Contra Costa County Women Infants & Children (WIC)
Perinatal Depression Screening, Education and Referral Project

Project Evaluation Final Report

Elaine Zahnd, PhD, Independent Consultant

October 7, 2010

This final report covers the four (4) key objectives of the project evaluation. The project goals and evaluation goals are set forth below, followed by the objectives, analysis, and outcomes.

Project Goal: *The overall goal of the WIC-funded "Perinatal Depression Screening, Education and Referral Project" is to increase awareness, screening, education and referrals to services for those at-risk for perinatal depression among low-income women of childbearing age. In addition, for WIC staff and perinatal health providers, the goal is to increase awareness of the problem of perinatal depression, to provide training to doctors and other community and health providers on the symptoms of perinatal depression, to increase utilization of the depression screening tool, and to increase the number of women at-risk for perinatal depression who receive and utilize referrals for services.*

Evaluation Goal: *The evaluation goal is to determine if WIC clients are screened with the perinatal depression screening tool, if an educational/media component (i.e., poster, brochure, class) is instituted and if it increases awareness and referrals, if perinatal depression training of providers is accomplished, and if women with scores of 10 or greater on their screener received referrals, and whether they utilized the referrals or not, and if not, why not.*

Objective 1: 80% of all women participating in WIC from June 15-July 15, 2010 in Contra Costa County will be screened for perinatal depression using the Patient Health Questionnaire (PHQ-9).

Evaluation Outcome: We calculated the number of women participating in Contra Costa WIC sites from June 15 through July 15 that were screened during the evaluation period for perinatal depression as compared to the number of WIC clients receiving checks at WIC at those sites during the evaluation period to determine if the percentage screened met the 80% objective. The objective was an ambitious one given the fact that the project was new and was being pilot tested. Thus, there was a lack of previous response rates from this pilot or from other projects which would have been a helpful guide for the staff as they came up with an estimate of what a reasonable screening response rate would be for the project. Overall, however, their estimate of 80% was not far from the final response rate of 73%.

OVERALL SCREENING RESPONSE RATE: As shown in Table 1, despite some challenges, the screening rate at all four WIC sites was 73% over the period of June 15, 2010 through July 15, 2010 (evaluation period). This proportion (approximately ¾) was very close to the target objective (80%). Almost 5600 WIC clients, pregnant or with a child 1 year or under, were screened during the month pilot period. The

four sites differ considerably in the number of WIC clients coming through the door. Richmond WIC handled 2746 clients, Pittsburg WIC serviced 2494 clients, Concord WIC had 1695 clients; and Brentwood WIC met with 751 clients during the same time period. The overall screening response rates ranged from 68% to 93%, reflective of how sites differed in their ability to administer the screeners consistently and to insure that WIC clients had the time, ability, and willingness to complete a screener. In reviewing the daily rates, there was also a wide range indicating that on certain days, problems occurred that made it difficult to distribute and collect the depression screeners.

CONCORD WIC: For example, at the Concord WIC site, the overall rate for the month was 76% (Table 1), and the daily response rates ranged from 0%-99%; however, there was one day (July 12) in which no surveys were collected from the 101 clients who visited WIC. Without that aberration, rates at Concord WIC ranged from 63%-99% with an overall rate of 81%. Thus, at Concord, minus one day in which the protocol broke down, the objective would have been met.

RICHMOND WIC: In reviewing the screener response rate at the Richmond site, it is quite apparent that the response rate increased over time. The overall rate was 70% (Table 1); however, the June rate was 62% while the July rate was 75%, indicating that the protocol worked better with staff and clients over time. The numbers of women screened in the two months also increased, growing from 722 to 1196 clients. The range was from 49% to 94%. Richmond WIC has the most clients overall of the four sites, although Pittsburg WIC comes close.

PITTSBURG WIC: The pattern established in Richmond was mirrored in Pittsburg. The overall rate for Pittsburg WIC was 68%, an insignificant difference between the two largest sites. Similarly, Pittsburg WIC's June screener response rate was a mere 55%, growing to a rate of 79% in July which almost met the objective (80%). The range was from 32% to 86%.

BRENTWOOD WIC: The smallest WIC site had the highest response rate by far (93%) (Table 1). Small numbers of clients (approximately 376 a month) may mean a less hectic environment, and one in which staff may have more time to engage with as well as know their clients. The existence of smaller numbers may indicate that the entire staff could jointly undertake the new protocol in a unified fashion, resulting in very positive outcomes.

TABLE 1
PERINATAL DEPRESSION SCREENING RATES AT WIC SITES
JUNE 15-JULY 15, 2010

SITE	SURVEYS COMPLETED	TOTAL WIC CLIENTS	PERCENT SCREENED
BRENTWOOD	698	751	93%
PITTSBURG	1696	2494	68%
CONCORD	1284	1695	76%
RICHMOND	1918	2746	70%
TOTAL	5596	7686	73%

STAFF QUESTIONNAIRE-RELATED RESULTS: One aspect influencing the screener response rate is the degree to which WIC staff are engaged in the project. A staff questionnaire was administered to the WIC staff at the four sites over the one month evaluation period, and the survey was returned by 28 staff members. Table 2 displays their responses to the question: "How important do you feel it is to screen women for perinatal depression at WIC sites?" Half of the staff felt it was "Very important", 36% indicated it was "Somewhat important", while only 11% felt it was "Not that important".

As one staff noted as to why she felt it was "very important": "*We might be the first contact after they have a baby."* Another who checked off "very important" wrote: "*Due to the crisis they are already in. They already have stress due to unplanned pregnancies, no income, and usually they are not with the FOB (father of the baby) but are alone."* A third respondent who felt it was very important to screen said: "*To show there is free help and to provide resources and information."* Among the staff who indicated that it was "not too important" to screen at WIC sites, there was only one written comment: *"It is very time-consuming. We are already understaffed and have heavy workloads. This is a Mental Health Department issue."* Another comment from a staff person who felt it was "somewhat important wrote: *"At WIC sites? Somewhat important."* In contrast, a staff person who said it was "very important" to screen at WIC sites wrote: *"It is part of what public health deals with".*

TABLE 2
INITIAL STAFF SURVEY JUNE-JULY 2010
IMPORTANCE OF SCREENING FOR PERINATAL DEPRESSION AT WIC SITES

LEVEL OF IMPORTANCE	TOTAL	PERCENT
Very Important	14	50%
Somewhat Important	10	36%
Not too Important	3	11%
Missing	1	4%
Total	28	100%

Follow-up Staff Survey. On September 30, 2010, a follow-up staff questionnaire was administered at the four sites to see if there had been any staff attitudinal changes over time. Table 2A portrays the more recent attitudes among the 30 staff respondents who completed the staff survey.

TABLE 2A
STAFF FOLLOW-UP SURVEY SEPT 2010
IMPORTANCE OF SCREENING FOR PERINATAL DEPRESSION AT WIC SITES

LEVEL OF IMPORTANCE	TOTAL	PERCENT
Very Important	23	77%
Somewhat Important	7	23%
Not too Important	0	0%
Missing	0	0%
Total	30	100%

As the follow-up staff survey indicates, with time, staff began to see screening for perinatal depression as more important, perhaps as it became more part of the routine of providing services to the WIC population. The increase from 50% to 77% among staff who indicated that it was "Very important" is significant. No one felt it was "Not important*";* 23% thought it was "Somewhat important". Asked to comment, one staff member stated: it is important… "*because of the population we serve – it (WIC) is an ideal place (i.e., …for screening for perinatal depression)."*

Initial Staff Survey Results. WIC Staff were also asked on the initial June-July survey if they thought it was difficult for clients to fill out the form. Gauging the degree of difficulty for clients to fill out the form, either due to time, emotional response to the questions on the screener, language or educational barriers, are reflected by staff on Table 3.

TABLE 3
INITIAL STAFF SURVEY JUNE-JULY 2010
DIFFICULTY OF GETTING CLIENTS TO FILL OUT SCREENING FORMS

LEVEL OF DIFFICULTY	TOTAL	PERCENT
Very Difficult	3	11%
Somewhat Difficult	9	32%
Not too Difficult	14	50%
Don't Know	2	7%
Total	28	100%

Most staff (50%) said it was "Not too difficult" for clients to fill out the nine (9) item Patient Health Questionnaire. The survey was administered in both English and Spanish. However about one-third thought it was "Somewhat difficult" (32%), while 11% felt it was "Very difficult" for clients. Asked if the clients exhibited any resistance to completing the form, 32% (9 staff) said "yes", while 46% (13 staff) said "no", and 21% (6 staff) responded that they "did not know". In follow-up phone calls with a handful of staff to conduct a longer interview about the project, one respondent indicated that for a significant minority of clients, filling out the form was too difficult because the form was not in their language. Another staff member noted that some women who were already receiving mental health treatment were reluctant to fill out the form, perhaps seeing it as an unnecessary additional form to complete, since they were already receiving help.

Follow-up Staff Survey. As previously noted, on September 30, 2010, a follow-up staff questionnaire was administered at the four sites to see if there had been any changes in staff attitudes over time. Table 3A portrays the changes in attitudes regarding how difficult staff believed it was to get clients to fill out the screening forms. The follow-up sample consists of 30 respondents who completed the staff survey at the end of September.

TABLE 3A STAFF FOLLOW-UP SURVEY SEPT 2010 DIFFICULTY OF GETTING CLIENTS TO FILL OUT SCREENING FORMS		
LEVEL OF DIFFICULTY	**TOTAL**	**PERCENT**
Very Difficult	1	3%
Somewhat Difficult	22	73%
Not too Difficult	6	20%
Missing	1	3%
Total	30	100%

Among staff completing the survey in September compared to those completing the survey in June-July, the percentage who thought it was "Very difficult" to get clients to complete the depression screener dropped from 11% to 3%. The largest percent increase was among staff who noted that it was "Somewhat difficult." In the initial survey (June-July), almost one-third (32%) of the respondents felt it was "Somewhat difficult", while in the follow up survey, almost ¾ (73%) specified that it was "Somewhat difficult." Staff who felt it was "Not too difficult" dropped from 50% to 20%, an indication that there continues to be challenges in the eyes of some staff to making sure that clients complete the depression screeners (See Table 3A).

A few of the staff's handwritten comments accompanying the survey are revealing. One staff wrote that it was "somewhat difficult" because of: *1) Time restraints, 2) Lack of willingness from clients, and 3) Lack of work experience with this topic (i.e., training).* While time restraints will always be a challenge when new tasks are added on top of an already busy staff schedule, the lack of willingness of clients to fill out the forms and lack of staff experience with this topic would both benefit from additional staff training. In addition, if clients were asked to fill out the forms at the beginning of the classes or just prior to the scheduled appointments, and then the topic was discussed by the teacher or the staff with whom the client had a scheduled appointment (nutritionist, etc.), the clients might be more willing to complete them as part of the discussion underway. Following this line of reasoning, another staff member wrote: *"Give questionnaire before GA22 class (then) women are ready or needing to talk about it."* Another staff member responded: *"I've taken a lot of 'hits' with talking to moderately to severely depressed women, but I'm happy we are helping them."* In a similar vein, another staff wrote: *"It can be emotional at times or sometimes clients can be defiant."* Clearly, additional staff training would help in such challenging situations. Having a mental health counselor available at the WIC sites would, naturally, be ideal, although probably not feasible without additional outside funding and/or resources.

Initial Staff Survey Results. Related to the previous objective, on the initial staff questionnaire administered during the evaluation month (June-July 2010), a question was asked: "Would having to answer only 2 or 3 questions on the screener make a big difference in women filling out and returning the screening form?" As shown on Table 4, most staff said that they were unsure if a shorter screener would make a difference in client completion (39%). While ¼ thought it would be helpful to give their clients a short screener with only 2-3 questions, 29% thought it might be helpful ("maybe"), and 7%

decided it would not make a difference. Since this was a hypothetical question, it is little wonder at the diverse responses, however, it does indicate, that before recommending a short screener as a panacea for any challenges of the project, it should be piloted first, perhaps at one or two sites for a short period.

TABLE 4
INITIAL STAFF SURVEY JUNE-JULY 2010
WOULD A SHORTER SCREENER MAKE A BIG DIFFERENCE IN CLIENT COMPLETION?

	TOTAL	PERCENT
YES	7	25%
MAYBE	8	29%
NO	2	7%
DON'T KNOW	11	39%
TOTAL	28	100%

Follow-up Staff Survey. On the September 30, 2010 follow-up staff questionnaire, six additional staff questions were asked to gauge their opinions regarding how various components of the perinatal depression pilot project benefitted WIC clients. Table 4A illustrates the results.

TABLE 4A
STAFF FOLLOW-UP SURVEY SEPT 2010
HOW BENEFICIAL DO YOU THINK THE FOLLOWING PROJECT COMPONENTS ARE FOR CLIENTS?

CLIENT BENEFIT LEVEL	SCREENING	%	CLASSES & HANDOUTS	%	BROCHURE	%	REFERRALS	%	COUNSELING	%
Very	20	67%	20	67%	17	57%	26	87%	23	77%
Somewhat	8	27%	6	20%	9	30%	3	10%	3	10%
Not	1	3%	0	0%	0	0%	0	0%	0	0%
Missing	1	3%	4	13%	4	13%	1	3%	4	13%
Total	**30 Staff Respondents = 100 %**									

When asked how much WIC clients benefitted from being screened about perinatal depression, 2/3 (67%) of the staff responded that they thought it was "Very beneficial" for clients (Table 4A above). Another 27% indicated that it was "Somewhat beneficial" for clients, and only one respondent noted that it was "Not beneficial". Similarly, 20 of the 30 staff respondents felt the perinatal depression classes and handouts provided during those classes were "Very beneficial" for clients, while another 20% felt the classes provided "some" benefit. Staff were a bit less sure of the worth of the brochures that were provided to WIC clients, although almost 6 in 10 said they were "Very beneficial" while 30% felt they were "Somewhat beneficial". The largest proportion of staff respondents felt that the referrals to mental health counselors or other providers were "Very beneficial". Finally, over ¾ of the staff responding to the follow-up September survey indicated that counseling services provided to clients in

need were "Very beneficial" with another 10% noting that counseling was "somewhat beneficial" (See Table 4A).

A general question asked of the staff on the follow-up survey concerned how difficult the project has been to date for them. Table 4B shows that 37% responded that it was "Not difficult" for them, while the bulk of the sample (57%) noted it was "Somewhat difficult". Only one respondent said that it was "Very Difficult".

TABLE 4B
STAFF FOLLOW-UP SURVEY SEPT 2010
HOW DIFFICULT HAS THE PROJECT BEEN FOR YOU?

LEVEL OF DIFFICULTY	TOTAL	PERCENT
VERY	1	3%
SOMEWHAT	17	57%
NOT	11	37%
MISSING	1	3%
TOTAL	30	100%

Staff were also asked on the follow-up survey: "How can the Perinatal Depression Project be improved?" Of the 1/3 of staff who jotted down comments, the majority focused on the need for more time and training in handling the clients with high risk scores (i.e., moderate to severe depression). For example: "*Would like more training in talking with clients in referring them," "Not enough time for high scores (clients)", "A little more training and support for those who have to call for the 'high score' clients."* Another wrote: *"Coping skills for staff."*

A number of staff had some positive suggestions in how to address these challenges. One wrote: *"Designate a person in each clinic that the 'high scores' or anyone in general can talk to about perinatal depression."* Another said: "*Have more time allowed on the daily schedule to use for helping clients initiate the first phone call in your office."* When asked how the project could be improved, two staff mentioned the need for more resources. One said: *"More available and accessible resources,"* while the other staff brought up the use of videos, stating: "*Using a video or DVD – it will help. When we have to teach on the different topics include a Spanish video too. That way they (the clients) can see the visual on the DVD."* Finally, staff did indicate their support of the project overall. One stated *"Great job!"* while another said *"Thank you so much for starting this project. It is difficult but has been invaluable."*

Objective 2: Posters and handouts/brochures on the topic of perinatal depression will be created and prominently displayed in doctor's offices, WIC sites, and relevant related community agencies. WIC infant feeding and breastfeeding classes during pregnancy classes will include a perinatal depression component. The objective of the educational/media component of the project is to increase awareness among low-income women of childbearing age about the issue of perinatal depression, to encourage them to ask providers about the issue, and to provide information on how they might seek and receive help if they are experiencing perinatal depression.

Evaluation Outcome: To determine if the posters, brochures and class content increased awareness and referrals, a random sample of WIC clients was asked about the educational/media content (i.e., posters, brochures, classes) on four randomly selected dates at the various WIC sites. We randomly sampled 89 WIC clients by calling those who have appointments at WIC for classes or individual appointments without recertifying on four randomly selected dates. Staff called them to ask them a few questions about the brochures, posters and/or classes. We estimated a response rate of the clients to be approximately 33%. We drew this random sample from the list of appointments scheduled for the random days in order to not bias the results. The outside evaluator analyzed the data obtained to determine if the women viewed a poster, read or received a brochure, and/or heard about the topic of perinatal depression during one of their classes or visits to WIC, along with what the message was contained in the educational/media materials.

EDUCATIONAL/MEDIA RESULTS: A total of 36 Perinatal Depression Evaluation telephone surveys were completed by a random sample of WIC clients visiting the Richmond, Pittsburg, Brentwood and Concord sites in August 2010. The survey was administered to the random sample of clients by telephone.

We exceeded the objective sample size estimated response rate (30) with a good distribution from the four sites, allowing for the smallness of the Brentwood WIC site. The evaluation survey was developed by the evaluator and grant director, going through a number of revisions. Women at the scheduled classes or recertification appointments were asked if they viewed posters, filled out a questionnaire about depression, heard about depression in a class (and whether it was helpful), heard about individual counseling from anyone (and if it was helpful), received a brochure on the subject, and knew where to go or who to turn to if they or someone they knew felt depressed.

Table 5 exhibits the media/education results from the random survey of 36 WIC clients. The sites are combined since results did not differ significantly by location. Of note, the Pittsburg WIC sample was slightly more likely to affirm seeing posters, receiving questionnaires and brochures on the topic, and hearing about the topic in a class.

TABLE 5 PERINATAL DEPRESSION EVALUATION SURVEY RESULTS				
TOPIC	**YES**	**NO**	**DK**	**TOTAL**
Did you see any posters on perinatal depression?	18 (50%)	9 (25%)	9 (25%)	36
Did you receive a survey about how you are feeling?	19 (86%)	2 (9%)	1 (5%)	22
Did anyone talk to you about depression in a class?	6 (43%)	7 (50%)	1 (7%)	14
If "Yes", was it helpful? (N=5)	5 (100%)	0	0	5
Did anyone talk to you about individual counseling?	19 (100%)	0	0	19
If "Yes", was it helpful? (N=19)	19 (100%)	0	0	19
Did you receive any information (handout) on the topic?	18 (51%)	16 (46%)	1 (3%)	35
If "Yes", was it helpful? (N=16)	10 (63%)	6 (37%)	0	16
Did you receive any referrals?	8 (32%)	12 (48%)	3 (20%)	23
If "Yes", was it helpful? (N=11)	3 (27%)	8 (73%)	0	11
Would you know where to go or who to talk to if you or someone you knew felt "blue" or depressed?	26 (76%)	8 (24%)	0	34
Note: A few missing cases are not included, therefore not all rows total 100%				

Posters: As shown in Table 5, half of the random sample of WIC clients (50%) noticed seeing a poster on perinatal depression when they came in for their last appointment, while 25% could not recall seeing them, and another 25% did not observe the office posters at that time. Having attended two classes on perinatal depression at two different sites, and a staff meeting at one of the WIC facilities, there may be a number of reasons as to why the widely displayed posters that I observed on those visits may have been missed. WIC offices are very busy facilities with an array of diverse educational posters and materials spread throughout the facilities. A woman coming in for assistance, for breastfeeding advice, or for a nutritionist appointment, often with a toddler or small infant in tow, might easily overlook the poster. In addition, a woman who was not feeling "blue" or depressed may have glanced at the poster, and not have registered seeing it, since it was not something that she felt she needed. The posters were one component of the entire educational campaign, so the results should be considered in light of the entire media/educational campaign.

Received a perinatal depression screener: The vast majority of this sample of clients (86%) reported that they received a questionnaire about how they were feeling on the August survey (i.e. the perinatal depression screener) (see Table 5). Since as reported earlier, 68-93% of the WIC clients received a survey during the June-July pilot period, the fact that such a high number reported receiving the screener suggests that over time, the staff at the WIC sites were able to ensure that WIC clients coming in for appointments and classes were receiving the depression screeners.

It is worthwhile to note that during the initial evaluation month 43% of staff reported that they felt some or a lot of clients had difficulty in filling out the forms, and 32% of staff felt there was resistance on the clients' part in completing the screening form. Despite such concerns, by the end of the evaluation period, almost 9 out of 10 WIC clients received and completed the screener (of the sample).

Staff were asked on the initial Staff Survey what they found especially difficult about the project. Some indicated that distributing the forms and having clients complete the forms were among the tasks they

found especially difficult. Others felt short staffing was a factor, and others noted language and cognitive problems.

For example, different staff wrote each of the following comments about what was "most difficult about the project" on the first Staff Survey:

> *The time allowed.*
> *Making it more clear/easier to fill out.*
> *Time.*
> *Moms don't know that the questionnaire was intended for them.*
> *Some think that the questions were for the child.*
> *Expectations. Time.*
> *We had clients unable to read or write in other languages.*
> *We are short staffed – heavy workload already.*
> *Staff time and wording on the Questionnaire.*
> *Some staff did not cooperate with the screening process – not flexible.*

On the same vein, one staff respondent found that the protocol was difficult and felt that the screening should not take place by having the clerks hand out the form, but instead:

> *We should screen WIC clients in GP31, GA22. Screen the GP31 and GA22 in class.*

The same staff member explained under the final section of the Staff Survey:

> *The information should be part of the class; not part of the recertification or AOB interview. Too many papers –clients do not want to complete any more forms.*

Of note, on August 4th, when attending a class at WIC Concord site, I learned that during the pilot phase, they were screening all women who came in for enrollment, recertification or to see a nutritionist or home economist, but that there was some confusion among the clerks during the pilot about what groups of women they were supposed to hand out the screener to; obviously by the time of this follow-up sampling among clients, those factors had been ironed out.

Classes: Only 14 of the 30 respondents were asked about the class component during the follow-up telephone survey. The majority of women filling out the evaluation survey did not go to a class. Of the 14 WIC clients, 43% reported that someone talked to them about perinatal depression in a WIC class (Table 5). Among that group, 100% said that it was helpful to them. Half (50%) of the small group of 14 women did not recall hearing about the topic in a class.

During the evaluation, I attended two of the classes in which the topic of perinatal depression was discussed. There were a number of WIC training classes also held for staff so that they could learn more about screening and referring clients exhibiting perinatal depression symptoms (see section on Objective 4).

The sessions were very interactive, with approximately 20 women (often with infants) attending the class. The section on perinatal depression began with definitions, and moved into a discussion of symptoms, and ended with distinguishing types, as well as where to go for referrals. Questions were answered and the forum gave women who might be experiencing such symptoms a chance to not feel alone in her situation, as well as to see where she might go for assistance. The classes were handled in a professional yet informal fashion, and seemed to work well. Additional follow-up training would probably be very helpful for the staff who have been conducting the classes during the pilot. Getting the group of staff who lead the perinatal depression classes together again with the trainers for discussion and additional support and training would prove helpful. Although it might have been beneficial to add a bit more content and discussion time, but it is squeezed into a longer class, and is meant to trigger concern, outreach, and eventually help to those WIC clients in need.

Individual counseling: As shown on Table 5 above, 19 WIC clients of the 36 said that someone talked to them about individual counseling (100%); all 19 said that it was helpful. While this did not happen for 17 of the clients, they may have all had "No depression" on the PHQ-9, and thus would not be referred to a counselor. Since all 19 who did talk to someone about counseling found it helpful, it appears that the WIC staff focused on those with high risk scores for moderate or severe depression. The 17 who did not talk to someone about counseling are presumably drawn from the general WIC population, and as expected, a few wrote in "not needed."

Brochures or handouts on the topic: Also displayed on Table 5 are the results of a query of the 36 WIC clients about whether they received any handouts or educational materials about the topic and if they were helpful. Over half (51%) reported that they did, and of this group, 63% felt the materials were helpful, while 37% did not.

Referrals: Asked if they received any referrals on the topic, 32% responded affirmatively (see Table 5). Slightly less than half said they did not receive a referral list or a referral to receive help (48%), and 20% could not recall this topic coming up. Again, among the latter group, a few wrote in "no need". Among the women who said they did or couldn't recall if they did receive a referral, 27% noted that is was helpful, while almost ¾ did not find it helpful (73%). Staff had indicated that even with follow-up calls to schedule counseling sessions or to help clients with referral appointments, that it was difficult to get women appointments and that it was very time-consuming. The need for more work based on the pilot results focused on finding needed resources for those women who do have high risk scores is a challenge (Table 5).

Who to talk to and where to go: Finally as shown on Table 5, the majority of women, over 7 in 10, reported that they would know where to go or who to talk to if they or someone they knew were depressed or felt "blue" (76%). Almost ¼ were negative on this query (24%). As shown in the concerns drawn from the staff interviews and survey, coupled with the need for referrals, these are two of the challenges moving forward. Using the evaluation results and recommendations as well as talking to staff and trainers about ways to build upon the pilot project are ways to continue to improve the program.

Objective 3: We will determine the number of WIC clients that have "moderate depression or greater" based on their PHQ-9 screening score of a score greater than 9 on the PHQ-9 scale, and the number of those women who receive referrals to services to determine the number of at-risk women that receive a referral.

Evaluation Outcome: 50% of WIC women completing a PHQ-9 screening tool and having a score greater than 9 (indicating a minimum of "moderate depression") will recall receiving educational materials and/or referrals. 15% of the "at-risk for perinatal depression" women receiving information and referrals will have used the referrals or information to help them overcome their depression. Those who did not use the information or referrals will provide information on why they did not use the services that will help identify barriers for "at-risk women" which will prove helpful in further improving the model.

Method and Analysis: WIC staff will gather information on the number of women who have a score greater than 9 on the PHQ9 screening tool to determine the number of WIC clients that have "moderate or greater depression". For the evaluation, we will randomly sample 30 WIC clients who received a score of 10 or more on the PHQ9 during the month of August 2010. Staff called for referrals for all clients with a score greater than 9 during August. A follow-up questionnaire was developed by the outside evaluator, with assistance from the WIC grant director, to ascertain if WIC clients screened for perinatal depression who had a score greater than 9 on the PHQ-9 screening tool recalled any education or referrals they received at WIC on the problem, and if they followed-up on the referrals provided by seeking out more information, or actively went to or called any of the referrals provided to them. In addition, if they did not follow-up by using one of the referral sources, they were asked about why not in order to identify potential barriers to seeking help.

DEPRESSION SEVERITY SCORE RESULTS: Using the Patient Health Questionnaire (PHQ-9), which is a standard, validated perinatal depression screener, 12,945 WIC clients were screened at the four sites between May and July 2010 (see Table 6). For the nine PHQ-9 questions that measure feelings of depression over the past two weeks, the frequency scale for each item includes the following response categories: "Not at all", "Several days", "More than half the days", and "Nearly every day", with scoring increasing as frequency increases regarding endorsement of the problem. Among the problems covered are such items as: "little interest or pleasure in doing things", "feeling tired or having little energy", or "feeling bad about yourself – or that you are a failure or have let yourself or your family down". Once the client completes the 9 item screener, they are asked if they checked off any categories to indicate how difficult the problems have been in accomplishing their work, doing home chores and getting along with other people, with a range from "not difficult at all" to "extremely difficult".

Overall, there were small differences in the distribution of scores between sites. Table 6 presents the total scores between and across sites for those scoring 10 or greater on the PHQ-9. The table is followed by Table 7 indicating the level of depression associated with each PHQ-9 score. Our focus is on women who scored 10 or greater on the survey, which equals moderate to severe depression since this

was the group targeted for referrals and follow-up for the evaluation to determine if they sought help, and if not, why not.

TABLE 6
PERINATAL DEPRESSION SEVERITY SCORE RESULTS
WIC Clients with >9 Score indicating Moderate to Severe Perinatal Depression on the PHQ-9

	SCORE 10-14	SCORE 15-19	SCORE 20-27	TOTAL >9 SCORE
RICHMOND	267 (5.9%)	105 (2.3%)	38 (0.9%)	410 (9.1%)
CONCORD	171 (5.5%)	49 (1.6%)	16 (0.5%)	236 (7.6%)
PITTSBURG	260 (6.8%)	61 (1.6%)	39 (1.0%)	360 (9.4%)
BRENTWOOD	82 (5.4%)	31 (2.0%)	19 (1.3%)	132 (8.7%)
TOTAL	780(6.0%)	246 (1.9%)	112 (0.8%)	1138 (8.7%)
N = 12,945 WIC clients screened				

TABLE 7
SCORE LEVEL INDICATORS
PHQ-9

SCORE	LEVEL OF DEPRESSION SEVERITY
0-4	NONE
5-9	MILD DEPRESSION
10-14	MODERATE DEPRESSION
15-19	MODERATELY SEVERE DEPRESSION
20-27	SEVERE DEPRESSION

As Table 6 and 7 indicate, overall, 1138 women (8.7%) scored 10 or greater, reflecting risk of moderate to severe depression as measured by the PHQ-9 screener. The range went from a low of 7.6% at Concord WIC to a high of 9.4% at Pittsburg WIC, however the bulk of women at Pittsburg scored in the 10-14 level range. Of interest, overall 2062 (16%) women scored 5-9 on the PHQ-9, a measure of 'mild depression". Over ¾ of the 12,945 WIC women clients screened (76%) scored 0-4 on the PHQ-9 indicating "no perinatal depression" (Note: The "mild" and "none" depression groups are not shown on Table 6). Women who scored over 15 received an immediate referral at all 4 sites to the public health nurse.

Table 8 portrays the random sample of 64 WIC clients across the four sites who scored 10 or greater on the PHQ-9. They were asked to complete a follow-up questionnaire on perinatal depression. The short f-up survey was designed to measure Objective 3 of the evaluation. These questions focused on outreach and referrals.

Regarding whether women with moderate to severe depression talked to anyone at WIC about their feelings, slightly over half (53%) affirmed doing so. Among the depressed group, 45% indicated that they did not talk to anyone at WIC about their feelings of depression. Because of the need to measure project objectives, we did not have the time to investigate whether those who did not talk to anyone at WIC, did talk to someone outside of WIC – a family member, friend, spiritual advisor, counselor, therapist, or other health provider. Some may have already been in counseling and therefore did not see the need to talk to someone at WIC about their feelings of sadness and depression. Still others may not have been ready to reach out despite their depression, or were unwilling or found other barriers to asking for help at a WIC facility. A future project would benefit by exploring further whether the women in need received support from other channels, or none at all.

Of those who did talk to someone at WIC, 79% said it was helpful, while 21% did not find it of help. Asked if they received a handout on the topic of perinatal depression or other information, for example, during one of the WIC classes, Table 8 reveals that 65% did receive a brochure or handout on the topic. Of note, however, less than ½ of those receiving materials found the materials to be helpful (47%), while over ½ did not indicate that the handouts or brochures were helpful for them. Finally, women were asked if they received a referral list of where to seek additional support and assistance. Slightly over ½ (51%) indicated that they did receive a referral list, while only 19% called anyone on that referral list. Over ¾ of the clients did not take advantage of the referral list to call or perhaps tried to call and never reached anyone.

TABLE 8
CLIENTS WITH MODERATE OR SEVERE PERINATAL DEPRESSION
REFERRAL RESULTS
N = 64 WIC clients score >9 on PHQ-9

	YES	NO	DK
Did you talk to anyone at WIC about your feelings of depression?	34 (53%)	29 (45%)	1 (2%)
If "yes", was it helpful? (n=34)	26 (79%)	7 (21%)	0
Did you receive a handout or any other information?	42 (65%)	21 (32%)	1 (2%)
If "yes", did you find the handout/brochure helpful? (n=38)	18 (47%)	20 (53%)	0
Did you receive a referral list for additional support?	27 (51%)	25 (42%)	1 (2%)
If "yes", did you call anyone on the referral list? (n=31)	6 (19%)	24 (77%)	1 (4%)

Note: Missing cases are not included, therefore not all rows total 100%

Of note, however, the fourth Objective of having 50% of the WIC at- risk clients (score >9) talk to someone was met, as was the percentage (65%) recalling receiving handouts on the topic, and the women receiving a referral list (51%). Understanding the difficulties faced by women with moderate to severe depression, we set a goal of having a minimum of 15% of the "at-risk for perinatal depression" group of women using the referral list or information by calling someone to help them overcome their depression (19%) (See Table 8).

We also asked women if they did not call, why they did not call. The most common reasons cited were: *"no need to", "didn't need to call – felt ok", "not called yet but would be soon" or "don't believe I need any service."* One woman indicated that she was "*overstressed. Can't find the time."* One staff member

who worked with a client noted that the client: *"Hasn't had a chance yet but would be soon, and has been seeing a psychiatrist and says the nutritionist circled a couple of numbers on the referral list and would be calling soon."* Another staff assisting a client noted that the client is taking meds and they called a counselor but they did not want to talk to her because she is taking meds that are not covered by her insurance. One woman cited the reason for not calling that "*she was worried about having to take meds or worried about CPS taking away her children and seemed very skeptical."* Sadly, one woman's child died, and the staff offered her numbers for bereavement counseling and she said she did not want any. A few clients indicated they were waiting for a call back, or were too busy but would call. One disappointed client wrote that "it was just a sheet of paper". That comment reflects the concern of staff as well, and their desire that if they screen and find levels of moderate to severe depression, the project needs to be able to provide more immediate help.

Among those who did call and said it was helpful was the following comment: *Called Mental Health Access and they were helpful.*

Objective 4: WIC staff will increase the number of community, health and faith-based workers trained to recognize and to assist clients with perinatal depression.

Evaluation Outcome: A diverse group of community, health and faith-based workers will be trained to recognize and assist clients with perinatal depression and use the PHQ-9 screener.

Method and Analysis: WIC staff will keep track of the numbers of trained community, health and faith-based volunteers trained in perinatal depression between May 1, 2010 and September 30, 2010.

TRAINING RESULTS: The perinatal depression project was successful in meeting Objective 4, by holding 10 WIC training sessions from April 30, 2010 through September 28, 2010. A total of 239 people attended the sessions led my Caroline Cribari, MD, PhD, a Stanford-trained physician specializing in reproductive mental health, and Pec Indman, EdD, MFT, PA, a psychotherapist specializing in reproductive mental health. Dr. Cribari was formerly the chief of psychiatry at El Camino Hospital. Dr. Indman is chair of the postpartum support international education/training committee.

In addition, two trainings were held at the end of August and in September, specifically on August 31, 2010 a training of WIC Bay Area Staff was conducted with approximately 190 attendees, and the other was held on September 17, 2010 for 75 early childhood therapists and nurses. With the completion of those trainings, over 500 individuals were trained during this project.

The trainings focus on sessions covering "Perinatal depression and mother/infant/child attachment issues" as well as "How to screen and refer WIC clients for perinatal depression". While the breakdown by gender and job title is not provided, other breakdowns reveal that:

I. 60 WIC staff trained on April 30, 2010

II. 25 crisis hotline volunteers trained on May 22, 2010

III. 15 physicians trained at Contra Costa County Regional Hospital in Martinez on May 25, 2010

IV. 17 Healthy Start staff trained at Pittsburg Healthy Start Clinic, including 2 Healthy Start staff and 15 family practice physicians, on June 1, 2010

V. 11 pediatrician doctors trained at Martinez medical site on June 15, 2010

VI. 46 staff from a diverse group of organizations trained on June 18, 2010 including: Family Stress Center, CC County Mental Health Department, Ujima Family Services, Community Services Bureau, Head Start, WIC, Wee Care services for Children, Lynn Center, CC Family, Maternal, and Child Health Department staff, and First 5 Contra Costa Children and Family Commission center staff.

VII. 50 staff from Concord medical facility, including physicians, nurses, social workers, community outreach workers and other medical staff on June 25, 2010.

VIII. 15 staff physicians from Martinez medical center/facilities on July 28, 2010.

IX. 190 attendees from WIC Bay Area staff were trained on August 31, 2010

X. 75 early childhood therapists and nurses were trained on September 17, 2010

Regarding the need for more support or training for the Perinatal Depression project, the majority of the 28 staff who completed the Staff Survey reported that they were adequately trained (see Table 9). Approximately 2/3 of the respondents felt that they do not need more support or training (64%), while over 1/3 do feel they could benefit from additional training and support.

TABLE 9
STAFF SURVEYS
DO YOU NEED MORE SUPPORT OR TRAINING FOR THE PERINATAL DEPRESSION PROJECT?

	Total	Total %
YES	10	36%
NO	18	64%
TOTAL	28	100%

Asked about what they need for training or support, most staff among those surveyed focused on the need for more resources to handle those women who screen in for moderate to severe depression. For example, there seemed to be consensus on the need for having someone on site who was a mental health counselor or a social worker trained in handling perinatal depression. While , a number of staff reported that they felt that the protocol worked fine for screening and identifying women at risk for perinatal depression, one staff remarked: "*I would like more explanation of how to rate the scores."*

Many staff felt that there was some need for improvement concerning the project, (which is after all, the point of a pilot project), and noted that the main gap in the project concerned the referrals for clients in need. Handing women the referral list felt somewhat inadequate according to those surveyed.

Often they could not reach someone on the phone immediately or at all, and even when they did reach a counselor, not all took MediCAL clients. Staff felt the women who screened in at a very high level indicated moderate to severe depression (15+ of the PHQ-9 screener) needed more than a brochure or referral list at that point, but needed someone to talk to immediately. A number felt that the suggestions offered for helping women that screen in positive for depression or anxiety were not enough to respond to the situation, and felt inadequate to do the counseling without considerable expertise, training and experience. Examples of comments along this line by one staff person follow:

> *Resources, more information on resources. When I have to call the resources (referrals) for clients, it is very time-consuming and with limited amount of time per client, it would cause backups on files and other co-workers having to work harder due to your shortcoming. Maybe having a support person on site to walk clients to (for counseling) instead of making phone calls (would help). Clients complained that resources give them—(result in) even more phone numbers to call. Having an on- site staff to help make phone calls for very high risk clients so that it would not effect the clinic (workload would be beneficial).*

Another staff person said *"It would be good to give the clients more information immediately."* In a parallel statement, another wrote: "*Someone onsite who can talk to them more in depth. Ensure that we have both Spanish and English resources."* Similarly put: *"We need counselors that are knowledgeable to help depressed clients at WIC. We need to follow-up with clients that were depressed."* Finally, one wrote:

> *I'm not sure if they really are getting the help. The help they need is so much bigger than referral to counselors. They need a place to live, jobs, supportive family…"*

Regarding the need for more training, one staff commented:

> *It would have been nice to have had some time between training and starting the pilot program. Very exhausting.*

Clearly, Objective 4 was met by training a diverse group of community, health and faith-based workers to recognize and assist clients with perinatal depression and use the PHQ-9 screener. For example, at an April 30, 2010 training with 35 staff completing the training evaluation, 80% said the training helped them understand prenatal and postpartum depression "Very much". The majority of staff who were trained at that session felt the training was important to "assist women with proper referrals" and to "prevent suicide".

Some staff, however, pointed out that more resources and more training are still needed, especially in relation to handling the women who have very high risk scores.

Summary and Recommendations.

Overall, the Perinatal Depression Project pilot project was a success. The evaluation demonstrates that all four of the main objectives were met during the pilot phase. The screener, while somewhat lengthy, worked as intended, and was useful in selecting out those high risk women in need of counseling, referrals and other mental health services. The trainings went well, and the classes, brochures, handouts and posters played a key role in ensuring that the project objectives were carried out as intended. The pilot screening grant ended on September 30, 2010.

The following recommendations emerge from the evaluation:

- A shorter perinatal depression screening tool would prove beneficial to both clients and staff, both of whom are pressed for time during WIC classes and appointments. There are some good shorter screeners that could be tested (such as the PHQ-2 or PHQ-3), which have only 2 or 3 screening questions.

- Screening for perinatal depression using a standardized validated instrument at WIC classes and appointments is feasible and effective as shown by the pilot, however, ideally screening should be undertaken at all phases of prenatal and perinatal care, and a uniform instrument should be adopted countywide. With a move toward such adoption, all providers would have the same scoring system, the same definitions of risk, and the same protocol of how to address perinatal depression. Women with perinatal depression could be tracked and monitored throughout their pregnancies and beyond, and receive the help they need without ever slipping through the cracks due to a somewhat segmented system.

- Communication and coordination throughout the system would enhance the ability of staff to respond to perinatal depression, and assist in providing intense attention to those women with moderate to severe depression early in their pregnancies as well as early in their infant care giving years.

- Working closely with the county mental health department would be useful to ensure that more referrals and counselors are available immediately upon identification of a woman with perinatal depression. Having a MH counselor on site at all WIC locations would be ideal, although a difficult challenge given fiscal challenges.

- Having the depression screeners handed out in a class or at specific appointments would ensure that women with high risk scores would have someone to follow-up immediately to help them reach out for needed mental health services. Having the Public Health RN available on site to handle the high risk women would also prove beneficial.

- Staff and clients both benefitted from the pilot project, and continuing to identify women at this stage (WIC) is highly recommended.

- Continued training would be helpful for staff at various periods so that they could share ideas of how to resolve problems that arise. Some private space to move to when clients breakdown or are upset would also be helpful. Nutritionists are not trained as mental health counselors, so ways to help bridge this gap by more mental health trainings would increase their skills and confidence.

- As suggested by staff, having additional educational videos available on the topic of perinatal depression and how to handle in a variety of languages, as well as having self-help books and materials would also be of benefit.

- Finally, continuing to use the Contra Costa Perinatal Depression to Wellness Network as a resource will prove beneficial as the pilot project moves into a more permanent aspect of WIC services in the future. As the Network notes in their Vision/Mission Statement: *"We recognize that the incidence of perinatal mood disorders is especially high in Contra Costa communities because of inequities in health, the stressors of poverty, unequal access to health care, isolation, substance abuse, domestic violence, racism and the scarcity of effective resources to address these issues. …and through our efforts we will strengthen, link, and provide screening, prevention, intervention and referral services to promote wellness."*