Improving Maternal and Child Health in Los Angeles:
Implementing Postpartum Depression Screenings at Harbor-UCLA’s Pediatric Continuity Care Clinic
Acknowledgements

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Glossary
211-LA: Is a private non-profit referral service, which provides free, confidential services 365 days a year, at all hours of the day. It offers professional community resources to “help callers with issues such as health care and substance abuse, domestic violence, shelter, food, legal and financial assistance, programs for children and seniors and different types of mental health services.”

Attending Physicians: Sometimes referred to as attendings. Attending physicians are licensed doctors and medical center faculty who are responsible for: “supervising, teaching and training residents and medical students. They are ultimately responsible for all aspects of a patient’s care.”

Baby Blues: As many as 80% of women typically experience baby blues after giving birth. Symptoms of baby blues include tearfulness, anxiety, irritability, labile mood and sleep disturbance. These symptoms usually evident within the first ten days after delivery. These symptoms typically are self-limiting resolving within hours or a few days.

Care Coordinator: A clinic employee with training in a health-related field, who provides coordinated care to patients by initiating, developing and monitoring appropriate follow-up to interdisciplinary services for the patient, which extend beyond the resources physically available in the clinic. Examples of job responsibilities are: initiating referrals to another specialty clinic (like the psychiatry clinic); putting patients in contact with community-run support groups, providing patients with resources such as transportation vouchers and Women, Infant and Children Program; calling patients to follow-up on their mood, whether they need prescription refills, and whether they received referral services. They can have training as medical assistants, social workers or case managers.

Core Market: The Office of Statewide Health Planning and Development identifies a hospitals’ core market using “USPS zip code areas in which the core majority (70%) of a single hospital’s

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1 “What is 211 LA County?”
2 “Health Care Team.”
3 Epperson and Ballew, “Postpartum Depression.”
This report utilizes the core market data to describe Harbor-UCLA’s patient population.4

Diagnostic and Statistical Manual of Mental Disorder, versions IV and V (DSM IV, DSM V): The DSM V is the current edition, published in May 2013. The DSM consists of diagnostic classification, diagnostic criteria and descriptions of mental disorders and is designed for use in clinical settings. In practice, adherence to DSM diagnostic classification and criteria varies.5

Empathetic Conversation: A term used by the LA County Perinatal Mental Health Task Force-Training Institute to constitute the immediate dialogue between physician and patient following a positive screen for postpartum depression. The dialogue is marked by language that normalizes the occurrence of the disorder and its symptoms.

Hand-Off: The in-person transition when a physician directly introduces the patient to a behavioral health provider at the time of the patient’s medical visit.

Harbor-UCLA Medical Center: Referred to as Harbor-UCLA in this report. It is one of three medical centers operated by the Los Angeles County Department of Health Services to serve publicly insured and un-insured inhabitants of Los Angeles County. Harbor-UCLA is located in Torrance, California and consists of a complex of facilities, which include a hospital, emergency room and outpatient clinics such as the Pediatric Continuity Care Clinic (PCCC). It also provides comprehensive services, which include primary care visits, lab tests, pathology, radiology, surgery, emergency care, and inpatient hospitalizations provided by physicians, nurses and ancillary medical staff in pediatric, internal medicine, family medicine, obstetrics and gynecology, surgery, psychiatry, radiology, pathology, emergency medicine and other subspecialties such as orthopedic surgery and cardiology.6

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4 “Healthcare Atlas.”
5 “DSM.”
6 “About Harbor-UCLA.”
Los Angeles County Perinatal Mental Health Task Force: “The mission of the Los Angeles County Perinatal Mental Health Task Force is to remove barriers to the prevention, screening and treatment of prenatal and postpartum depression in Los Angeles County. Founded in 2007, the Task Force is a coalition composed of over 35 public and private non-profit agencies as well community leaders, research partners and advocates for mothers, infants, and families. It also includes grassroots participation by survivors of maternal depression and affected family members.”

Mother-Child Dyad: Refers to the pairing of two individual units and emphasizes the critical inter-dependence between “children’s growth, development and social and intellectual achievements” and the mother’s health and well-being.

Obstetrics: “Branch of medicine and surgery concerned with childbirth and the care of women giving birth.” Often referred to in the context of “obstetrics and gynecology,” or shorthand as Ob/gyn, to include medicine and surgery concerned with a women’s reproductive health organs as a whole.

Patient-Centered Medical Home (PCMH): “A team based model of care led by a personal physician who provides continuous and coordinated care throughout a patient’s lifetime to maximize health outcomes.”

Pediatric Continuity Care Clinic (PCCC): The Pediatric Continuity Care Clinic is a primary care clinic located in Harbor-UCLA, which is run by pediatric residents, pediatricians and staff including nurses, medical financing clerks and secretaries. The clinic provides outpatient primary care to infants, children and adolescents ranging from newborn to 21 years old. The majority of visits are scheduled but, the PCCC can accommodate same-day appointments when possible.

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7 “About Us.”
8 Weiss, “The Mother-Child Dyad Revisited.”
9 “Obstetrics.”
10 "Patient-Centered Medical Home."
**Perinatal**: The time period around birth. In this report it will refer to conception until one year after giving birth.

**Postpartum Psychosis**: “A rare illness compared to the rates of postpartum depression or anxiety. It occurs in approximately 1 to 2 out of every 1,000 deliveries, or approximately 0.1% of births. The onset is usually sudden, most often within the first four weeks postpartum. Symptoms can include: delusions or strange beliefs, hallucinations (seeing or hearing things that are not there), paranoia and suspiciousness, rapid mood swings.” There is a 5% infanticide or suicide rate associated with this illness.\(^{11}\)

**Prenatal**: The time period during pregnancy before birth.

**Postnatal**: The time period after birth.

**Resident**: A medical school graduate undergoing medical training at an accredited medical center within a field of medicine (i.e. pediatrics, surgery, psychiatry) as part of their medical licensure requirement.

**Warm Referral**: A term used among behavioral health specialists to designate an empathetic conversation and transition from the physician to a community resource or a behavioral health provider at the time of the patient’s medical visit. This referral can be completed remotely.

**Well-baby check-ups**: We define the well-baby check-ups as scheduled visits with a primary care pediatrician conducted during the first year at two to four days of life, two weeks of life, and at one, two, four, six, nine and 12 months of age. Issues usually addressed during these check-ups include growth, development, feeding, elimination, sleep, immunizations, safety and other parental or health concerns. A clinic visit regarding an urgent medical concern, injury or illness during the first year of life is not considered a well-baby check-up.\(^{12}\)

\(^{11}\)“Postpartum psychosis.”
\(^{12}\)“Well-child visits.”
Executive Summary
With a prevalence of 10-20% for mothers, postpartum depression (PPD) is the most common complication of pregnancy and childbirth.\textsuperscript{13} This disorder is known to disproportionately affect low-income, single and young mothers, who are less likely to seek medical care.\textsuperscript{14} The Harbor-UCLA Pediatric Continuity Care Clinic (PCCC) is a resident physician-run clinic in Torrance, California, that provides care to a predominantly underserved population that mirrors those disproportionately affected by PPD.\textsuperscript{15} The negative impacts of undiagnosed and untreated PPD extend beyond the health of the mother, adversely affecting child development and family dynamics.\textsuperscript{16}

Given the frequency of well-baby check-ups and the unmatched access that pediatricians have to the special relationship between the mother and child, consensus for pediatricians to screen for PPD continues to grow.\textsuperscript{17} Acknowledging their role in this debate, Dr. Carol Berkowitz, Executive Vice-Chair in the Department of Pediatrics at Harbor-UCLA, and Dr. Galena Kolchugina, a pediatric resident at the PCCC, commissioned us to address undetected maternal PPD at the Harbor-UCLA Pediatric Continuity Care Clinic.\textsuperscript{18} To achieve this, we considered the following questions:

1) \textbf{Is it feasible to implement an effective postpartum depression screening at well-baby check-ups at the Pediatric Continuity Care Clinic?}

2) \textbf{If so, how should the PCCC conduct postpartum depression screenings and manage care for mothers?}

In order to determine whether the Pediatric Continuity Care Clinic should implement postpartum depression screenings and how it should be operationalized, we collected data from expert interviews, performed a literature review, conducted a survey of Harbor-UCLA pediatric residents and acquired data from the Los Angeles Mommy and Baby Project and the California Office of Statewide Health Planning and Development. The data presented current debates surrounding postpartum depression, which helped identify evaluative criteria by which we

\textsuperscript{13} Association, The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. 
Gavin et al., “Perinatal Depression.” 1071-1083.

\textsuperscript{14} Atkins, “Self-Efficacy and the Promotion of Health for Depressed Single Mothers.” 155-168.

\textsuperscript{15} “Healthcare Atlas.”

\textsuperscript{16} Berkowitz, “Perinatal Mood and Anxiety Disorders: The Role of the Pediatrician.”

\textsuperscript{17} Olson et. al. “Brief Maternal Depression Screening.118-207.

\textsuperscript{18} Mothers only see OB-GYN/midwife once at a 6-8 weeks postpartum visit.

\textsuperscript{19} For the duration of this report, we will refer to Dr. Kolchugina, Dr. Berkowitz as “our client.”

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measured each policy option. This allowed us to design and gauge the feasibility of the following five PPD policy options:

- **Policy Option 1** - Status Quo: does not address PPD
- **Policy Option 2** - Community Resource: incorporates PPD screening with residents responding empathetically and coordinating a warm referral to community resources for mothers who screen positively for PPD.
- **Policy Option 3** - Internal Care Coordinator: incorporates PPD screening with residents responding empathetically and hires a care coordinator who refers mothers who screen positively for PPD to community resources.
- **Policy Option 4** - Partnering with Harbor-UCLA Residency Clinics: incorporates PPD screening with residents responding empathetically and a care coordinator providing a referral to other Harbor-UCLA resident clinics for mothers who screen positively for PPD.
- **Policy Option 5** - Partnering with Harbor-UCLA Residency Clinics and Integrating a Biweekly Patient Care Meeting: incorporates PPD screening with residents responding empathetically and a care coordinator providing a referral to other Harbor-UCLA resident clinics for mothers who screen positively for PPD. Requires a mandatory integrative care meetings held every other week, to discuss the cases of mothers who screened positively for PPD.

Based on the analysis of prioritized criteria, we identify PCCC level and Harbor-UCLA level policy recommendations. The PCCC level recommendation addresses short-term, immediate policy change that can be accomplished at the clinic alone. Acknowledging the urgency of this issue and the high-risk population the PCCC serves, we recommend Policy Option 2, which takes advantage of resident support for incorporating screenings during well-baby check-ups with referrals when necessary. The Harbor-UCLA level recommendation focuses on long-term change to address postpartum depression at the hospital. Understanding that comprehensive care for PPD requires Harbor-UCLA level change, we recommend Policy Option 4, which partners the PCCC residents with Harbor-UCLA resident clinics.

Through incremental change, the PCCC can immediately help the high-risk population they serve and work toward a more comprehensive coordinated care model. The Pediatric Continuity Care Clinic has a significant opportunity to improve the lifelong trajectory of both mother and child through early recognition and intervention of postpartum depression.
Chapter 1
Introduction
Postpartum depression (PPD) is the most common complication of pregnancy and child birth.\textsuperscript{19} It is a form of clinical depression with symptoms of anxiety that affects parents during the first few years postpartum, with a prevalence of 10-20\% in mothers and 4-25\% in fathers.\textsuperscript{20} However, the prevalence could be underreported because PPD disproportionately affects low-income, single and young mothers who are less likely to seek medical care.\textsuperscript{21} While PPD is commonly associated with mothers who have given birth to a live child, other individuals can experience symptoms of postpartum depression and anxiety around childbirth.\textsuperscript{22} Fathers, adoptive parents, mothers who give their child up for adoption and mothers who give birth to a stillborn or miscarry, can also suffer from PPD.\textsuperscript{23} Given the limited research available, we focus and limit the scope of our report to PPD occurring in biological mothers.

Postpartum depression impacts a child’s health and development.\textsuperscript{24} When a mother has PPD her ability to provide adequate care for her child diminishes, thereby deteriorating the special relationship between mother and child, known as the dyad.\textsuperscript{25} Mothers with PPD are less likely to connect with their infant, specifically making less eye contact and speaking less frequently to their child, than a mother not experiencing this disorder.\textsuperscript{26} They are also less likely to take their child to routine healthcare visits and instead, “are more likely to seek urgent care.”\textsuperscript{27} Children of parents with PPD are more likely to experience depression and have behavioral problems themselves.\textsuperscript{28} Regardless of these adverse consequences, PPD can be reliably screened for and is responsive to self-help interventions, psychotherapy and antidepressants.\textsuperscript{29} Despite this, there is no universally-accepted standard of care for screening or managing PPD.\textsuperscript{30}

\textsuperscript{19} Expert Interview. February 28, 2014.
\textsuperscript{20} Association, The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.
Gavin et al., “Perinatal Depression.” 1071-1083.
Musser et. al. “Paternal Postpartum Depression” 479-485.
\textsuperscript{22} Expert Interview. February 26, 2014.
\textsuperscript{23} Ibid.
\textsuperscript{24} Berkowitz, “Perinatal Mood and Anxiety Disorders: The Role of the Pediatrician.”
\textsuperscript{25} Weiss, “The Mother-Child Dyad Revisited.”
\textsuperscript{26} Ibid.
\textsuperscript{27} Olson et. al. “Brief Maternal Depression Screening.118-207.
\textsuperscript{28} McLennan et al. “Parental prevention practices for young children.” 1090-1095.
Lovejoy et al. “Maternal depression and parenting behavior.”
\textsuperscript{29} Expert Interview. February 28, 2014.
\textsuperscript{30} American College of Obstetricians and Gynecologists. Committee on Obstetric Practice, “Committee Opinion No. 453.”
There is a growing consensus for pediatricians to screen for PPD. Due to the frequency of well-baby check-ups, pediatricians have more access to the dyad than other clinicians, providing the opportunity for timely intervention. Acknowledging their role in this debate, Dr. Carol Berkowitz, Executive Vice-Chair in the Department of Pediatrics, and Dr. Galena Kolchugina, a pediatric resident at Harbor-UCLA, commissioned us to address undetected maternal PPD at the Harbor-UCLA Pediatric Continuity Care Clinic (PCCC). This is achieved by evaluating the following questions:

1) Is it feasible to implement an effective postpartum depression screening at the well-baby check-ups at the Pediatric Continuity Care Clinic?

2) If so, how should the PCCC conduct postpartum depression screenings and manage care for mothers?

Given the prevalence of postpartum depression, its negative impact on child development, it is crucial to address PPD immediately. In order to meet this pressing need, we recommend a short-term PCCC level policy option. Understanding that true PPD management requires interdisciplinary care, we also recommend a Harbor-UCLA level policy option for the long-term.

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31 Mothers only see Ob-gyn/midwife once at a 6-8 weeks postpartum visit.
32 For the duration of this report, we will refer to Dr. Berkowitz and Dr. Kolchugina as “our client.”
Chapter 2
Approaching the Issue of Postpartum Depression
In order to determine whether Harbor-UCLA should implement postpartum depression screenings and how it should be operationalized, we collected data from expert interviews, performed a literature review, conducted a survey of Harbor-UCLA pediatric residents and acquired data from the Los Angeles Mommy and Baby Project (LAMB) and from the California Office of Statewide Health Planning and Development (OSHPD).

To understand current best practices and gauge policy feasibility, we interviewed 18 experts in the fields of general pediatrics, child development, obstetrics, psychology, psychiatry, social services, public health and public policy. They also have extensive experience in perinatal mental health and the mother-child dyad. These experts work in diverse settings including the Harbor-UCLA Health System, public hospitals and in the private healthcare sector. All interviews were conducted by at least two members of our team in a semi-structured conversational style. These interviews revealed the complexity of postpartum depression and the challenges of implementing a PPD screening at Harbor-UCLA’s Pediatric Continuity Care Clinic.33

To identify current guidelines and effectiveness measures related screening and managing postpartum depression, we researched published findings on perinatal mood disorders including risk factors, prevalence, symptoms and long-term health effects. Expecting challenges to potential policy change, we researched barriers to implementation regarding PPD screenings. This included case studies and literature on general depression. Based on the current knowledge in the field, we framed the policy questions and identified essential features for potential policy options, as well as determined the appropriate criteria for policy option evaluation.

With the aim of assessing PCCC resident attitudes, knowledge and beliefs regarding PPD, we conducted a short survey during a Friday educational lecture.34 Twenty-six individuals attended the lecture and out of these possible respondents, we received 25 responses, 21 of which were from residents. Of the survey population, 23 respondents previously participated in the Pediatric Continuity Care Clinic. The survey gauged pediatricians’ opinions on implementing a policy option that incorporates PPD screening and management at the clinic.

33 Expert Interview questions and dates of interviews are presented in Appendix A.
34 More information on the survey methodology is presented later in this report. The survey is also presented in Appendix B.
We utilized the Office of Statewide Health Planning and Development data to identify the population Harbor-UCLA serves. It collects yearly demographic information about discharged patients from all accredited hospitals operating in California. OSHPD identifies a hospitals’ “core market” using “USPS zip code areas in which the core majority (70%) of a single hospital’s patients reside.” Our team assumed the demographic data collected by OSHPD represents the population served by Harbor-UCLA. The core market methodology informed the data we requested from the Los Angeles Mommy and Baby (LAMB) Project.

In order to understand the experience of mothers and babies that Harbor-UCLA and the PCCC currently serve, we utilized data from the LAMB Project. The Los Angeles County Department of Public Health sponsored LAMB to conduct a survey, collecting “county-wide population-based data on attitudes and experiences of women before, during, and shortly after their most recent pregnancy.” The LAMB project conducts these surveys every two years, with its most recent report published in 2010. We requested LAMB data on respondents living in Harbor-UCLA’s core market during 2011. Since the LAMB respondents live within this core market, we assumed the 1,367 respondents represent mothers served by the PCCC.

Postpartum depression is an emerging area of medical attention. Our client hopes to increase resident knowledge on the subject and improve the lives the families served by the clinic. This report sets out to evaluate the feasibility of implementing a postpartum depression screening during PCCC well-baby check-ups and to generate systematized policy options. To answer the policy questions, we first present the current medical knowledge of postpartum depression. Next, we frame the context of the policy questions within the community served by Harbor-UCLA as whole and at the PCCC specifically. After providing this context, we conduct a decision analysis to determine whether or not implementing a PPD screening is feasible. Our team then presents the debates surrounding PPD screening and management, which informed the evaluative criteria by which our policy options are measured. The policy options amalgamate effective and feasible practices discovered by our team, leading to PCCC level and Harbor-UCLA level recommendations.

35 “Healthcare Atlas.”
36 “2010 Surveillance Report.”
Chapter 3
The Big Picture of Postpartum Depression
The spectrum of postpartum mood disorders ranges from baby blues, a common, normal and self-limiting response to childbirth, to the more severe form of postpartum psychosis, with postpartum depression (PPD) lying between these two extremes. Postpartum depression affects 10-20% of mothers within the first year after giving birth. Symptoms of PPD take a more severe form of baby blues symptoms, affecting and limiting functioning ability for a prolonged period of time. Mothers with depressive symptoms are less likely to read to their children, engage in healthy feeding and sleep behaviors and implement safety measures.37

Despite these recognized effects, postpartum depression often goes undetected and undertreated.38 Validated screening tools include the Patient Health Questionnaire-9 (PHQ-9), Edinburgh Postnatal Depression Scale-10 (EPDS-10) and Postpartum Depression Screening Scale (PDSS).39 The PHQ-9 has a sensitivity of 75-88%, the EPDS-10 has a sensitivity of 59-100% and the PDSS has a sensitivity of 91-94%.40 A high sensitivity is less likely to miss a mother who is truly experiencing PPD. Even though the PHQ-9 and the EPDS have a larger sensitivity range, meaning they do not capture everyone who is truly experiencing PPD, these tools consist of fewer questions and require less time to administer. Additionally, the PHQ-9 has a specificity of 90%, the EPDS-10 has a specificity of 49-100%, and the PDSS has a specificity of 72-98%.41 Even though large specificity ranges will produce a large number of false positives, individuals who screen positively but are not truly experiencing PPD are likely expressing some PPD symptoms and could benefit from receiving treatment.42

There is no formal recommendation for universal PPD screening; professional organizations such as the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics strongly encourage screening for PPD, yet offer no recommendation on implementation.43 In addition to not having a standard for PPD screening, there are other barriers to implementing policy change. These barriers occur on the patient level, physician level and healthcare system level. Patient barriers include cost of care or lack of

37 O’Hara and Swain, “Rates and risk of postpartum depression.”
38 Pearlstein et al. “Postpartum depression.” 322-328.
39 “Healthcare Atlas.”
40 American College of Obstetricians and Gynecologists. Committee on Obstetric Practice, “Committee Opinion No. 453.”
41 Ibid.
43 Ibid.
Earls, “Incorporating Recognition and Management of Perinatal and Postpartum Depression Into Pediatric Practice.”
insurance, social stigma, poor follow-up with mental health referrals and difficulty adhering to the treatment plan.\textsuperscript{44} Physician barriers include lack of time, insufficient training or knowledge and limited community mental health resources.\textsuperscript{45} Lastly, healthcare system barriers include reduced understanding of the dyadic relationship and no standard of care for postpartum depression.\textsuperscript{46} We address the barriers that fall within the scope of this report in Chapter 6.

\textsuperscript{44} Scholle et al. “Addressing depression in obstetrics/gynecology practice.” 83-90.
“Depression Screening Attitudes and Practices Among Obstetric...”
Nease and Malouin, “Depression Screening: A Practical Strategy.”
\textsuperscript{45} Horwitz et al., “Barriers to the Identification and Management of Psychosocial Issues in Children and Maternal Depression.”
\textsuperscript{46} Katon.”Improving services for women with depression in primary care settings.”
Chapter 4
Harbor-UCLA Demographics and Statistics
Understanding the Pediatric Continuity Care Clinic requires comprehending the larger context of Harbor-UCLA including, Harbor-UCLA’s patient demographics, the experiences of mother and babies at Harbor-UCLA, the pediatric residency program and the interaction between pediatrics and other clinical departments.

Harbor-UCLA is located in Torrance, California, and is one of the three Los Angeles Department of Health Services-operated medical centers serving Los Angeles County inhabitants who are insured under Medi-Cal (California social health insurance for low-incomes individuals and families), Medi-Cal Managed Care, Medicare or are uninsured and receive medical payment assistance through LA County No-Cost/Low-Cost Programs. In addition to being a county medical center that provides medical care to people regardless of their ability to pay, Harbor-UCLA is a teaching hospital that sponsors 12 accredited medical residency training programs. It is also a rotation site for medical students from the UCLA David Geffen School of Medicine.

Harbor-UCLA Patient Demographics

Harbor-UCLA defines its target population as “poor or near poor.” According to 2011 data from the Office of Statewide Health Planning and Development (OSHPD), Harbor-UCLA had 21,863 hospitalizations and discharges, roughly accounting for 6% of all hospitalizations and discharges in California. The largest concentration of patients discharged from Harbor-UCLA did not have any insurance, resulting in a 0% reimbursement rate to the hospital for the services they received.

47 Patients do not need to be legal residents of the U.S. In reality, Harbor-UCLA hospital does not turn anyone away. If someone with private insurance presents to the emergency department, the medical staff will stabilize the patient and then facilitate transfer to a medical center within the patient’s insurance coverage network. Harbor-UCLA Hospital is sometimes the first place visitors from other countries and other states will seek care at for an emergency or chronic medical problem. Follow-up outpatient care is provided for some but not all of these conditions. LA County no-cost/low-cost programs include ability-to-pay plans, discounted pre-payment plans and charity care. An LA County DHS financial worker works with patients to determine the best plan to meet their needs.

“DHS Delivers Quality, Community-Based Care.”

48 A hospital or medical center that is affiliated with a medical school, in which medical students receive practical training, or has a residency program, in which postgraduate medical students receive supervised training in the care of patients in a more specific medical field or specialty (eg: pediatrics, psychiatry, Ob/gyn). Harbor-UCLA has 12 residency programs accredited by the Council for Graduate Medical Education (ACGME) which include: pediatrics, internal medicine, family medicine, obstetrics and gynecology, surgery, orthopedic surgery, radiology, pathology, anesthesiology, dermatology, psychiatry, and emergency medicine.

“About Harbor-UCLA.”

49 “About Harbor-UCLA.”

50 “About Harbor-UCLA.”
provided.\textsuperscript{51} Compared to other California hospitals, Harbor-UCLA serves a larger uninsured population. Thirty-four percent of Harbor-UCLA patients used Medi-Cal to pay for their care, while 28\% of all patients in California hospitals used Medi-Cal.\textsuperscript{52} Only seven percent of Harbor-UCLA patients used Medicare, while 34\% of people discharged from California hospitals used Medicare to pay for services.\textsuperscript{53} And on average 5\% of Harbor-UCLA patients used private insurance compared to the average among California hospitals of 30\%.\textsuperscript{54}

Harbor serves a disproportionately poor, young and minority population. OSHPD defines the area served by a hospital as its core market. In 2011, a quarter of people living in the area served by Harbor-UCLA lived at the federal poverty level (FPL), in comparison to the 14\% of Californians who live at the FPL.\textsuperscript{55} Furthermore, half of Harbor-UCLA’s core market lived at just twice the federal poverty level. More young people under the age of 18 live within Harbor-UCLA’s core market than in the state as a whole. Individuals under the age of 18 make up over 31\% of this market, whereas young people under the age of 18 make up 25\% of the overall state population. More Hispanics and African Americans live within Harbor-UCLA’s core market than in the state as a whole. Hispanics make up over 66\% of this market compared to 37\% in the general state population. African Americans make up 18\% of Harbor-UCLA’s core market and only 6\% of the general population.\textsuperscript{56}

Compared to the state’s general population, the characteristics of Harbor-UCLA’s core market puts the people they serve at higher risk for postpartum depression. Incorporating screenings for PPD at Harbor-UCLA could be the first step in addressing the un-met need of mothers currently experiencing from PPD.

\textsuperscript{51} Thirty-five percent of Harbor-UCLA discharges classified to ‘County Indigent’ patients.
\textsuperscript{52} “LAC/Harbor-UCLA Medical Center: Hospital Facility Details and References.”
\textsuperscript{53} Ibid.
\textsuperscript{54} Ibid.
\textsuperscript{55} The federal poverty level refers to poverty guidelines issued yearly by the Department of Health and Human Services. In 2011, 100\% of the FPL for a single person was an annual income of $10,980 and $22,350 in annual income for a family of four.
\textsuperscript{56} Comparison of Harbor-UCLA core market and statewide data are presented in Appendix C.
Pediatric Continuity Care Clinic Well-Baby Check-up Demographics

In 2011, there were approximately 900 babies delivered at Harbor-UCLA. The low number of births at Harbor-UCLA was a result of arrangements made in the 1980s when the demand for obstetrics services overwhelmed the county medical system’s capacity. To meet demand, the county contracted private community hospitals to deliver babies; these services were then reimbursed by the county. After delivery, newborns return to the county system to receive their well-baby check-ups and additional pediatric care. Harbor-UCLA provides 22,000 scheduled outpatient pediatric visits a year. Of these visits, 9,600 to 12,800 are seen by pediatric residents in the Pediatric Continuity Care Clinic and about 15% to 20% of those are well-baby check-ups.

In order to understand the experience of mothers and babies that Harbor-UCLA and the PCCC currently serve, we utilized data from the Los Angeles Mommy and Baby (LAMB) Project, which surveys mothers living in LA County who recently delivered a baby. According to LAMB, over a third of respondents in Harbor-UCLA’s core market were uninsured prior to pregnancy. At the time of delivery, about a third of mothers were less than twenty years old and over half were unmarried. In 2009, more than half of the mothers reported an annual household income of less than $20,000. A large proportion of these mothers were teenaged, single or low-income, indicating increased risk for PPD, yet only 42% reported discussing depression at their postpartum check-up with their Ob/gyn and even less, 29%, reported discussing anxiety. Half of survey respondents reported experiencing some depression after delivery, with over 13% of the mothers reporting that they felt “moderately” or “very depressed.” This estimate falls within the 10 to 20% nationally reported prevalence of PPD and is likely underreported due to limitations of the survey including ascertainment bias, selection bias and social-desirability.
bias. We identified the market Harbor-UCLA predominantly serves and found that the increased risk associated with Harbor-UCLA’s population points to a significant un-met need to screen and manage postpartum depression within this community.

The Pediatric Residency Program at Harbor-UCLA

Thirty pediatric residents completing a three-year residency program provide care at the PCCC. Fifty full-time faculty in the Department of Pediatrics at Harbor-UCLA instruct and supervise the residents as they go through the established curriculum and attain a set of core clinical competencies. Residents are required to attend educational lectures and complete readings relevant to their rotation. The goal of rotations, educational lectures and readings is to prepare the resident for the breadth of medical conditions they face as pediatricians. While the residency program is very diverse and comprehensive, there is currently no time in the standard curriculum dedicated to postpartum depression. And since there is a growing consensus that pediatricians should be prepared to address postpartum depression, it is important for Harbor-UCLA’s pediatric residency program to provide residents with the opportunity to gain PPD competency.

Physician Communication within Harbor-UCLA

The pediatric residency program is just one of twelve residency programs in the many departments at Harbor-UCLA. Similar to other large medical centers, communication at Harbor-UCLA is often siloed. Few opportunities exist for interaction among physicians from different departments due to competing priorities and responsibilities. For example, even though there is a close relationship between a pregnant mother and her child, communication between pediatrics

63 There are limitations to the data so it probably underestimates the prevalence of PPD, which is consistent with literature reporting that PPD is under diagnosed and under treated. Limitations to survey include: ascertainment bias: less likely to answer phone if depressed, selection bias: only mothers who had babies in the past 6 mos., social-desirability bias: information is self-reported. Gavin et al., “Perinatal Depression.” 1071-1083.
64 “Harbor-UCLA Pediatrics.”
65 The core clinical competencies are defined by the Accreditation Council for Graduate Medical Education and American Board of Pediatrics.
66 “Getting out of silos”
67 Ibid.
and obstetrics is limited to when the pediatrician attends a high-risk vaginal delivery or C-section.\textsuperscript{68} During the delivery, a nurse or an obstetrician will briefly present the mother’s relevant medical history, pregnancy history and delivery course to the pediatrician. After delivery, the pediatrician no longer interacts with the obstetrician and relies on the mother’s medical chart for information.\textsuperscript{69} Nevertheless, some communication occurs at Harbor-UCLA when physicians from different departments share a patient. For example, the pediatricians at Harbor-UCLA work alongside child psychiatrists and psychologists at the Child Crisis Center to evaluate a child who is suspected of being abused. Pediatricians also work with pediatric surgeons when a hospitalized child needs surgery. Surgeons visit the patient on the pediatric floor every day and meet daily with pediatricians to discuss the child’s plan of care.

Beyond the context of care for a shared patient, there is limited communication among physicians in different departments in Harbor-UCLA.\textsuperscript{70} However, increased communication between physicians improves patient care and is a target of national reform efforts.\textsuperscript{71} For instance, the Affordable Care Act advocates for the delivery of healthcare services in a patient-centered medical home model (PCMH) as part of an effort to improve health care in America.\textsuperscript{72} A PCMH provides collaborative care by an interdisciplinary team of physicians.\textsuperscript{73}

One example of a promising PCMH model is the USC-Eisner Family Medicine Center at California Hospital located in downtown Los Angeles. The clinic serves a predominantly low-income and uninsured population.\textsuperscript{74} With the help of the Los Angeles County Perinatal Mental Health Task Force, the clinic implemented PPD screenings and developed the New Family Care Team in 2010. The team consists of a social worker, a case manager, family medicine physicians, medical assistants, occupational therapists, psychologists and psychiatrists.\textsuperscript{75}

\begin{itemize}
\item[68] Pediatrics is only paged to a vaginal delivery if there is a concern that it will be a difficult delivery that will cause danger to the newborn. Examples are if the mother spikes a fever during labor, so the baby could have an infection at birth, if the labor is prolonged and there is evidence of fetal distress during labor. Rarely, a pediatrician will be paged after delivery when the nurses notice that the baby needs additional respiratory support, resuscitation or other monitoring. Pediatrics is present at all C-sections.
\item[69] Expert Interview. February 19, 2014.
\item[70] Expert Interview. March 12, 2014.
\item[71] Expert Interview. February 19, 2014.
\item[72] Dingley et al., “Improving Patient Safety through Provider Communication Strategy Enhancements.”
\item[73] Davis, Abrams, and Stremikis, “How the Affordable Care Act Will Strengthen the Nation’s Primary Care Foundation.”
\item[74] “Patient-Centered Medical Home.”
\item[75] Expert Interview. February 28, 2014.
\end{itemize}
assistants administer and family medicine physicians score the postpartum depression screen. During the appointment, if a mother screens positively for PPD the family medicine physician partners with the case manager, who then coordinates with the social worker and begins the process of follow-up care. Once a week, the New Family Care Team meets to discuss patient cases of PPD. Together, the team discusses and adopts a plan of care to best address the patient’s needs.

Through a PCMH model, an interdisciplinary team of care providers can achieve the ideal PPD management consisting of prevention, screening, diagnosis, treatment and follow-up. Each care provider plays an integral role in the mother’s perinatal health. With existing opportunities to screen for postpartum depression and the incorporation of a PCMH, improved outcomes for PPD seem possible. Focusing on expanding existing communication and collaboration within the hospital, Harbor-UCLA can potentially provide better care for not only mothers with PPD, but all patients.

77 Ibid.
78 When a mother thinks she is pregnant or finds out that she is pregnant, she will usually visit her primary care provider for a blood test confirmation. If positive and the pregnancy is wanted, the primary care provider, depending on his or her expertise, will either presume the mothers’ obstetric care or refer her to obstetrician/gynecologist and midwives for obstetric care. In both cases, and assuming a normal healthy pregnancy, mothers usually receive the same standard of care. The typical schedule usually include monthly visit before the 28 weeks of pregnancy, biweekly visits between week 28 to 36 weeks of pregnancy, and weekly visit after 3 weeks until birth. “What Happens during Prenatal Visits?”
79 Croghan and Brown “Integrating Mental Health Treatment Into the Patient Centered Medical Home.”
Chapter 5
The Pediatric Continuity Care Clinic as a Site for Addressing Postpartum Depression
In recent years, an increasing number of experts support postpartum depression screening within a primary care setting. Two opportunities for routine PPD screenings exist. One opportunity to screen for PPD is during the single postpartum follow-up with the mother, obstetrician/gynecologist, family physician or nurse midwife. This single visit limits their ability to track the mother’s postpartum mental health. Another opportunity occurs during well-baby check-ups, which take place throughout the child’s first year. At Harbor-UCLA, pediatricians provide the majority of well-baby check-ups, allowing them to detect and continually monitor the mother’s postpartum mental health.

Several reasons make the PCCC an obvious place to screen for postpartum depression. Even though the mother is not the pediatricians’ patient, the pediatrician is responsible for ensuring the health of the child, which the mother’s actions significantly influence. As discussed previously, the quality of the dyad relationship has large implications on the child’s early development. Therefore, the child is inherently tied to the health of the mother. Moreover, the population Harbor-UCLA’s Pediatric Continuity Care Clinic serves fits the profile for being at high risk for PPD. Once diagnosed, postpartum depression can be easily treated and managed. The earlier PPD is diagnosed, the sooner interventions and improvements can occur in the child’s early development.80 Because the population the PCCC serves is high risk and early intervention is critical to ensure the child’s development when the dyad is compromised, the PCCC has the opportunity to make a large impact in a marginalized illness for a relatively minimal opportunity cost.81

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81 Opportunity costs will be discussed further in Chapter 8.
**Decision Analysis**

We use a decision tree to assess the feasibility of implementing a postpartum depression screening at the PCCC. While the PHQ-9 and the EPDS-3 are imperfect screenings, they still allow the PCCC to provide care for a share of its population. Figure 1 illustrates our model that weighs the decision to implement screenings and their outcomes.

**Figure 1. Decision Tree Analysis**

![Decision Tree Diagram](image)

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82 We will discuss the PHQ-9 and EPDS-3 further in Chapter 6.
Utilizing the EPDS-3 and PHQ-9 in parallel provides a combined screening strategy that has a very high sensitivity (99%) but a lower specificity (72%). A high sensitivity is advantageous for screening as it maximizes the number of people it captures, without leading to a large number of false positives. The expected values of each branch in the decision tree are calculated using combined specificity and sensitivity of the EPDS-3 and PHQ-9 and the midpoint of the estimated 10 to 20% true PPD prevalence in the population, which is 15%. We estimate the number of mothers described in each branch of the decision tree using a high estimate of 320 babies seen annually for well-baby check-ups. Using these numbers, we estimate that implementing a postpartum depression screen at the PCCC will lead to 123 mothers screening positively for PPD, requiring referral for follow-up care.

As with any screening, a portion of mothers will screen positively without actually experiencing PPD, constituting a false positive screen. The intensity of their symptoms translate to a score on the margin of the positive threshold. Therefore, they have some symptoms and may benefit from postpartum depression management. Managing these mothers’ PPD will bear very little burden on the PCCC. According to our analysis, only one mother will screen negatively for postpartum depression while actually having PPD, constituting a false negative screen. This false negative could be potentially dangerous for the mother with severe postpartum depression or postpartum psychosis. As discussed in Chapter 1, untreated PPD and even PPD symptom expression can result in behavior problems, depression and developmental issues in the child. However, the outcome associated with a false negative is no different than not screening for postpartum depression, which is the current practice at the PCCC. Given the number of mothers

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83 Combined sensitivity and specificity of the EPDS-3 and PHQ-9 were calculated using combination equations for parallel screening tests: Sensitivity=SensEPDS-3+SensPHQ-9 -SensEPDS-3 x SensPHQ-9; Specificity=SpecEPDS-3 x SpecPHQ-9 with SensEPDS-3=95%, SpecEPDS-3 =80%, SensPHQ-9 =81.5% (the midpoint of the published range 75%-88%), SpecPHQ-9=90%.

84 This number was estimated based on information from expert interviews (February 19, 2014) regarding the quantity of well-baby check-ups seen annually at the PCCC and which is presented in the earlier section: PCCC Well-Baby Check-Up Demographics. According to this information, the PCCC sees approximately 9600-12800 patients annually, 15-20% which are well-baby check-ups. We calculated 15-20% of 9600-12800, resulting in 240-426 total well-baby check-ups annually. As there are a total of eight well-baby check-ups, we divided this number by 8 (assuming each mother attends one set of well-baby check-ups annually), which resulted in 30-320 mothers served through well-baby check-ups annually. There are limitations to our calculations, however, we believe that by using the high estimate of 320 new mothers served in the PCCC provides an adequate reference point to assess potential clinic burden and opportunity costs related to implementing PPD screening and management.

85 This will be discussed further in the Opportunity Cost section of Chapter 8.

86 Berkowitz, “Perinatal Mood and Anxiety Disorders: The Role of the Pediatrician.”
the PCCC can reach and the single mother who would be missed, we believe the PCC should implement PPD screenings.

**Concerns about Missed Appointments**

There is also concern that depressed mothers are less likely to bring their babies to well-baby check-ups. Research into patterns of newborn care for babies of mother’s expressing depression symptoms reveals that, though these mother are less likely to bring their babies to all scheduled well-baby check-ups on time compared to mothers reporting no symptoms of depression, the difference is quite small.\(^\text{87}\) For instance, 84% of mothers expressing depression symptoms are on schedule for all their well-baby check-ups compared to 88% for mothers overall.\(^\text{88}\) Therefore, though a small percentage of mothers with PPD may be missed, screening at well-baby check-ups would still capture the majority of mothers. The fact that mothers in general are likely to miss some well-baby check-ups underscores the importance of screening at each visit.

**Pediatric Continuity Care Clinic Structure**

The clinic plays an important role in providing consistent care for the child, seeing the child throughout his or her first year.\(^\text{89}\) Given that PPD is most likely to begin around six weeks and six months postpartum, the consistency of well-baby visits provides multiple opportunities for the residents to screen and track the mother’s mental health. Because new mothers and specifically mothers experiencing postpartum depression are less likely to seek health care for themselves, the physician they interact with the most is the pediatrician.\(^\text{90}\) The Continuity Care Clinic has two medical teams during each clinic with four residents assigned to each team. On rare occasions, residents miss clinic due to conflicting rotation schedules. There should be

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\(^{87}\) Minkowitz et. al. “Maternal Depressive Symptoms and Children’s Receipt of Health Care in the first 3 years of Life.” 306-313.

\(^{88}\) Ibid.

\(^{89}\) “Well-child visits.”

enough residents to see the patients in a timely manner, however, the parent and child still spend a significant amount of time waiting to see their provider.

The following workflow schematic, presented in Figure 2, demonstrates the steps a parent takes in accessing care at the clinic. These steps illustrate the existing opportunities and challenges faced by the clinic in providing care to children.

**Figure 2. Pediatric Continuity Care Clinic Workflow**

The majority of waiting seems to occur during the steps parents must go through before seeing their provider: taking a number, being called to the front-desk, being called to the business office and going to the measurement room. These steps are an advantageous opportunity to use a mothers’ time in the clinic efficiently by completing a PPD screening. For example, one opportunity for the mother to complete the PPD screening occurs between step two and step three, when the mother has checked in but is waiting to speak with the business office.

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**Current Resident Knowledge, Attitudes and Beliefs about PPD**

We conducted a short survey to gauge buy-in and current awareness of PPD at the Pediatric Continuity Care Clinic. Among the PCCC survey respondents, 92% believe screening for postpartum depression is important. When asked whether they should have responsibility for recognizing postpartum depression, 80% of the respondents agree, 12% disagree, while 8% remain neutral. The survey posed several questions aimed at assessing resident knowledge of PPD. When the respondents were asked if two possible PPD screening tools included the PHQ-9 and the EPDS, 84% of respondents correctly answered true while 12% of respondents mistakenly marked false. And when asked a question about the incidence of PPD in fathers, 56% of respondents correctly answered true and 36% of respondents wrongly marked false. With respect to reports that PPD does not occur in adoptive mothers, 88% of respondents correctly answered false while only 4% of respondent inaccurately answered true. When asked a true-or-false question regarding appropriate medications for pregnant and nursing mothers, 80% of respondents correctly identified medicines that are contraindicated. While 12% of respondents did not answer the question, 8% of respondents wrongly answered true. This survey reveals that the PCCC residents lack specific knowledge to detect and manage postpartum depression. Considering the impact of PPD on a child’s life, pediatricians should seek competency on the subject.

We also surveyed respondents about barriers they encountered or anticipated encountering in recognizing and screening for postpartum depression. Table 1 reveals these identified barriers.

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92 Survey respondents were asked to strongly disagree, disagree, neutral, agree or strongly agree to the following statement: “Recognizing postpartum depression is my responsibility.” Strongly disagree and disagree were combined into one group while strongly agree and agree were combined as well.

93 A survey participant did not respond to this question.

94 Two survey participants did not respond to the question.

95 Two survey participants did not respond to the question.

96 Basic knowledge survey questions took the form of true or false questions, developed by our client six months after presenting an educational lecture covering PPD.
Table 1. Resident Encountered or Anticipated Implementation Barriers

<table>
<thead>
<tr>
<th>Encountered or Anticipated Barriers</th>
<th>Number of Respondents</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Barrier</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician financial disincentives for mental health care referrals</td>
<td>25</td>
<td>100%</td>
</tr>
<tr>
<td>Inadequate time to provide counseling or education</td>
<td>19</td>
<td>76%</td>
</tr>
<tr>
<td>Appointment time too short for adequate history</td>
<td>16</td>
<td>64%</td>
</tr>
<tr>
<td>Unavailability of mental health care resources</td>
<td>13</td>
<td>53%</td>
</tr>
<tr>
<td>Patient’s insurance limited treatment options</td>
<td>8</td>
<td>32%</td>
</tr>
<tr>
<td>Mental health care professionals not affordable</td>
<td>7</td>
<td>28%</td>
</tr>
<tr>
<td>Difficult paperwork or authorization procedures</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>Poor reimbursement for treatment</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Physician Barriers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomplete training to diagnose or counsel</td>
<td>18</td>
<td>72%</td>
</tr>
<tr>
<td>Incomplete knowledge of DSM-IV diagnostic criteria*</td>
<td>4</td>
<td>16%</td>
</tr>
<tr>
<td>Incomplete knowledge of treatment for depression</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>Lack of effective treatments</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Patient Barriers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents reluctant to see mental health professional</td>
<td>20</td>
<td>80%</td>
</tr>
<tr>
<td>Parent reluctant to accept diagnosis</td>
<td>15</td>
<td>60%</td>
</tr>
<tr>
<td>Parent reluctant to begin antidepressant medication</td>
<td>9</td>
<td>36%</td>
</tr>
<tr>
<td>Medical problems of patient more pressing</td>
<td>8</td>
<td>32%</td>
</tr>
<tr>
<td>“Difficult to treat mother as a patient because I’m a pediatrician”</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>

*While the DSM-V has been published since May 2013, many healthcare providers are in the process of transitioning from the DSM-IV to the DSM-V.*
A majority of respondents identified inadequate time as a barrier. Seventy-six percent believed they did not have enough time to diagnose and counsel a mother with postpartum depression, while 64% believed that appointments were too short to obtain the mother’s history. Seventy-two percent of respondents also identified the physician-level barrier of incomplete training to diagnose or counsel a mother. Additionally, respondents distinguished patient-level barriers related to mental health stigma. Eighty percent of respondents believed parents would be reluctant to see a mental health professional and 60% believed parents would be reluctant to accept a diagnosis. Respondents unanimously identified financial disincentives for mental health referrals as a barrier to implementing PPD screening, which is consistent with Harbor-UCLA’s per-capita payment structure. Additionally, one respondent expressed his or her concern regarding the child being their patient instead of the parent. This survey reveals that while respondents believe they are personally responsible for recognizing PPD, Harbor-UCLA’s reimbursement structure and the stigma associated with PPD may impede implementation of postpartum depression screenings. Ultimately, any policy option undertaken by the PCCC should address resident knowledge of PPD and work towards mitigating barriers of implementation.

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97 Per-capita payment will be addressed in Chapter 6.
Chapter 6
Current Debates Surrounding Postpartum Depression
Through our research, we discovered consistent debates surrounding postpartum depression. The subjects of awareness, training, screening, management and challenges to policy implementation reoccurred in expert interviews and the literature. Careful consideration went into each issue and informed the design of policy options.

The awareness issue involves the value of increased knowledge among patients on PPD. Increasing awareness can be achieved through direct and indirect action. Direct action can consist of individuals receiving one-on-one information about PPD and indirect action can consist of billboard campaigns by organizations. The majority of experts interviewed expressed that increasing awareness reduces stigma and this reduction helps those who suffer from PPD by normalizing the disorder. The debate however, takes place over the minimum method of awareness to achieve effectiveness. Some experts believe informational brochures with a resource hotline are an effective way of increasing awareness, while others believe effective PPD awareness efforts require a conversation by the Ob/gyn or midwife. Others believe awareness needs to expand to include every member of the community, not just mothers.98 Throughout this debate, increasing awareness appears to depend on the clinic’s capacity, with it dictating the awareness method used and directly impacting the effectiveness an awareness effort can have.99 We conclude that because of the PCCC’s limited financial and personnel resources, the best minimum awareness effort is an informational brochure handed to all mothers at all well-baby check-ups.100

The debate on training refers to the level of competency needed to address screening and management of postpartum depression. Experts agree that those assessing PPD screenings require enough competency to feel comfortable addressing a positive screen.101 However, no consensus exists regarding the method to achieve competency. Some experts believe that routine educational lectures provide sufficient base-level knowledge to comfortably deal with positive screens.102 Other experts argue that a month-long supervised rotation incorporating a curriculum on PPD symptoms, screenings and management adequately prepares a physician to address the

99 Capacity refers to the resources available to implement awareness efforts, such as workforce, capital and time.
100 The LA County Perinatal Mental Health Task Force created an informational brochure that is available in multiple languages and includes a hotline number. An English version of the brochure is presented in Appendix E.
complexities of postpartum depression. Understanding the demand for training, the Los Angeles County Perinatal Mental Health Task Force created a PPD training curriculum in partnership with the USC-Eisner Family Medicine Center. This curriculum consists of a three-hour training course and quarterly lectures focusing on the impact of maternal depression, responding empathetically to mothers in a culturally sensitive manner, and lastly, strategies for prevention, referral and intervention. Resident physicians at USC-Eisner feel competent in managing cases of PPD after receiving this training. Therefore, our team concludes that the same training strategy should be used at the PCCC.

The debate in postpartum depression continues over effective screening tools to detect PPD in a primary care setting. Examples of screening tools include the Patient Health Questionnaire (PHQ), the Edinburgh Postnatal Depression Scale (EPDS) and the Postpartum Depression Screening Scale (PDSS). Though the PDSS has the highest sensitivity in detecting PPD through its thirty-five items, time constraints reduce its feasibility. Key informant interviews directed us toward the PHQ-9 and EPDS for comprehensive but practical screening. The full PHQ and full EPDS consist of nine and ten questions, respectively. Considering time constraints, researchers also developed a shorter form of both questionnaires, the PHQ-2, consisting of two questions and the EPDS-3, consisting of three questions. The EPDS-3 requires less time to administer and it is just as robust in detecting PPD as the EPDS-10 with a sensitivity of 95% and specificity of 80%. Additionally, the EPDS-3 captures PPD anxiety symptoms, which are often overlooked and not assessed by the PHQ-9 alone. The PHQ-9 has a sensitivity of 75-88% and specificity of 90% and is supported by our experts for its longitudinal assessment capability and because it is validated in pregnant and postpartum populations.

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104 Training Institute.
106 The PDSS must be purchased and requires technical qualifications for its use. Expert Interview. February 20, 2014.
108 Kabir, Sheeder and Kelly, “Identifying Postpartum Depression.”
110 American College of Obstetricians and Gynecologists. Committee on Obstetric Practice, “Committee Opinion No. 453.”
implementation and clinic time constraints, utilizing a combination of the PHQ-9 and EPDS-3 at all well-baby check-ups will effectively capture PPD in mothers.\textsuperscript{111}

There is also a debate over whether a process for diagnosis, treatment and follow-up should be established before administering screenings. Few experts argue that screening without complete follow-up management can “do more harm than good” by increasing anxiety levels. \textsuperscript{112} Many experts argue instead that screening creates awareness and should occur even when this process does not exist because it signals to the mother the importance of the issue.\textsuperscript{113} We acknowledge that the benefits of increased awareness does not necessarily lead to improved maternal health.\textsuperscript{114} Therefore, it is imperative to couple screening with follow-up management, which has been shown to improve maternal depression outcomes.\textsuperscript{115} Experts believe a screening with a warm referral to a community resource center hotline, like 211-LA, is “better than nothing.”\textsuperscript{116} Our team agrees that this is a first step in the right direction. Waiting until a systemized process is in place misses the opportunity to help mothers who are currently experiencing PPD, forgoing the benefits of early intervention. Moreover, a competent physician can preempt increased anxiety with an empathetic response to a positive screen.\textsuperscript{117} Therefore, the fear of increased anxiety should not prevent our client from implementing PPD screenings at the PCCC.

A number of challenges to policy implementation arose through our research including stakeholder buy-in, physician reservations and available resources. The first challenge facing

\begin{enumerate}
\item The PHQ-9, PHQ-3, EPDS-10 and EPDS-3 screening tools are presented in Appendix F.
\item Expert Interview. February 14, 2014.
\item Expert Interviews. February 28, 2014.
\item Expert Interviews. March 12, 2014.
\item Expert Interview. February 20, 2014.
\item Yawn et al., “TRIPPD.”
\item Ibid.
\item As mentioned in the glossary, a warm referral is a term used in the behavioral health field to designate an empathetic transition from the physician to a community resource or behavioral health provider during the patient’s medical visit.
\item Expert Interview. February 5, 2014.
\item Expert Interview. February 7, 2014.
\item Expert Interview. February 19, 2014.
\item Expert Interview. February 20, 2014.
\item Expert Interview. February 21, 2014.
\item Expert Interview. February 26, 2014.
\item Expert Interview. February 28, 2014.
\item Expert Interview. March 3, 2014.
\item Expert Interview. March 10, 2014.
\item Expert Interview. February 20, 2014.
\end{enumerate}
policy implementation is stakeholder buy-in. To create a lasting policy change, administrators and medical directors must support and invest in PPD screenings. They should recognize the implications of undetected PPD on the mother’s health and the child’s development are undeniable. In addition to believing its importance, administrators must advocate for complete and consistent implementation in all well-baby check-ups. Experts shared that buy-in must occur from top-down in addition to bottom-up.\(^{118}\)

Despite understanding the relationship between PPD, early child development and long-term child health outcomes, many pediatricians who express reservations about screening for PPD, attributed it to a lack of PPD knowledge and management skills.\(^{119}\) Additionally, federal patient privacy laws require a patient’s consent to access his or her medical records. Because the pediatrician’s patient is the child, the pediatrician needs the mother’s consent before accessing her medical record to provide treatment. This adds to pediatrician reservations about incorporating a PPD screening and management program. However, pediatricians can still track the mother’s mental health through voluntary self-reported screening forms, provide counseling and refer mothers to PPD management providers. In order for PPD screenings to be successful, pediatricians must recognize their role in monitoring and recognizing postpartum depression in mothers at well-baby check-ups. Due to the consistency of well-baby check-ups, pediatricians see the family more often than other practitioners. In order for policy change to occur, screening for PPD must earn buy-in from PCCC attendings, who are practicing pediatricians that teach residents and dictate patient care priorities. In addition to attending buy-in, PPD screenings will not be effective without resident buy-in because they have the most contact with the family during well-baby check-ups.\(^{120}\) Clinic staff also play an important role in providing continuity of care to new mothers.\(^{121}\) Therefore, successful PPD screening requires buy-in from all stakeholders including administrators, attendings, residents and clinic staff.\(^{122}\)

Resources present another challenge for implementing PPD screenings. Los Angeles County pays Harbor-UCLA per-capita for each patient, as opposed to paying for each individual service provided. As a result, no incentives exist to increase routine care already provided to the

\(^{118}\) Expert Interview. February 14, 2014.
\(^{119}\) Olson et al., “Primary Care Pediatricians’ Roles and Perceived Responsibilities in the Identification and Management of Maternal Depression.”
\(^{120}\) Expert Interview. February 28, 2014.
\(^{121}\) Ibid.
patient, since the clinic will receive no additional compensation. Furthermore, physicians have already limited time with their patients, spending on average 15 minutes with them. Although the demand for time with primary care providers paired with the lack of financial incentives makes it difficult to incorporate new screenings into well-baby check-ups, residents at the PCCC still expressed a willingness to implement these screenings.

Chapter 7
Criteria for Evaluating Policy Options
Based on our research, we identified a number of policy options for addressing postpartum depression at the Pediatric Continuity Care Clinic. In order to find the optimum policy option for our client, we distinguished a set of evaluative criteria, by which we measured policy alternatives. These criteria represent valuable principles that PPD policy options should encompass, according to experts. The evaluative criteria are: feasibility of implementation, effectiveness, resident physician competency required and level of coordinated care.

Feasibility of Implementation in the Short-Term

Feasibility describes the difficulty of implementing a policy option in the short-term, given the PCCC’s current structure and resources. This criterion considers the logistical capacity of the PCCC to undertake the policy option, which is critical for policy implementation to proceed beyond conception. Our team determined feasibility using data gathered from the PCCC resident survey, expert interviews and discussions with our client. We measured feasibility ranging from “low feasibility,” “moderate feasibility,” to “high feasibility.” A policy option that required hiring additional care providers and involved interdisciplinary biweekly meetings, was designated as having “low feasibility” because, not only are resources needed for the care coordinator, but physicians would need to find time to meet regularly in their already busy schedules. If the policy option required hiring additional care providers but did not involve an interdisciplinary meeting, it was identified as having “moderate feasibility” because hiring a care coordinator would require time and financial support for the position. If the policy could be implemented within the PCCC’s current structure and resources, the option was identified as having “high feasibility.”

124 Logistical capacity includes time, workforce, cost and other resources.
125 Occurring once every two weeks.
**Effectiveness**

The criterion of effectiveness deals specifically with the process for screening and follow-up management of positive PPD screens. Literature shows that pairing screening and management leads to improved maternal outcomes.\(^{126}\) Experts agreed that an empathetic conversation and a warm referral constitute a form of acceptable management.\(^{127}\) Therefore, a positive screen followed by an empathetic conversation and a warm referral could lead to improved PPD outcomes. For that reason, we defined a policy option as effective if it met the benchmark of an empathetic conversation and warm referral. Comparing the process for screening and management of each policy option to the benchmark, we assessed effectiveness on a range from “not effective,” “effective,” to “very effective.” If the policy option did not meet the benchmark, it was identified as “not effective” and if the policy option met the benchmark, it was identified as “effective.” However, if the policy option superseded the benchmark, it was identified as “very effective.”

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**Resident Competency Required**

Resident competency describes the minimum level of PPD training required for pediatric residents to address screening and management of postpartum depression. Similar to the previous criterion, resident competency was measured in comparison to an expert identified benchmark. Most experts agreed that the threshold for minimum competency is when physicians’ feel comfortable addressing a positive screen.\(^{128}\) We assessed the need for resident competency through a range from “no understanding required,” “basic understanding required,” to “proficient understanding required,” based on qualitative information from our expert interviews, the USC-Eisner Family Medicine Center and the LA County Perinatal Mental Health Task Force PPD Training Curriculum. If the policy option required no training for pediatric residents, then we identified it as “no understanding required.” If the policy option only required the benchmark,

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\(^{126}\) Yawn et al., “TRIPPD.”

\(^{127}\) An empathetic conversation normalizes the stresses of parenthood and presents the symptoms of PPD as natural. An example of this conversation may be: “Having a newborn in the home can be very stressful. It is natural to feel overwhelmed.” A transition to management may be: “Often times new parents find it helpful to speak with someone about the stresses of parenthood we can offer you...”


consisting of a three-hour training course and quarterly lectures, we identified it as “basic understand required.” However, if the policy option superseded this benchmark, it was identified as “proficient understanding required.”

Level of Coordinated Care

The medical and health service sector has been moving toward more integrated care. The Affordable Care Act acknowledges this trend and advocates for it by providing incentives for public and private practices to move toward coordinated care. This move is supposed to improve patient outcomes and satisfaction. Considering this shift, we measured each policy option based on its level of coordinated care. Our team determined coordinated care qualitatively using data gathered from expert interviews and the example of the USC-Eisner Clinic. We measured policy options ranging from “no coordination,” “low coordination,” to “high coordination.” Policy options that did not require physicians to partner with a care coordinator or other physicians within Harbor-UCLA were defined as having “no coordination.” Policy options that required physicians to refer patients to an internal care manager, but did not call for further partnership within Harbor-UCLA, were defined as having “low coordination.” Policy options that required physicians to partner with other care providers within Harbor-UCLA to coordinate healthcare for the mother were defined as having “high coordination.”

Priorities

In order to determine a recommendation for our client, we used the criteria to evaluate our policy options; however, each bore different implications on policy implementation. The order of the criteria follows a logical sequence. To address our first policy question of whether or not it is feasible for the PCCC to implement a postpartum depression screening, we first prioritized feasibility. Clearly, policy options could be considered further unless they were feasible to implement within the PCCC’s resources and current structure.

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129 As mentioned earlier integrated care consists of an interdisciplinary model like the PCMH model used at USC-Eisner. Expert Interview. March 3, 2014.
130 Croghan and Brown. “Integrating Mental Health Treatment Into the Patient Centered Medical Home.”
Once we established a policy option as feasible, we then focused on the second policy question of how the PCCC should conduct PPD screenings and manage care for mothers. To answer this policy question, we concluded that above all else, the policy option must improve maternal and child health, because the intent of all health screenings is to improve health outcomes. Screening without concern for effectiveness would be a harmful, unproductive and irresponsible use of scarce PCCC resources.

Immediately following effectiveness is resident competency. At the PCCC, residents are the primary care providers and an effective PPD screening program requires them to feel comfortable addressing postpartum depression. Having PPD competent residents without having an effective process for screening and managing postpartum depression, fails to improve maternal and child health, while misallocating resident training time. Additionally, our client is particularly interested in policy options that increase resident competency to address PPD and support the mother-child dyad. Considering that the knowledge and skills acquired during residency inform how physician’s practice medicine throughout their career, resident competency was the next prioritized criterion.

Our final criterion was care coordination because in an ideal world, PPD would be managed by an interdisciplinary team of care providers who focus on the mother’s individual needs. However, there is a significant tradeoff associated with immediately implementing postpartum depression screenings at the PCCC. Specifically, coordinating care among different resident clinics negatively affects the feasibility of implementing policy options in the short-term. So as the policy option’s level of care coordination increased, the short-term feasibility of implementing the policy option decreased. Because achieving the ideal of care coordination required building on an existing feasible policy option, care coordination was the last priority in our evaluative criteria.
Chapter 8
Analyzing Options for Implementing Postpartum Depression Screenings
Although some challenges would need to be addressed, we believe the Pediatric Continuity Care Clinic is well positioned to take the lead in developing a PPD screening program due to its unmatched access to the mother-child dyad, the existing screening opportunities and the potential reach of a PPD screening program, as shown in our decision analysis. Here, we identify and evaluate a series of policy options for implementation at Harbor-UCLA and the PCCC. We begin with the status quo, which does not involve implementing postpartum depression screenings. We consider a sequence of options that build on each other and gradually scale up in scope of PPD care beyond the PCCC to community resources, other clinics and ultimately integrating responsibilities and care across resident clinics at Harbor-UCLA.

**Policy Option 1- Status Quo**

Maintaining the status quo would not address PPD but it would preserve the existing quality of care administered by residents and attendings at the PCCC. We considered this option because implementing a screening could potentially disrupt care by introducing more complexity into the clinic workflow, constrain residents’ time, divert attention from the child and confuse a mother who is asked to fill out a form about herself rather than her child. Subsequently, the status quo would ensure care continues without changing the services provided. However, it does not raise awareness about PPD for patients and fails to address the 10 to 20% of mothers who experience PPD annually and go undiagnosed and untreated. This policy option also ignores resident willingness to become involved in screening and managing postpartum depression, as evident in the PCCC resident survey. Policy Option 1 would not require administration, attending and staff buy-in, which is currently unknown. The option to maintain the status quo requires no changes in the clinic therefore, has high feasibility. But it is not effective in managing PPD, requires no resident competency and has no coordinated care.
**Policy Option 2- Warm Referral to Community Resource**

The PCCC has the advantage of frequently interacting with the mother-child dyad, which has implications on child development. At the PCCC, the mother and child spend long periods of time waiting, presenting multiple opportunities for the mother to complete a PPD screening.

This policy option would systematize implementation of PPD screening so that every mother who checks into the PCCC for a well-baby check-up would be handed the PPD screen. The front desk staff would pre-assemble a PPD screening packet on a clip-board, which includes a PPD screen, a PPD awareness brochure and a laminated cover sheet to ensure the mother’s privacy. The front desk staff would ask the mother to complete the PPD screen while she is waiting for the resident and to hand the resident the packet once in the patient room. When the mother, child, and resident are together in the patient room, the resident would tally the scores on the PPD screening. If the mother screens positively, the physician would have an empathetic conversation with the mother and immediately offer to call a community resource that can help manage her PPD symptoms.

This policy option has high feasibility because it takes advantage of PCCC resident support for policy change and the time the mother spends waiting during well-baby check-ups. It also requires minimal effort from the front desk staff to assemble and disseminate the PPD screening packet and could be quickly tallied by the resident. However, if the screening is positive, the resident would need to invest more time with the mother on an empathetic conversation and warm referral. Through the resident survey, PCCC residents voiced their concerns regarding inadequate time being a barrier to addressing a positive screen. However, we estimate addressing PPD will require little additional time. This option meets the threshold of effectiveness as it incorporates an empathetic conversation at the time of the positive screening and provides a warm referral for the mother to community resources. In addition, this policy option would create awareness for new mothers through the PPD screening packet. The PCCC residents also identified inadequate knowledge as a barrier to implementing postpartum depression screenings. Addressing this concern, this policy option would require training to

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131 Resident will score the EPDS-3 first. A score of 3 or more constitutes a positive screen. If the EPDS-3 is negative, the resident will then score the PHQ-9, where any score 10 or more constitutes a positive screening and indicates moderate depression.

132 The additional time requirement will be further discussed in this chapter’s Opportunity Cost section.
achieve basic resident competency to address the screening and management of PPD. This policy option also does not incorporate coordinated care at Harbor-UCLA.

**Policy Option 3- Hand-off to Internal Care Coordinator**

This option expands on the process of PPD screening in Policy Option 2 by incorporating a care coordinator. As we discovered from the USC-Eisner Clinic, their case manager plays a central role in coordinating management for mothers who screen positively for PPD symptoms. In this option, if the mother scores positively for PPD symptoms, the physician would respond empathetically and encourage the mother to access available PPD resources. The physician then would offer to introduce the care coordinator, who would provide a warm referral for the mother to community resources. The care coordinator would also follow-up with the mother to ensure her access to these resources.

This policy option has moderate feasibility because it requires hiring a care coordinator. Even though the hiring process necessitates time investment and allocation of funds for the position, the care coordinator could provide other social-services for the clinic in addition to PPD resources. Given the high need for these services, our client supports hiring a care coordinator. This care coordinator would have time dedicated to facilitating and monitoring referrals to provide PPD management that meets the mother’s specific needs. Having a care coordinator would also address the residents’ concern of inadequate time to manage postpartum depression by themselves. Policy Option 3 is effective because it meets the minimum benchmark of providing a warm referral, in addition to incorporating an empathetic conversation at the time of positive screening. Similar to Policy Option 2, this policy option would require that residents receive enough training to acquire basic PPD competency. Because it involves hiring a care coordinator but does not require further partnership with other Harbor-UCLA physicians, this option has low care coordination.
Policy Option 4 - Warm Referral to Partnering Harbor-UCLA Residency Clinics

This policy option builds on the compiled PPD screening packet from Policy Option 2 and incorporates a care coordinator from Policy Option 3. In this option, the care coordinator would provide warm referrals for mothers who screen positively for PPD to partnering resident clinics at Harbor-UCLA equipped to manage PPD. The PCCC has yet to take advantage of these readily available clinics, even though PPD referrals to Harbor-UCLA clinics could increase the mother’s likelihood of accessing these services due to the convenience and familiarity of Harbor-UCLA. This policy option would also alleviate resident concern about financial disincentives for mental health referrals because when a patient is referred to an outside clinic, a portion of that patient’s per-capita reimbursement follows them to the outside referral. Furthermore, by referring to other adult healthcare providers, Policy Option 4 relieves pediatrician concern for caring for an individual who is not their patient.

Policy option 4 has moderate feasibility as it requires hiring a care coordinator and receiving support from other resident clinics. This year Harbor-UCLA Psychiatrists and Ob/gyns proposed implementing a depression screening for pregnant women visiting the Ob/gyn clinics. While the proposal is a major step toward addressing perinatal mental health, there is concern regarding the lack of screening and follow-up for mothers after the six to eight week post-birth visit. This suggests that collaborating between clinics is possible, but also reinforces the urgent need for pediatrician involvement. This policy option requires that residents have enough training to achieve basic PPD competency while progressing toward a high level of coordination.

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133 Examples of such resident clinics at Harbor-UCLA include the Ob/gyn resident clinic, Family Care resident clinic, and Psychiatry resident clinic. These are clinics where physicians are trained to address adult mental health issues.
135 Ibid.
Policy Option 5 - Partnering Among Resident Clinics and Integrating a Biweekly Patient Care Meeting

This policy option would utilize the systematized process of screening and assessing for PPD, in addition to incorporating a care coordinator to oversee the process of making warm referrals to community resources and other Harbor-UCLA resident clinics. This policy option would expand the process by incorporating mandatory biweekly integrative care meetings to discuss the cases of mothers who screened positively for PPD.\(^\text{136}\) In these meetings, the physicians would develop a comprehensive plan of care for the mother with consultation from all partnering clinics.\(^\text{137}\) This would allow pediatricians to stay informed and collaborate on the mother’s care as it impacts the dyad, without taking sole responsibility for the mother.\(^\text{138}\)

This policy option creates awareness and reduces stigma for mothers by providing the PPD informational brochure, first introduced in Policy Option 2. Its interdisciplinary care would provide comprehensive and individualized postpartum depression management for the mother. Although this policy option would require buy-in from residents, attendings and staff from all partnering clinics, establishing coordinated care at Harbor-UCLA would provide high quality health care and take advantage of existing Harbor-UCLA resources.

This policy option has low feasibility due to the complexity of scheduling biweekly integrative care meetings, increasing currently limited communication among resident clinics at Harbor-UCLA and hiring a care coordinator. However, this policy option is very effective because it goes beyond the warm referral by facilitating on-going communication about the mother’s PPD management. This policy option also requires a proficient understanding of PPD symptoms and management for residents to present and discuss cases during the integrative care meetings. This option has high care coordination as it resembles a patient-centered medical home.\(^\text{139}\)

\(^{136}\) Biweekly refers to meetings that occur every other week or twice a month comprised of resident physicians from all partnering resident clinics. This meeting is inspired by the USC-Eisner’s New Family Care Team meetings.


\(^{139}\) “A team based model of care lead by a personal physician who provides continuous and coordinated care throughout a patient’s lifetime to maximize health outcomes.”

“Patient-Centered Medical Home.”
Opportunity Costs of Policy Options

We also considered opportunity cost as an evaluative criteria, however, it was not pursued because projected results would not be grounded in validated data. Normally, cost would be considered in an evaluation like ours, but the aforementioned per-capita payment structure of reimbursing Harbor-UCLA for each patient served as opposed to each service provided, inhibits performing a cost analysis. However, we can project implications of each option to compare qualitative opportunity costs.

As shown in Figure 1, we project that the PCCC will refer about 123 mothers a year for further postpartum depression management. Although the follow-up management among each policy option will be different, at minimum we estimate Policy Option 2, Policy Option 3, Policy Option 4 and Policy Option 5 will add less than one minute to a well-baby check-up visit and less than two minutes of additional administrative work for the front desk staff.\textsuperscript{140} For a positive screen, an empathetic conversation will require less than five minutes of the physician’s time.\textsuperscript{141} The amount of time involved in referrals and management will depend on each policy option and each resident. Some options will require a couple of minutes to make a call and connect the mother to a resource, while others will require more time in management. Collectively, incorporating a PPD screening would translate to an additional 41 minutes of increased workload per resident per year, which breaks down to less than one additional minute of work for the resident per work day at the PCCC.\textsuperscript{142}

More complex policy options would require more time from physicians. Policy Option 4 requires PCCC physicians partner with resident clinics to provide management for mothers who screen positively for PPD. The amount of time required will vary among the different clinics. For instance, the average family medicine visit is 15 minutes, the average Ob/gyn visit is also 15 minutes, while the average psychiatric visit is sixty minutes.\textsuperscript{143} The projected 123 mothers who screen positively will be referred to these clinics and the additional workload will be shared

\textsuperscript{140} Expert Interview. February 19, 2014.
\textsuperscript{141} Olson et. al. “Brief Maternal Depression Screening.” 118-207.
\textsuperscript{142} Since we estimate that there will be approximately 123 positive screens in a given year and that response to a positive screen will take about 10 minutes, this will amount to 1,230 additional minutes per year of additional work. This total divided by 30 residents amounts to an added 41 minutes per resident per year dedicated to tallying, scoring, having empathetic conversations and providing referrals for positive PPD screens. Split among clinic days, which are weekly per resident, 41 minutes divided by 52 weeks results in less than a minute increase in time per work day.
\textsuperscript{143} Expert Interview. February 19, 2014.
Information et al., “Fact Sheet.”
among the three programs. Although we do not have definitive statistics, we expect the additional workload of a policy for partnering clinics, like Policy Option 4, would be minimal.

Furthermore, adding a mandatory biweekly care meeting like in Policy Option 5, would increase the amount of time required for participating clinics. This feature could impose upon the current level of care provided, since care meetings can take several hours and require several physicians to provide integrative care plans. Beyond the time required to have the meeting, it is often difficult to schedule around patient care responsibilities of physicians from different specialties. Additionally, there is very little unscheduled time built into residency training programs that could be used for this meeting.\footnote{Expert Interview. February 19, 2014.}

On the other hand, shifting resource allocation to screen for PPD can change the course of a person’s life. Postpartum depression intervention can prevent suicide, homicide, infanticide, and developmental set-backs.\footnote{“Bringing Light to Motherhood.”} Comparing the qualitative opportunity costs of not screening to those of screening, the resources required for policy options with moderate to high feasibility seem trivial compared to the potential life-altering outcomes.
Summary of Policy Analysis

The following matrix compares all of our policy options against the prioritized criteria. As discussed earlier the criteria priorities are as follows: feasibility of implementation, effectiveness of PPD management, level of resident PPD competency required and level of care coordination of the policy.

Table 2. Evaluation of Policy Options

<table>
<thead>
<tr>
<th></th>
<th>Feasibility of Implementation in the Short-Term</th>
<th>Effectiveness</th>
<th>Required Resident Competence</th>
<th>Level of Coordinated Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Status Quo</td>
<td>high feasibility</td>
<td>not effective</td>
<td>no understanding required</td>
<td>no coordination</td>
</tr>
<tr>
<td>2- Community Resource</td>
<td>high feasibility</td>
<td>effective</td>
<td>basic understanding required</td>
<td>no coordination</td>
</tr>
<tr>
<td>3-Internal Care Coordinator</td>
<td>moderate feasibility</td>
<td>effective</td>
<td>basic understanding required</td>
<td>low coordination</td>
</tr>
<tr>
<td>4-Residency Clinics</td>
<td>moderate feasibility</td>
<td>very effective</td>
<td>basic understanding required</td>
<td>high coordination</td>
</tr>
<tr>
<td>5- Biweekly Patient Care Meeting</td>
<td>low feasibility</td>
<td>very effective</td>
<td>proficient understanding required</td>
<td>high coordination</td>
</tr>
</tbody>
</table>

*Effectiveness, required resident competence, and level of coordinated care are contingent on feasibility because it is the first step in policy implementation. Therefore, feasibility is our top priority and differentiated in blue. For all brighter criteria, colors correspond to higher values- the brighter the color the better that option measures on that criterion.
Chapter 9
Recommendations and Conclusions
Based on our analysis of prioritized criteria, we identify PCCC level and Harbor-UCLA level policy recommendations. The PCCC level recommendation addresses immediate policy change that can be accomplished in the short-term at the clinic. The long-term recommendation represents more effective care for PPD but requires coordination at the Harbor-UCLA level.

Our policy questions focus on feasibly implementing postpartum depression screenings at the PCCC. Through our analysis, we conclude that it is feasible to implement a PPD screening, however, feasibility ranges depending on the amount of resources required for each policy option. Given the urgency of addressing postpartum depression in this high risk population and that PCCC residents support conducting PPD screenings, the status quo cannot be considered. Of the remaining policy options, only Policy Option 2 has a high feasibility of implementation. Policy Option 3, Policy Option 4 and Policy Option 5 all require hiring a care coordinator and incorporate varying degrees of interdisciplinary care, rendering them less feasible in the short-term. These options are not realistic within the current PCCC resources. Therefore, we recommend Policy Option 2, implementing screenings assessed by pediatric residents during well-baby check-ups with warm referrals when necessary to community resources that offer PPD management. We recommend this short-term policy option because it has high feasibility, it is effective, and it requires a basic level of resident PPD competency. Though this policy option provides no care coordination, it immediately addresses postpartum depression at the PCCC. We also recommend the PCCC pair the implementation of Policy Option 2 with data collection. Consistent and reliable data collection will allow the Pediatric Continuity Care Clinic to later evaluate the impact of policy implementation and will help set the stage for long-term change.

We discovered that the most effective management for PPD requires interdisciplinary coordinated care, however, to achieve this coordinated care, a trade-off occurs between feasibility and the level of coordination. Therefore, we consider a long-term policy option that would integrate care at Harbor-UCLA. In our analysis, policy options that have a high level of coordination have low to moderate feasibility of implementation. For the same reasons as stated above, we cannot consider Policy Option 1. Policy Option 2 and Policy Option 3 have no or low coordination, eliminating them from consideration in the long-term. Both Policy Option 4 and Policy Option 5 are considered very effective and require high care coordination. Although Policy Option 5 necessitates a higher level of resident knowledge compared to Policy Option 4, the additional resident knowledge gained through this option does not outweigh the higher
feasibility associated with Policy Option 4. Therefore, we recommend Policy Option 4 in the long-term. It implements a screening assessed by the pediatric residents during well-baby check-ups with a warm referral facilitated by the care coordinator to other Harbor-UCLA resident clinics. This policy option is very effective, requires a basic level of PPD resident competency, and has high care coordination, even though it is only moderately feasible in the short-term. While this option may not be currently attainable, we advocate that our client works toward this long-term recommendation.

Through our research, we determine that the Harbor-UCLA Pediatric Continuity Care Clinic should implement postpartum depression screenings during well-baby check-ups. Through incremental change, the PCCC can immediately help the high-risk population they serve and work toward a more comprehensive coordinated care model. Because pediatricians have unmatched access to the mother-child dyad, the Pediatric Continuity Care Clinic has a significant opportunity to improve the lifelong trajectory of both mother and child through early recognition and intervention of postpartum depression.
Appendix
Appendix A. Expert Interviews

Questions

1. Do you think it is important to screen for PPD? Why or why not?
2. What would be the ideal method of screening? What would be the ideal implementation of the screening?
3. What is the most effective way to diagnose PPD? What are some potential set-backs or challenges you anticipate in using this method to diagnose PPD?
4. If you were going to implement a screening of Postpartum Depression for mothers, how would you do it? Who would screen? And how would you ensure that mother's have resources available to them?
5. What is the most effective follow-up for a patient who is diagnosed with PPD? What are some potential set-backs?
6. Who do you think should be responsible for PPD screening? Why?
7. In your opinion is it feasible to screen for PPD during a well-baby check-up? Why or why not?
8. How often do you think a mother should be screened for PPD?
9. What are other screening tools that can be used to screen for PPD?

Expert Interview Dates

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Appendix B. Resident Survey Questions

1. (Circle One) Screening for postpartum depression is important.
   
   strongly disagree  disagree  neutral  agree  strongly agree

2. (Circle One) Recognizing postpartum depression is my responsibility
   
   strongly disagree  disagree  neutral  agree  strongly agree

3. (Circle all that apply) If you have previously recognized or diagnosed postpartum depression what are some of the barriers you encountered?
   
   If you have not previously recognized or diagnosed postpartum depression what are some of the barriers you anticipate you may encounter?
   
   I. Organizational barriers
      a. Inadequate time to provide counseling or education
      b. Appointment time too short for adequate history
      c. Patient’s insurance limited treatment options
      d. Mental health care professionals not affordable
      e. Unavailability of mental health care resources
      f. Poor reimbursement for treatment
      g. Difficult paperwork or authorization procedures
      h. Physician financial disincentives for mental health care referrals
      i. Physician barriers
         i. Incomplete training to diagnose or counsel
         ii. Incomplete knowledge of treatment for depression
         iii. Incomplete knowledge of DSM-IV diagnostic criteria
         iv. Lack of effective treatments
      j. Patient barriers
         i. Parent reluctant to see mental health professional
         ii. Parent reluctant to accept diagnosis
         iii. Medical problems of patient more pressing
         iv. Parent reluctant to begin antidepressant medication
      k. Other, (please specify) ___________________

4. (Circle One) Did you feel that these barriers were or may be (for those without previous experience with such a case)
   
   greatly limiting  somewhat limiting  or  not limiting at all?

5. (Circle One) Harbor- UCLA Medical Center should implement routine screenings for postpartum depression at well-child check-ups in the Continuity Care Clinic.
   
   strongly disagree  disagree  neutral  agree  strongly agree

6. (Circle One) Harbor-UCLA Pediatrics Residency Program should incorporate training for postpartum depression screening into their curriculum.
   
   strongly disagree  disagree  neutral  agree  strongly agree

7. True or False: The incidence of perinatal maternal mood & anxiety disorder is about 5%.
8. **True or False**: Two of the screening instruments for postpartum depression are the Edinburgh and the PHQ9.

9. **True or False**: Postpartum depression is reported in about 10% of fathers.

10. **True or False**: Postpartum depression has not been reported in mothers who adopt.

11. **True or False**: Psychotropic medications such as SSRIs are contraindicated in pregnant and nursing mothers.

12. (Circle One) Are you a **medical student, resident, attending or other**? If other, please list:

13. (Circle One) Have you participated in the Pediatric Continuity Clinic?
   - [ ] Yes
   - [ ] No

14. Have you attended Dr. Carol Berkowitz’ Grand Rounds on perinatal mood and anxiety disorders and the role of the pediatrician?
   - [ ] Yes
   - [ ] No
Appendix C. OSHPD Data for Harbor-UCLA’s Core Market

Zip codes represented in Harbor-UCLA’s Core Market:
90745, 90044, 90744, 90250, 90003, 90220, 90501, 90731, 90247, 90002, 90059, 90221, 90047, 90061, 90805, 90262, 90813, 90280, 90222, 90746, 90001, 90710, 90260, 90304, 90011, 90650, 90723, 90201, 90706, 90502, 90303, 90810, 90301, 90806, 90249, 90043, 90037
State:
- 14.0% @ 100% poverty level
- 32.7% @ 200% poverty level

Core Market:
- 25.0% @ 100% poverty level
- 50.0% @ 200% poverty level
Appendix D. LAMB Data for Harbor-UCLA’s Core Market

### Race/Ethnicity, Harbor UCLA Service Area, 2010 LAMB

<table>
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<th>Race/Ethnicity</th>
<th>Frequency</th>
<th>Percent (%)</th>
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</tr>
<tr>
<td>Hispanic</td>
<td>598</td>
<td>43.8</td>
</tr>
<tr>
<td>Black</td>
<td>410</td>
<td>30.0</td>
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<tr>
<td>A/PI</td>
<td>160</td>
<td>11.7</td>
</tr>
<tr>
<td>Native Am/Other/Unknown</td>
<td>58</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,367</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Educational Attainment, Harbor UCLA Service Area, 2010 LAMB

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School</td>
<td>404</td>
<td>30.3</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>421</td>
<td>31.5</td>
</tr>
<tr>
<td>More than High School</td>
<td>510</td>
<td>38.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,335</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Frequency Missing = 32

### Mothers Age at delivery, Harbor UCLA Service Area, 2010 LAMB

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20 years old</td>
<td>447</td>
<td>32.7</td>
</tr>
<tr>
<td>20-24 yrs old</td>
<td>258</td>
<td>18.9</td>
</tr>
<tr>
<td>25-34 yrs old</td>
<td>508</td>
<td>37.2</td>
</tr>
<tr>
<td>35+ yrs old</td>
<td>154</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,367</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Marital Status at Birth, Harbor UCLA Service Area, LAMB 2010

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>450</td>
<td>33.4</td>
</tr>
<tr>
<td>Separated or divorced</td>
<td>45</td>
<td>3.3</td>
</tr>
<tr>
<td>Widowed</td>
<td>8</td>
<td>0.6</td>
</tr>
<tr>
<td>Never married - living together</td>
<td>499</td>
<td>37.0</td>
</tr>
<tr>
<td>Never married - living apart</td>
<td>346</td>
<td>25.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,348</td>
<td>100.0</td>
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</table>

Frequency Missing = 19
### 2009 Annual Income, Harbor UCLA Service Area, LAMB 2010

<table>
<thead>
<tr>
<th>INCOME</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$20,000</td>
<td>551</td>
<td>52.7</td>
</tr>
<tr>
<td>$20,000-$39,999</td>
<td>247</td>
<td>23.6</td>
</tr>
<tr>
<td>$40,000-$59,999</td>
<td>95</td>
<td>9.1</td>
</tr>
<tr>
<td>$60,000-$99,999</td>
<td>90</td>
<td>8.6</td>
</tr>
<tr>
<td>$&gt;100,000</td>
<td>63</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,046</strong></td>
<td><strong>100.0</strong></td>
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Frequency Missing = 321

### Postpartum Checkup, Harbor UCLA Service Area, LAMB 2010

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>174</td>
<td>12.8</td>
</tr>
<tr>
<td>Yes</td>
<td>1,185</td>
<td>87.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,359</strong></td>
<td><strong>100.0</strong></td>
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</tbody>
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Frequency Missing = 8

### Well Baby Checkup, Harbor UCLA Service Area, LAMB 2010

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>37</td>
<td>2.8</td>
</tr>
<tr>
<td>Yes</td>
<td>1,308</td>
<td>97.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,345</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Frequency Missing = 22

### Provider Discussions for Women With Postpartum Health Checkups, Harbor UCLA Service Area, LAMB 2010*

<table>
<thead>
<tr>
<th>Topic</th>
<th>Frequency</th>
<th>Percent Discussing Topic (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Control</td>
<td>1,070</td>
<td>90.3</td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>916</td>
<td>77.3</td>
</tr>
<tr>
<td>Losing Weight Gained in Pregnancy</td>
<td>602</td>
<td>50.8</td>
</tr>
<tr>
<td>Anxiety</td>
<td>348</td>
<td>29.4</td>
</tr>
<tr>
<td>Depression</td>
<td>497</td>
<td>41.9</td>
</tr>
<tr>
<td>Baby’s Sleep Position</td>
<td>651</td>
<td>54.9</td>
</tr>
<tr>
<td>Domestic and Child Abuse</td>
<td>326</td>
<td>27.5</td>
</tr>
<tr>
<td>Postpartum Depression, Harbor UCLA Service Area, LAMB 2010</td>
<td>Frequency</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Not at all depressed</td>
<td>678</td>
<td>50.4</td>
</tr>
<tr>
<td>A little depressed</td>
<td>489</td>
<td>36.3</td>
</tr>
<tr>
<td>Moderately depressed</td>
<td>116</td>
<td>8.6</td>
</tr>
<tr>
<td>Very depressed</td>
<td>63</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,346</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Frequency Missing = 21

<table>
<thead>
<tr>
<th>Stressful Events in Pregnancy, Harbor UCLA Service Area, LAMB 2010*</th>
<th>Frequency</th>
<th>Percent Facing Event (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close Family Taken to Hospital</td>
<td>228</td>
<td>17.2</td>
</tr>
<tr>
<td>Separated/Divorced from Husband/Partner</td>
<td>143</td>
<td>10.8</td>
</tr>
<tr>
<td>Moved to New Address</td>
<td>401</td>
<td>30.0</td>
</tr>
<tr>
<td>Became Homeless</td>
<td>91</td>
<td>6.9</td>
</tr>
<tr>
<td>Husband/Partner Lost Job</td>
<td>239</td>
<td>18.1</td>
</tr>
<tr>
<td>Lost Job</td>
<td>164</td>
<td>12.4</td>
</tr>
<tr>
<td>Argued More than Usual with Husband/Partner</td>
<td>481</td>
<td>36.1</td>
</tr>
<tr>
<td>Could Not Pay Bills</td>
<td>337</td>
<td>25.4</td>
</tr>
<tr>
<td>In a Physical Fight</td>
<td>87</td>
<td>6.6</td>
</tr>
<tr>
<td>Husband/Partner/Mother Went to Jail</td>
<td>88</td>
<td>6.7</td>
</tr>
<tr>
<td>Someone Close Had Problems with Drinking/Drugs</td>
<td>148</td>
<td>11.2</td>
</tr>
<tr>
<td>Close Person Died</td>
<td>224</td>
<td>16.8</td>
</tr>
<tr>
<td>Car Accident</td>
<td>73</td>
<td>5.5</td>
</tr>
<tr>
<td>Experienced 0-3 Stressful Events in Pregnancy</td>
<td>1,024</td>
<td>80.6</td>
</tr>
<tr>
<td>Experienced 4+ Stress Events in Pregnancy</td>
<td>247</td>
<td>19.4</td>
</tr>
</tbody>
</table>

*Please note that the number of missing varied for each stressful event variable.*
Appendix E. Los Angeles County Perinatal Mental Health Task Force Perinatal Depression Informational Brochure

SPEAK UP WHEN YOU'RE DOWN

6 THINGS EVERY NEW MOM & MOM-TO-BE SHOULD KNOW ABOUT PERINATAL DEPRESSION

1. Perinatal depression is common. It is, in fact, the number one complication of pregnancy. In the US, 15% to 20% of new moms or about 1 million women each year experience perinatal mood and anxiety disorders, and some studies suggest the number may be even higher.

YOU ARE NOT ALONE. Perinatal depression can affect any woman regardless of age, income, culture, or education.

2. You may experience some of these symptoms:
   - Feelings of sadness, or mood swings:
   - Feeling empty and hopeless:
   - Difficulty concentrating:
   - Lack of interest in things you used to enjoy:
   - Changes in eating and sleeping habits:
   - Fatigue, weakness, or pain:
   - Excessive worry about your baby:
   - Thoughts of harming yourself or your baby:
   - Fearing that you can’t take care of your baby:
   - Feelings of guilt and inadequacy:
   - Difficulty accepting motherhood:
   - Irrational thinking: seeing or hearing things that aren’t there:

Some of the ways women describe their feelings include:

I want to cry all the time.
I feel like I don’t do anything right.
I feel like I’m on an emotional roller coaster.
I will never find happiness again.
I don’t think my baby likes me.
Everything feels like an effort.

3. Symptoms can appear at any time during pregnancy and up to the child’s first year.

Baby blues, a normal adjustment period after birth, usually last from 2 to 6 weeks. If you have any of the listed symptoms, they have surged the same or greater.

4. You did nothing to cause this. You are not a weak or bad person. You have a common, treatable illness. Research shows there are a variety of risk factors that may impact how you are feeling, including your medical history, how your body processes certain hormones, the level of stress you are experiencing, and how much help you have with your baby. What we do know is, THIS IS NOT YOUR FAULT.

5. The sooner you get treatment, the better. Recent studies show that your baby’s well-being and development are directly tied to your physical and emotional health. You deserve to be healthy, and your baby needs a healthy mom in order to thrive. Don’t wait to reach out for help. It is available.

6. There is help for you. There comes a time in every woman’s life when she needs help. Now is the time to reach out to a caring professional, who is knowledgeable about perinatal depression, and who can help you through this time of crisis. He or she can understand the pain you are experiencing and guide you on the road to recovery. Contact Postpartum Support International, 1.800.944.4773 or www.postpartum.net, for referrals and support near you.

Los Angeles County Perinatal Mental Health Task Force
Los Angeles County Children’s Mental Health Task Force

LOMHS.com

Published jointly by the Los Angeles County Children’s Mental Health Task Force and Los Angeles County Children’s Mental Health Task Force.

Los Angeles County Children’s Mental Health Task Force
Los Angeles County Children’s Mental Health Task Force

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Appendix F. PPD Screening Tools

PHQ-9

<table>
<thead>
<tr>
<th>PATIENT HEALTH QUESTIONNAIRE (PHQ-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAME:</strong> __________________________</td>
</tr>
<tr>
<td>Over the last 2 weeks, how often have you been bothered by any of the following problems? (use “✓” to indicate your answer)</td>
</tr>
<tr>
<td><strong>Not at all</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>1. Little interest or pleasure in doing things</td>
</tr>
<tr>
<td>2. Feeling down, depressed, or hopeless</td>
</tr>
<tr>
<td>3. Trouble falling or staying asleep, or sleeping too much</td>
</tr>
<tr>
<td>4. Feeling tired or having little energy</td>
</tr>
<tr>
<td>5. Poor appetite or overeating</td>
</tr>
<tr>
<td>6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down</td>
</tr>
<tr>
<td>7. Trouble concentrating on things, such as reading the newspaper or watching television</td>
</tr>
<tr>
<td>8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual</td>
</tr>
<tr>
<td>9. Thoughts that you would be better off dead, or of hurting yourself</td>
</tr>
<tr>
<td><strong>Total:</strong> __________________________</td>
</tr>
</tbody>
</table>

*(Healthcare professional: For interpretation of TOTAL please refer to accompanying scoring card.)*

| **10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?** |
|---|---|---|---|
| **Not difficult at all** | **Somewhat difficult** | **Very difficult** | **Extremely difficult** |

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PHQ-2

1. During the past month, have you often been bothered by feeling down, depressed, or hopeless?
2. During the past month, have you often been bothered by little interest or pleasure in doing things?

*Any ‘yes’ score is considered a positive screen.*
Edinburgh Postnatal Depression Scale

Name: ___________________________ Address: ___________________________
Your Date of Birth: ___________________________ Phone: ___________________________
Baby’s Date of Birth: ___________________________ Phone: ___________________________

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

Here is an example, already completed.

I have felt happy:
☐ Yes, all the time
☐ Yes, most of the time This would mean: “I have felt happy most of the time” during the past week.
☐ No, not very often Please complete the other questions in the same way.
☐ No, not at all

In the past 7 days:

1. I have been able to laugh and see the funny side of things
☐ As much as I always could
☐ Not quite so much now
☐ Definitely not so much now
☐ Not at all

2. I have looked forward with enjoyment to things
☐ As much as I ever did
☐ Rather less than I used to
☐ Definitely less than I used to
☐ Hardly at all

*3. I have blamed myself unnecessarily when things went wrong
☐ Yes, most of the time
☐ Yes, some of the time
☐ Not very often
☐ No, never

4. I have been anxious or worried for no good reason
☐ No, not at all
☐ Hardly ever
☐ Yes, sometimes
☐ Yes, very often

*5. I have felt scared or panicky for no very good reason
☐ Yes, quite a bit
☐ Yes, sometimes
☐ No, not much
☐ No, not at all

*6. Things have been getting on top of me
☐ Yes, most of the time I haven’t been able to cope at all
☐ Yes, sometimes I haven’t been coping as well as usual
☐ No, most of the time I have coped quite well
☐ No, I have been coping as well as ever

*7. I have been so unhappy that I have had difficulty sleeping
☐ Yes, most of the time
☐ Yes, sometimes
☐ Not very often
☐ No, not at all

*8. I have felt sad or miserable
☐ Yes, most of the time
☒ Yes, quite often
☐ Not very often
☐ No, not at all

*9. I have been so unhappy that I have been crying
☐ Yes, most of the time
☐ Yes, quite often
☒ Only occasionally
☐ No, never

*10. The thought of harming myself has occurred to me
☐ Yes, quite often
☐ Sometimes
☐ Hardly ever
☒ Never
Edinburgh Postnatal Depression Scale (EPDS)

Postpartum depression is the most common complication of childbearing. The 10-question Edinburgh Postnatal Depression Scale (EPDS) is a valuable and efficient way of identifying patients at risk for "perinatal" depression. The EPDS is easy to administer and has proven to be an effective screening tool.

Mothers who score above 13 are likely to be suffering from a depressive illness of varying severity. The EPDS score should not override clinical judgment. A careful clinical assessment should be carried out to confirm the diagnosis. The scale indicates how the mother has felt during the previous week. In doubtful cases it may be useful to repeat the tool after 2 weeks. The scale will not detect mothers with anxiety neuroses, phobias or personality disorders.

Women with postpartum depression need not feel alone. They may find useful information on the web sites of the National Women’s Health Information Center <www.chss.iup.edu/postpartum> and Depression after Delivery <www.depressionafterdelivery.com>.

### SCORING

**QUESTIONS 1, 2, & 4 (without an *)**

Are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.

**QUESTIONS 3, 5-10 (marked with an *)**

Are reverse scored, with the top box scored as a 3 and the bottom box scored as 0.

- **Maximum score:** 30
- **Possible Depression:** 10 or greater
- **Always look at item 10 (suicidal thoughts)**

Users may reproduce the scale without further permission, providing they respect copyright by quoting the names of the authors, the title, and the source of the paper in all reproduced copies.

### Instructions for using the Edinburgh Postnatal Depression Scale:

1. The mother is asked to check the response that comes closest to how she has been feeling in the previous 7 days.
2. All the items must be completed.
3. Care should be taken to avoid the possibility of the mother discussing her answers with others. (Answers come from the mother or pregnant woman.)
4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.

**EPDS-3**

1. I have blamed myself unnecessarily when things went wrong
2. I have been anxious or worried for no good reason
3. I have felt scared or panicky for no very good reason

Options for responses are:

- a. Yes, most of the time (3 pts)
- b. Yes, some of the time (2 pts)
- c. Not very often (1 pt)
- d. No, never (0 pts)

A total score of 3 or higher constitutes a positive screen.
Bibliography


Berkowitz, C. “Perinatal Mood and Anxiety Disorders: The Role of the Pediatrician.” Grand Rounds Lecture, Children’s Hospital Los Angeles, Los Angeles, CA, November 1, 2013.


Olson, et. al. “Primary Care Pediatricians’ Roles and Perceived Responsibilities in the Identification and Management of Maternal Depression.” Pediatrics 110, no. 6 (December 1, 2002): 1169–76.


