Multilingual Postpartum Depression Screening in Pediatric Community Health Clinics

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Background

Depression is a medical condition that can bring about symptoms of depressed moods or loss of interest and pleasure, causing distress and impacting areas of social, occupational, and even cognitive functioning (American Psychiatric Association, 2013). Postpartum depression (PPD) is a major depressive disorder that must meet the criteria of having a depressive episode during pregnancy or during the first year postpartum. Symptoms of PPD may include; having difficulty sleeping even when infant sleeps, fear of being alone or leaving the house, impaired infant bonding, feelings of worthlessness, isolation from close family or friends, unexplained irritability, thoughts of harming self or baby, difficulty concentrating or making decisions, and feeling out of control (APA, 2013 & Postpartum Health Alliance, 2018).

The incidence of PPD has been extensively researched and a wide range of rates have been proposed. In a comprehensive literature review, Gaynes et al., (2005) estimate a 14.5% incidence of depression during the first three months postpartum. This rate appears to underestimate the incidence of postpartum depression among low-income and immigrant women. Hobfoll et al., (1995) finds a 23.4% PPD incidence rate among inner-city and low-income mothers. According to the American Academy of Pediatrics (AAP), low-income mothers report depressive symptoms 40-60 percent of the time and an estimated 55 percent of infants in families below the poverty level live with a mother with some form of depression or anxiety disorder (Earls, 2010; Veriker, Macomber, & Golden, 2010). Immigrant mothers are often displaced from their primary support system, often having language and cultural barriers that isolates them and puts them at risk for developing PPD (Ramchandani, Richter, Stein & Norris, 2009). Special attention to this population must be given to manage these challenges and assure a healthy and safe transition into motherhood.
According to the Center on the Developing Child at Harvard University, infants growing up with caregivers suffering with PPD, can lead to feelings of fear and anxiety in the child and could result in increased in stress chemical production that can affect brain development, the ability to learn, and increase the risk of emotional disorders into adulthood. Infants of mothers with depression, were found to have underdeveloped stress coping mechanisms, more protest behavior, more withdrawn behavior and increased rates of behavioral disturbances by preschool age (Earls, 2010; Veriker, Macomber, & Golden, 2010). Mothers with PPD are also at risk for insecure attachment with their newborns, a strong predictor of long-term outcomes for children (Armstrong & Morris, 2000). There are an approximated 400,000 infants born to mothers with depression every year and are at risk of significant cognitive, emotional and/or developmental delays (Earls, 2010). It is imperative that pediatric primary care practitioners (PPCPs) engage with these mothers, as a large number are never identified and only 15% of those identified, receive the services they need (Center for the Developing Child at Harvard University, 2009).

Current U.S. Preventive Services Task Force recommendations for screening for maternal depression include testing women in obstetrical antenatal and postnatal visits, but do not mention screening women in the pediatric primary care setting (USPSTF, 2016). In 2010, the American Academy of Pediatrics (AAP), developed guidelines to include these screenings in the pediatric primary care setting, due to their “longitudinal relationship with families and unique opportunity to identify maternal depression and help prevent untoward developmental and mental health outcomes for the infant and families” (Earls, 2010, p. 1037).

**Purpose**

The purpose of this evidence-based project is to implement the Edinburgh Postnatal Depression Scale (EPDS) screening tool, validated in 5 different languages (English, Spanish,
Vietnamese, Arabic, & Somali), develop protocols for the routine screening and referral of new mothers arriving for the 1-week, 1-month, 2-month, and 4-month well-baby checks, and educate patients and providers on the significant impact PPD can have on infants and their development.

**Project Site Needs Assessment**

This project was implemented at community clinics in Southern California, providing integrative primary care services to low income, mostly immigrant, pediatric and adult populations. These clinics already have established integrated mental health services yet void of established protocols for PPD screening at the pediatric visits, per AAP guidelines. In a research study highlighting the Southern California Community mental health needs for non-citizens, three major barriers in accessing mental health services were discussed: lack of awareness of resources, fragmented services making referrals and applications difficult, and programs that lack linguistic and cultural needs of the population (Rodgers & Purnell, 2012). Study site preliminary data collected over a year showed only two women (.14%), out of 1400 encounters, were identified as having PPD and referred accordingly. Many women and children potentially at risk have gone undetected until now, this practice change attempts to implement current AAP guidelines and address one of the many barriers to care that immigrant and low-income populations face in the postpartum period.

**Review of the Literature**

In a systematic review for the United States Preventive Services Task Force (USPSTF), screening programs among mothers 18 years and older showed an 18%-59% relative reduction of risk for depression after 3 to 5 months follow up, with or without any additional treatments or services provided (O’Connor, Rossom, Henninger, Groom, & Burda, 2016). According to AAP clinical guidelines, PPCPs are in a unique position to provide this screening as they are the first
providers to see mothers after the birth of their child and have frequent contact with mothers, thereafter (Earls, 2010). Additional recommendations for screening in the pediatric setting include the 2008 Surgeon General’s Conference on Children’s Mental Health, Bright Futures guidelines and the 2004 President’s New Freedom Act on early screening (Earls, 2010).

The golden standard tool for identification of PPD is the 10-item Edinburgh Postnatal Depression Scale (EPDS) developed in 1987 and validated repeatedly in over 18 languages (Cox, 1987 & Department of Health, 2006). The sensitivity of this tool, English version, is found to be 0.79 (95% CI, 0.67-1.00) and a specificity of 0.87 or higher in all studies included in systematic review for the USPSTF (O’Connor et al., 2016). The use of paper screening has shown to be more effective than a verbal interaction with a provider in identifying PPD among new mothers (Olson et al., 2002). Implementing a paper questionnaire for all 1-week, 1, 2, and 4-month well-baby checks and adding results to the electronic health record for that visit, is the main goal of this project.

The timing of the use of the EPDS tool in the postpartum period has had a somewhat uniform recommendation, with some studies suggesting screening on all well child visits in the first year to others screening at the 2-month and 6-month well child visits. The AAP currently recommends screening at the 1, 2, 4, & 6-month well child visits (Hagan, Shaw, & Duncan, 2017). Support for an early screening is based on the belief that the longer the depression is present, the more difficult and less responsive to treatment (Riley, 2003). Early treatment is important in limiting the disability and degree of dysfunction of the mother-infant relationship and therefore screening at the 1-week well-child visit can help identify those mothers with unidentified perinatal depression (Isaacs, 2004). Postpartum depression has been found to be a significant risk factor to early breastfeeding cessation, a timely detection of PPD can improve the
15% world-wide compliance rate of the World Health Organization recommendation of breastfeeding exclusivity for the infant’s first 6 months of age (Machado et al., 2014).

Infants born to mothers with depression are at risk for altered maternal attachment which are associated with later behavioral and conduct disorders in the child (Earls, 2010). Postpartum depression often creates an adverse home environment leading to symptoms of anxiety and fear for the child. According to the Center for the Developing Child at Harvard University (2009), this can affect brain development in the management of the stress response and lead to an increase in emotional disability for the child. Addressing PPD in mothers alone has not yielded improvement in child outcomes, it is only when the interventions also address parenting behavior that a larger impact on child development is seen (Whiffen, 1993). Identifying the children at risk is an important early intervention by the PPCPs to assure discussion and management of these altered maternal-child relationships among women suffering with postpartum depression. Pediatric practices that monitor maternal depression closely have been found to have higher immunization rates and greater compliance to routine recommended visits, an added benefit to integration of PPD screening into pediatric primary care (Kimmel et al., 2017).

Once screened and identified, it is the responsibility of the providers to discuss the effects and risk of postpartum depression and recommend immediate referrals and guidance. One way of monitoring the progress of these referrals is by adding the diagnosis of infant affected by maternal depression, to the child’s medical history or problem list. This prompts the PPCPs to closely follow the mother’s progress and any sequelae the infant may experience. Primary care providers can also encourage breast feeding as a method of maternal-infant bonding, provide extra return visits to the clinic for support, and follow up on referrals to mental health professionals (Earls, 2010). According to the AAP, the approach to discussing PPD with new
mothers must include avoiding judgment and/or stigma regarding mental health disorders. The use of the HELP (hope, empathy, language/loyalty, permission/partnership/plan) pneumonic is one communication style that can aide practitioners in improving interactions and normalizing conversations about mental health and encourage women to seek recommended mental health services (Meschan, 2010).

Pediatric primary care provider characteristics that strongly correlate with effective identification and treatment of PPD include; working in an integrated practice that provides mental health services, routine assessment of maternal depression at pediatric visits, having greater than one method to address maternal depression, and most importantly, provider belief that maternal depression can have a severe impact on the developing child (Heneghan et al., 2007). A key to the success of this practice change is to educate pediatric PPCPs and their staff on the importance of identification and referral of mothers suffering with PPD. Once the referrals are made to mental health services, participation and utilizations of these recommendations is often a barrier among immigrant and community health settings.

A systematic review of the literature on participation of mental health services by postpartum women demonstrated that discussing available community resources with patients, provider training and access to mental health at the screening facility can improve mental health service utilization by 200%-400% (Byatt, Levin, Ziedonis, Simas & Allison, 2015). Unfortunately, immigrant mothers have been underutilizing mental health services, and very targeted approaches are needed to better provide for this population. An active referral process using health navigators, educating providers and patients about depression, reducing the stigma around depression and addressing the lack of support often felt by immigrant mothers have been
recommended to improve underutilization of mental health services, among ethnic minority mothers (Boyd, Mogul, & O’Hara, 2015).

The largest population sector at the proposed clinics is the Latina population, making up almost 62% of patients surveyed. Latina women have higher rates of depression but are three times less likely to seek the recommended treatments and six times less likely to be identified with PPD than their white counterparts (Cabassa, Zayas & Hansen, 2006; Lara-Cinisomo, Griffin, and Daugherty, 2009). Language specific resources were developed for the Latina, Arabic, Vietnamese, and Somali immigrant population at risk for PPD.

Another attempt at maximizing mental health utilization was the implementation of warm handoffs between the providers and mental health practitioners. The handoffs have been reported to improve the chances of engagement with their treatment providers as well as creating a trusting relationship with the referring practitioner. Women who discussed depression with in-house mental health providers along with their PCPs were more likely to follow through on their recommendations (Horevitz et al., 2015). This problem is not unique to these Southern California Community Clinics, underutilization of services is an obstacle for all behavioral health integration programs and a multidisciplinary approach must be considered when addressing these obstacles. PPCPs are in a unique position to identify and help mothers at risk to assure improved outcomes for their infants.

**EBP Model**

The Iowa Model: Evidence-Based Practice to Promote Excellence in Health Care was chosen for this EBP project due to its wide applicability and use of multidisciplinary teams during the implementation process (Iowa Model Collaborative, 2017). The model begins with identifying triggers in current practice and applying new knowledge to address the deficit
identified. Its frequent feedback loops allow the process to change and improve without restarting the process. A key aspect of this model is the use of a pilot program, a necessary component requested by the stakeholder at the study site (a group of Southern California community health clinics). Once the pilot program was completed, data were collected and reported to the team and stakeholders. Important provider feedback was needed to make sure the practice change was appropriate for adoption. It is at this junction that the model makes a key recommendation of identifying important personnel to help adopt this practice change, restructuring the current team addressed one of the possible barriers identified earlier for this project. Assuring sustainability has been a frequent request by the organization, and this model guides the process to monitor key indicators and support continually as needed. Overall, the Iowa Model had all the necessary characteristics for a community health practice change.

**Project Plan Process**

Implementing an electronic health record reminder to screen all mothers at their 1-week, 1, 2, and 4-month well-child visits was one of the reasons that this project was adopted with such ease. These reminders, in the form of drop-down menus, were added to pre-existing templates for all eligible visits and completed by providers. Pulling up all patient records without this completed section was an effective way at monitoring compliance with the screening process. All completed questionnaires were reviewed and crosschecked with medical records to monitor for provider and staff compliance. Providers received electronic action items if screening results were left blank or if further documentation or action was needed on positive results. Review of the questionnaires occurred on a weekly basis and constant communication with providers assured continual feedback on the practice change.
The next step in the PPD screening process, involved the education of the staff and pediatric providers in engaging with postpartum mothers to complete the Edinburgh Postnatal Depression Scale (EPDS) tool and document results in the infant’s EHR. Once the tool was completed, results of the questionnaires were given to providers for additional discussion with the mothers, if required. Documentation of results in the EHR, allowed for close follow-up of mothers and infants at risk.

For mothers who screened positive (≥10 on EPDS), whenever possible, the primary care provider requested a warm handoff with the mental health provider to help assure attendance and follow through on the referral. Grant funding covered sliding scale or out-of-pocket fees for initial mental health evaluations. If the clinician determined there was an immediate risk to the mother or infant, the clinic staff scheduled an urgent mental health appointment or called Emergency Services. Cumulative data were collected after EHR review of all infant charts whose mother had screened positive for attendance to the initial behavioral health appointment. Mother who had no-show appointments were contacted to find out reasons for failure to comply with the referral in hopes to reschedule or improve barriers to care. If financial barriers were identified, prepaid grant-funded coupons covering sliding scale fees for initial mental health evaluations were provided.

Language appropriate handouts with community and mental health resources were handed out to all mothers who are at risk for PPD. Appropriate EHR documentation of resources given, were also added to eligible well-child templates. All EHRs with positive screens were reviewed to assure patient education and that resources had been given. If documentation regarding patient resources was not found, then electronic communication was generated. This
was implemented to secure appropriate provider implementation until the adoption of this practice change became routine.

Close follow up of these couplets at risk included the addition of diagnosis P00.89, *newborn affected by maternal depression*, to the infant’s problem list. This assured further discussion and evaluation into maternal-infant bonding, continuation of breast feeding, parenting techniques and risk assessment by the PPCPs, at all future visits. This was an opportunity for PPCP to increase the number of visits, provide more breastfeeding support, promote maternal-infant attachment, and improve mental health utilization services, by mothers at risk of PPD (Figure 1).
**Figure 1.** Postpartum Depression Screening Algorithm. CHDP = Well Child Check; MA = Medical Assistant; ICD = International Classification of Diseases; SD = San Diego; EHR = Electronic Health Record; BHI = Behavioral Health Intervention; CPT = Current Procedural Terminology; SDFC = San Diego Family Care; PCP = Primary Care Provider; NP = New Patient; SmartCare = mental health triage phone service.
Results

Process and outcome indicators were monitored on a monthly basis during the 6-month EBP implementation process. Data collected from the EHR included; percentage of mothers screened, percentage of new positive screens, number referred, number attended referral and number flagged on the problem list. There were two large inner-city pediatric clinics being monitored in the same community. Data were collected on the basis of clinic location and then tabulated together for organizational purposes. These key indications were a bellwether for process compliance of the new practice change and easily tracked post implementation to assure sustainability of practice change. The addition of documenting the screening data into the patient’s EHR, made the continual analysis of the data simple and effective.

There were a total of 523 eligible visits, 437 (83.5%) were screened using the EPDS tool and documented into the EHR. There were multiple visits per mother, for a total of 273 mothers screened between November 2017 and April 2018. Additional demographic information included race, age, parity and breastfeeding status.
Table 1

Study Demographics (N = 273)

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>N</th>
<th>Breastfeeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic, Latino</td>
<td>169</td>
<td>74.7%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>23</td>
<td>78.3%</td>
</tr>
<tr>
<td>Black, African-American</td>
<td>16</td>
<td>80.0%</td>
</tr>
<tr>
<td>Asian, Pacific Islander</td>
<td>20</td>
<td>61.1%</td>
</tr>
<tr>
<td>Other, Multiracial</td>
<td>2</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>28.03</td>
<td>5.77</td>
</tr>
<tr>
<td>Parity</td>
<td>2.3</td>
<td>1.27</td>
</tr>
</tbody>
</table>

EPDS Score

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>2.88</td>
<td>3.30</td>
</tr>
<tr>
<td>Month 1</td>
<td>2.99</td>
<td>3.41</td>
</tr>
<tr>
<td>Month 2</td>
<td>2.28</td>
<td>3.50</td>
</tr>
<tr>
<td>Month 4</td>
<td>3.73</td>
<td>4.71</td>
</tr>
</tbody>
</table>

Of the total eligible visits in the 6 months studied, the rate of screening was 86% with an 11% overall incidence rate of at risk for PPD. Of those mothers who screen positive, 83% had documentation demonstrating a referral to mental health services, 43% of mothers referred actually attended their mental health appointments and an average of 48% of infant charts had appropriate flagging in the EHR. Table 2 provides a monthly accounting of screenings.
Table 2

**Monthly Screenings**

<table>
<thead>
<tr>
<th>Month</th>
<th># of new + Screens</th>
<th># of Eligible Visits</th>
<th>Number Referred</th>
<th>Attended Referral</th>
<th>On Problem List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov-17</td>
<td>4</td>
<td>39</td>
<td>4 (100%)</td>
<td>3 (75%)</td>
<td>2 (50%)</td>
</tr>
<tr>
<td>Dec-17</td>
<td>4</td>
<td>36</td>
<td>2 (50%)</td>
<td>1 (25%)</td>
<td>3 (75%)</td>
</tr>
<tr>
<td>Jan-18</td>
<td>5</td>
<td>61</td>
<td>4 (80%)</td>
<td>1 (20%)</td>
<td>4 (80%)</td>
</tr>
<tr>
<td>Feb-18</td>
<td>2</td>
<td>64</td>
<td>2 (100%)</td>
<td>1 (50%)</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Mar-18</td>
<td>1</td>
<td>66</td>
<td>1 (100%)</td>
<td>0 (0%)</td>
<td>1 (100%)</td>
</tr>
<tr>
<td>Apr-18</td>
<td>-</td>
<td>52</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Totals</td>
<td>16</td>
<td>318</td>
<td>13 (81%)</td>
<td>6 (38%)</td>
<td>11 (69%)</td>
</tr>
</tbody>
</table>

(Pediatric Clinic #1) (6.8%)

<table>
<thead>
<tr>
<th>Month</th>
<th># of new + Screens</th>
<th># of Eligible Visits</th>
<th>Number Referred</th>
<th>Attended Referral</th>
<th>On Problem List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov-17</td>
<td>3</td>
<td>25</td>
<td>2 (67%)</td>
<td>1 (33%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Dec-17</td>
<td>3</td>
<td>30</td>
<td>3 (100%)</td>
<td>2 (67%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Jan-18</td>
<td>2</td>
<td>37</td>
<td>1 (50%)</td>
<td>0 (0%)</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Feb-18</td>
<td>2</td>
<td>33</td>
<td>2 (100%)</td>
<td>1 (50%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Mar-18</td>
<td>1</td>
<td>53</td>
<td>1 (100%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Apr-18</td>
<td>2</td>
<td>27</td>
<td>2 (100%)</td>
<td>0 (0%)</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>Totals</td>
<td>(6.2%)</td>
<td>205</td>
<td>11 (85%)</td>
<td>4 (36%)</td>
<td>3 (23%)</td>
</tr>
</tbody>
</table>

(Pediatric Clinic #2)

**Conclusions**

Assuring normal development of infants at risk by early identification and treatment of postpartum depression among low-income and immigrant mothers at Southern California community clinics, was the principal driver for this practice change. Extensive research on the consequences of maternal depression on the child, have led to the current AAP guideline recommendations. By educating providers and staff on the impact and the importance of early screening and interventions, PPCPs can make timely referrals to community resources and
mental health services for mothers at risk for PPD. PPCPs have a unique opportunity to identify those at risk and facilitate access to services that will impact the health of the entire family.

Additional screening recommendations at 6-month well-child visit can improve detection of mothers with delayed PPD symptomatology and follows AAP recommendations. Initial hesitancy for redundant screening can be addressed by removing the 1-week well-child screen and replacing it with a screen at the 6-month well-child visit. This time frame will also be effective in addressing issues surrounding mothers returning to work and decreased familial support in childcare responsibilities.

These clinics are the first community clinics in this region to implement postpartum depression screening in the pediatric setting and will serve as an exemplar for PPCPs to follow in surrounding communities. This practice change was able to address the complexities of implementing screens, algorithm development, staff training on the use of the EPDS tool and a referral process to mental health services, all obstacles to guideline implementation often mentioned by PPCPs.
References


