental health system to include those points women frequent, i.e., pediatric care providers, etc. The potential for cost reduction in the Hawaii study has been evidenced in more recent years as well.

- *Wraparound Milwaukee*: Provides a coordinated system of care through a single public agency (Wraparound Milwaukee) that coordinates a crisis team, provider network, family

advocacy, and access to 80 different services. The program's $30 million budget is funded by ***pooling*** chilled welfare and juvenile and adult justice funds (previously spent on incarceration or institutional care) and by a set monthly fee for each Medi-Cal eligible participant. (The fee is derived from historical Medicaid costs for psychiatric hospitalization or related services.) Similar models implemented performance sites included Milwaukee and Madison, Wisconsin, Indianapolis, Indiana, and the State of New Jersey (President's New Freedom Commission on Mental Health, National Alliance on Mental Health Illness, June 23 2011). **Outcomes**: Reduced juvenile delinquency (as directly affected by PMAD), better clinical outcomes, lower use of hospitalization, and reduced costs of care. Program cost is $4,350 per participant, instead of the $7,000 for residential treatment or incarceration/institutionalization. **Total cost decrease: 38%**

- *Denver Housing First Collaborative*: Provides comprehensive services to individuals with disabilities, including housing, integrated health, behavioral health, substance treatment and support services. The overall goal of the DHFC is to increase residential stability and overall health status of participants while reducing the utilization and costs of emergency services being provided with taxpayer funds. The Cost Benefit Analysis focused on examining the actual health and emergency service records of sample participants for the 24-month period prior to entering the program, and the 24-month period after entering the program. Cost data from clinical records were analyzed to determine emergency room, inpatient medical or psychiatric, outpatient medical, incarceration, shelter costs, and utilization. The findings document an overall reduction in emergency services costs for the sample group. The total emergency related costs for the sample group declined by 72.95%, or nearly $600,000 in the program period compared to the 24-month period prior to entry in the program. The total emergency cost savings averaged $31,545 per participant. Utilization of emergency room care, inpatient medical and psychiatric care, and incarceration were significantly reduced by participation in the program. Only outpatient health costs increased, as participants were directed to more appropriate and cost effective services by the program. Emergency room visits and costs were reduced by an average of 34.3 percent. Inpatient visits were reduced by 40%, while overall inpatient costs were reduced by 66 percent. Fifty percent of participants have documented improvements in health status, 43% have improved mental health status, and 64% have improved their overall quality of life.

- The Michigan Association of Community Health Boards was able to identify savings of $1,194,900 in the first year of performance following policy change that requires a more comprehensive and integrated system of care. In that case, funding was pooled from the justice, child welfare, mental health, and medical funding streams to screen and treat mental health patients, of which 42% were women and 21% were children.

A common thread among those agencies that have implemented strategic plans designed to address the needs in PMAD has been the blending of funding from existing sources rather than requesting new funding that is essentially non-existent. Agencies that are required to perform certain tasks (i.e., screening and assessment at emergency room intake, incarceration, etc.) have added funding for those particular tasks to the pool, so that personnel resources can be more efficiently utilized elsewhere. Agencies that possess the knowledge and certification to train other agencies in assessment have provided that training. Funding that might otherwise have gone toward institutional treatment have instead been directed toward preventative care. Communication and collaboration have proven key—using existing funding to the most efficient level possible has allowed agencies to increase preventative care while reducing the burden of service on several departments.

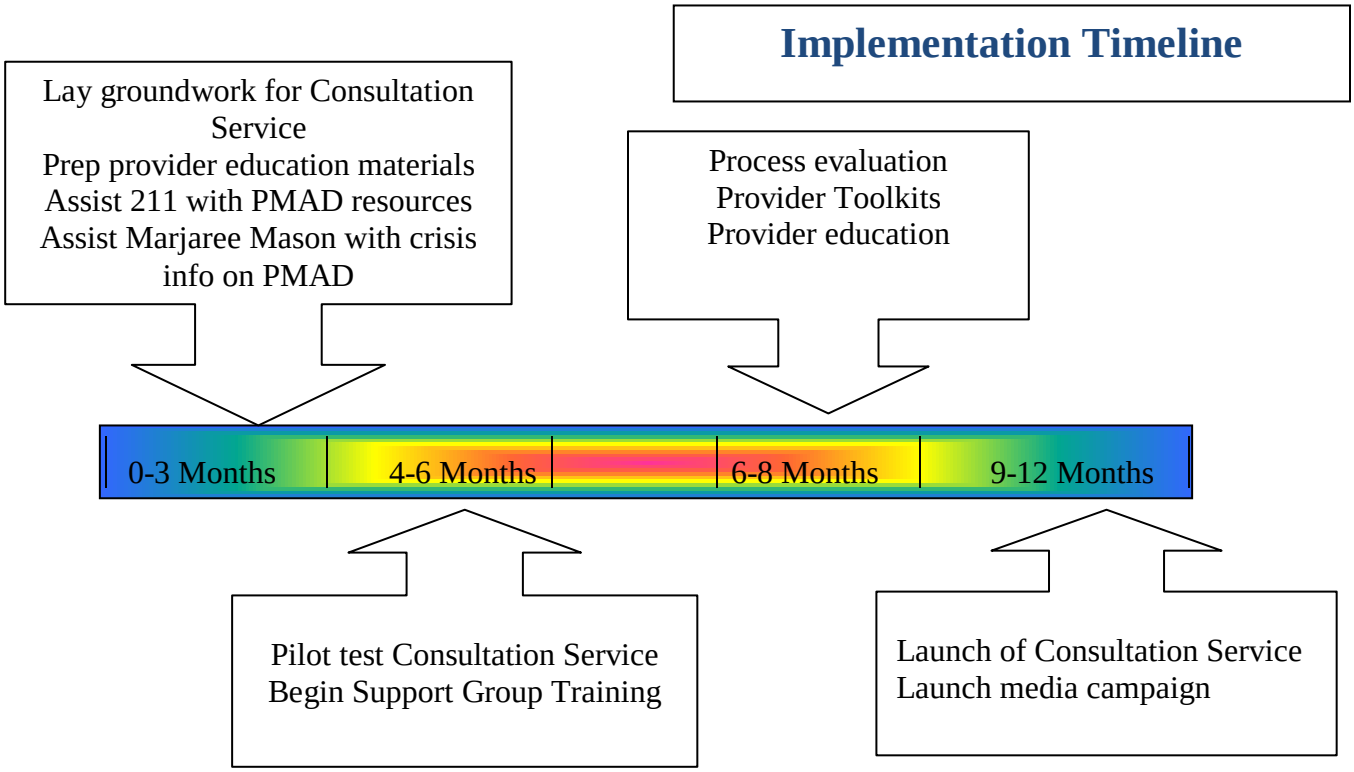
It is worth noting that the demonstrated successes found in Illinois, New Jersey, Oregon, and other States and regions has led to an increased recognition of success from Federal, State, and foundational funding agencies. The funding agencies also recognize that the physical manifestation of illness is often merely a symptom of an underlying mental health disorder. That being said, funding agencies such as the Department of Health and Human Services, Maternal Child Health Division have begun trending toward the funding of physical health-based initiatives that truly target mental health disorders. Likewise, Educational funding agencies also recognize the importance of mental health in the home, and specifically the mother. Programs like the Department of Mental Health's Early Mental Health Initiative and the Office of Juvenile Justice Delinquency Prevention's Safe Start Promising Approaches project offer direct and complementary mental health services not only to children, but to the families as well. The current forecast for this trend is positive—the U.S. Department of Health and Human Services forecasts ongoing grant funding for direct and indirect projects. For example, the Federal Maternal Child Health Division recently awarded three grants of over $250,000 each to three agencies addressing the mental health of perinatal women through a grant program designed to address diabetes and obesity in women. Each grantee (two of which were in California) proposed and proved that the physical symptoms (overweight) exhibited by women in the respective programs are the indicators of mental health disorder—including PMAD.

Chapter 5. Next Steps

The California Health Collaborative has been fortunate to work with many outstanding agencies and people all dedicated to finding solutions to the problems associated with treating PMAD in Fresno County. A major benefit and result of this planning work has created high levels of collaboration, support and interest in not only the development of this document but also the implementation of the recommendations.

In addition to the presentation of this plan to the First 5 Fresno County Commission, the Central California Perinatal Mental Health Collaborative is hosting a perinatal mental health conference November 9th for providers and the community. During that conference, we will participate with First 5 Fresno County on a special panel discussion regarding this report and its recommendations.

The California Health Collaborative is committed to offer First 5 Fresno County and our community continued services in the transition from this plan to the implementation of the recommendations. It is our view that with continued community support and partnerships, several of the recommendations could be completed by as early as July 1st, 2012. The first priority would be the establishment and pilot testing of the Consultation Service. It is the first and most important recommendation to start the process for increasing capacity in our community. In recognition of the critical nature of this recommendation, the California Health Collaborative has been in early discussions with local medical/psychiatric providers to begin the organization and planning for development of the consultation model. If these developmental activities can begin in November 2011, pilot testing of the consultation model can begin in the spring of 2012 and possibly operational in July 2012.



For each of these recommendations, we have sought and received the support of many of the major agencies and groups already serving these women and families. Fresno County Departments of Health, Behavioral Health and Social Services, Community Hospital-Behavioral Center, United Way Fresno County/211 Fresno, Marjaree Mason Center, Children's Hospital of Central California, and EOC have participated in meetings where they have stated support for the plan recommendations and its implementation.

These past twelve months of work have been challenging but quite rewarding. We have spent hundreds of hours in community and small group meetings, conference calls and internal meetings to review and discuss many of the elements that have been included in this final report. These activities have strengthened and enhanced existing relationships and partnerships to a level where the opportunity and window for action has perhaps never been better for our community.

We believe that the work completed in creating this strategic plan has greatly improved the chances for successful implementation of these recommendations. In our view, it is a rare and unique opportunity for sustaining partnerships that will facilitate on a short-term basis improving the capacity for serving women and allow for systems change to evolve and occur during a longer period of time.

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Appendix 1 Survey Sites

Sites where surveys were distributed

Site	Program	Potential Number	Actual Number	Code	Data Entry Range
Clinica Sierra Vista	WIC	50-100	63	CSV	322-384 and 497-500
Children's Hospital Central California	Parent Discharge Education	100	20	VCH	511-530
Fresno County-Black Infant Health	support group	10	4	FCBIH	567-570
Spirit of Woman		40	19	SW	479-496
Teen Parenting Conference		100	158	TPCN	1-158
Early Head Start		50	38	EHS	571-608
Sikh Women's Conference/Group	CSU Child Resources and Sikh Temple	40	25	CSU-ST	197-222
Fresno Women's Medical Group		25	8	FWMG	503-510
Exceptional Parents	Parenting Classes Home Visitation	50	14	EP	385-398
Si Se Puede Learning Center	Health Faire	50	99	SSPL	223-321
WestCare		25	23	WC	174-196
Tollhouse Indian Reservation		10	0	TRIR	NA
Family Development Center	Pathways to Recovery Early Intervention Therapeutic Center	45	36	FDC	531-566
United	CPSP	140	81	UND	399-478
Birth Circle Support Group		25	15	BCSG	159-173
Sikh Women's Group	April 17 Conference	25	2	PHF	501-502
Firebaugh School Readiness		25	0	FSR	NA

Appendix 2 PMAD Resources

Fresno County Perinatal Mental Health Resources

Mental Health Resources	Payment Sources	Contact Information
Adventist Community Care Behavioral Health Provides evaluation and treatment. Clinician on-site limited days.	Medi-Cal Sliding Scale Private Insurance	Selma-559-891-6429 Coalinga-559-846-9370
Clinica Sierra Vista Behavioral Health Program Provides evaluation and treatment.	Medi-Cal Sliding Scale Private Insurance	559-457-5960
Comprehensive Counseling Services MSW/LSW	Private Pay but will assist with billing insurance	559-233-5505
Fresno County Department of Behavioral Health, Perinatal Program Provides evaluation and treatment.	Medi-Cal	559-600-1101
Fresno County Behavioral Health Provides evaluation and treatment.	Sliding Scale Medi-Cal	Multiple sites throughout Fresno County 559-453-4099
****Fresno Family Counseling Center at CSU Fresno*** Provides evaluation and treatment.	$30 first visit $20 subsequent visits	559-229-3085
Fresno Mental Health	Private Insurance	559-227-1977
On-Site Counseling Center	$25-$45 per 50 minute session	559-452-1796
W. Gary Cannon Psychological Service Center at Alliant University Provides evaluation and treatment provided by interns supervised by licensed clinical staff	Sliding Scale $20-50 per 50 minute session	559-253-2277
Tree House Program	Sliding Scale Private Insurance	559-226-1316
University Psychiatry Associates Therapy and medication provided by Residents supervised by Psychiatrist	Private Insurance Sliding Scale $20-50	559-320-0580
The Well Community Church Counseling Center	$30 for intern $60 for licensed therapist $90 for PhD	559-326-5100 ext. 5300
Mental Health and Substance Abuse Resources		
Fresno County Department of Behavioral Health, Pathways	No cost, but consumer must qualify under program parameters	559-600-6068
Spirit of Woman	Medi-Cal Private Insurance Contract with County	559-244-4353
WestCare	Medi-Cal Major insurance Plans	559-251-4800

These are individuals /programs that specialize in PMAD

This list cannot be considered an all-inclusive directory, but represents resources that at the time could be used to serve women with PMAD

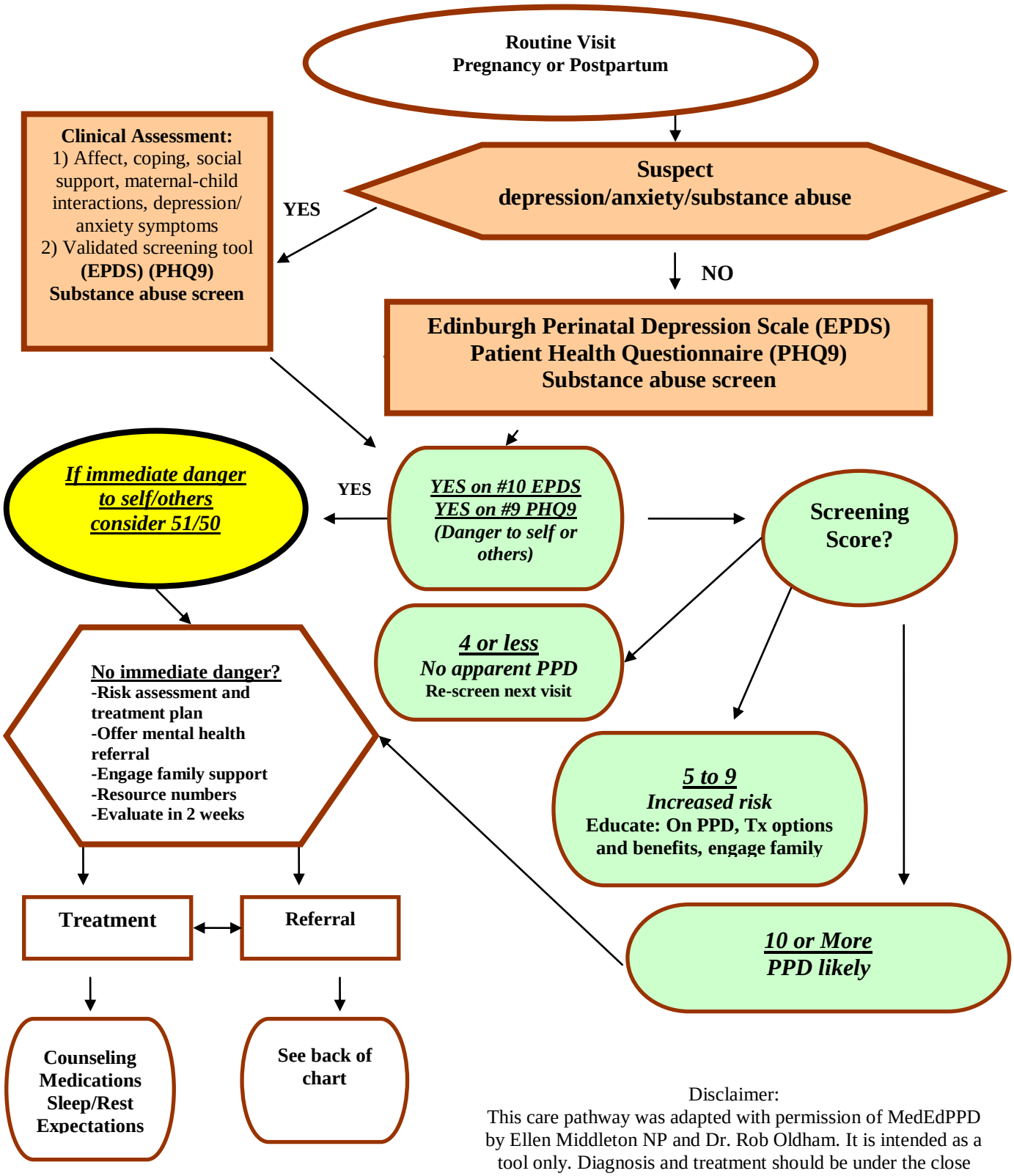
Private Practice Therapists		
Laurie Crosbie, LCSW		559-779-0418
Patricia Neufeld, LMFT		559-226-0800
Maureen Wolf, LMFT		559-222-2545
Support Groups		
Fresno Family Counseling		559-229-3085
Centro la Familia		559-237-2961
Other Resources		
Angel Babies Assistance for families who have experienced miscarriage, stillbirth or infant death		559-248-8579
CalmHappySafe Website providing information about perinatal mental health and resources		www.ccpmhc.org
Centro la Familia Offers assistance with food stamps, health insurance, housing and parenting education		559-237-2961
Depression Screening Website sponsored by Mental Health America, offers confidential screening and information		www.depression-screening.org
Fresno County Babies First Program Parental information line- Moms and Kids Hotline		800-640-0333
MedEdPPD.org Website with information on PMAD and resources		www.mededppd.org
Mental Health America Website with information on mental health and getting help		www.mentalhealthamerica.net
Postpartum Support International (PSI) A website and s warm-line that provides information and resources on perinatal mood and anxiety disorders		1-800-944-4773 www.postpartum.net
211/United Way Fresno County Offers comprehensive information and referral to various community health, human and social services in Fresno		211

These are individuals /programs that deal specifically with PMAD

This list cannot be considered an all-inclusive directory, but represents resources that at the time could be used to serve women with PMAD

Appendix 3 Example of Medical Provider Protocol

Maternal Psychological Screening and Care Pathway



Disclaimer:
This care pathway was adapted with permission of MedEdPPD by Ellen Middleton NP and Dr. Rob Oldham. It is intended as a tool only. Diagnosis and treatment should be under the close supervision of a qualified health provider.

Appendix 4

Example of an Allied Health and Human Services Protocol