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Department of Public Health
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August 30, 2017

Steven T. James
House Clerk
State House Room 145
Boston, MA 02133

William F. Welch
Senate Clerk
State House Room 335
Boston, MA 02133

Dear Mr. Clerk,

Pursuant to Chapter 313 of the Acts of 2010, the Massachusetts Department of Public Health is pleased to issue a summary of Calendar Year 2016 activities related to screening for postpartum depression (PPD).

Sincerely,

Monica Bharel, MD, MPH
Commissioner
Department of Public Health

Cc: Representative James O'Day (PPD Legislative Commission Co-Chair)
Senator Joan Lovely (PPD Legislative Commission Co-Chair)

Charles D. Baker
Governor

Karyn Polito
Lieutenant Governor

Marylou Sudders
Secretary

Monica Bharel, MD, MPH
Commissioner

CY16 Summary of Activities Related to Screening for Postpartum Depression

August 2017

Massachusetts Department of Public Health

Legislative Mandate

The following report is hereby issued pursuant to Chapter 313 of the Acts of 2010 as follows:

The Department of Public Health "*shall issue regulations that require providers and carriers to annually submit data on screening for postpartum depression. Following the receipt of data, the commissioner of public health shall issue an annual summary of the activities related to screening for postpartum depression, including best practices and effective screening tools. The department shall annually file the summary with the commissioner of public health and the clerks of the house of representatives and the senate not later than June 30; provided, however, that the first report is due not later than June 30, 2011."*

Introduction

On August 19, 2010, Chapter 313 of the Acts of 2010, An Act Relative to Postpartum Depression, was signed into law. This legislation has two primary components: the establishment of a postpartum depression (PPD) Legislative Commission and a requirement that the Massachusetts Department of Public Health (DPH) promote a culture of awareness, de-stigmatization, and screening for perinatal depression.

Specifically, DPH is charged with:

- Developing standards for effective PPD screening;
- Making recommendations to health plans and health care providers for PPD screening data reporting;
- Issuing regulations that require health plans and health care providers to annually submit data on screening for postpartum depression; and
- Issuing an annual summary of the activities related to screening for postpartum depression including best practices and effective screening tools.

This report provides a summary of activities for Calendar Year 2016.

PPD Regulations - 105 CMR 271.000

An Act Relative to Postpartum Depression, Chapter 313 of the Acts of 2010 charged DPH to issue regulations that require carriers and health care providers to annually submit data on screening for PPD. Understanding statewide PPD screening patterns and outcomes through relevant data reporting to DPH is intended to improve the detection of this prevalent condition and facilitate treatment for mothers in need of help.

The PPD Regulations (105 CMR 271.000) were promulgated in December 2014 and require annual reporting by a provider that conducts or oversees screening for PPD, using a validated screening tool, during a routine clinical appointment in which medical services are provided to a woman who has given birth within the previous six months. The regulation also applies to a carrier that receives a claim for this PPD screening.

The Providers responsible for adhering to these regulations are OB-GYNs, Family Medicine Practitioners, and Advanced Practice Nurses including Nurse Midwives and Nurse Practitioners, and Physician Assistants, who practice in a family medicine/OBGYN setting.

Providers can report their PPD Screening data to DPH through an annual written report or through claims codes. Data collection began in CY2015. Providers are able to submit an annual written report to DPH by March 1 for the previous calendar year using the "Annual PPD Data Reporting Form" available on the DPH webpage dedicated to PPD at:
http://www.mass.gov/eohhs/gov/departments/dph/programs/family-health/postpartum-depression/ppd-regulations-on-screening-reporting-requirements.html

Alternatively, Providers are able to use the HCPCS code of S3005 (Performance Measurement, Evaluation of Patient Self-Assessment, Depression) with a diagnostic range Z39.2 (Routine Postpartum follow up, formerly ICD9 V24 - Screening for Postpartum Depression) and with a modifier as a mechanism for reporting PPD screening.

Servicing Provider	Modifier for use with a positive PPD screen	Modifier for use with a negative PPD screen
OB-GYNs, Family Medicine Practitioners, Advanced Practice Nurses including Nurse Midwifes and Nurse Practitioners, & Physician Assistants	U1	U2

Depending on the carrier, the service code is set to pay at zero or at $0.01. Carriers have been accepting this service code from the servicing providers identified above, and are reporting it directly to the All Payer Claims Database (APCD) at the Center for Health Information and Analysis (CHIA) as required under the PPD Regulations.

PPD Data Collected through Claims Codes & Linkage with APCD

Background: Chapter 313 of the Acts of 2010, An Act Relative to Postpartum Depression, called for submitting data on postpartum depression (PPD) screening to examine the frequency and scope of PPD among new mothers in Massachusetts. PPD defined as depression occurring within 12 months after giving birth, includes feelings of sadness, hopelessness and anhedonia—the loss of interest in previously pleasurable activities. PPD is an important public health issue with profound long-term consequences for mothers and families if left untreated, including impaired mother-infant bonding, delayed social and cognitive development in children, and increased risk of maternal suicide and infant death. It is recognized that greater than 50% of mothers with PPD are not identified and thus do not seek help from a health care or mental health professional.

Methodology: We linked the All Payer Claims Database (APCD) collected by the Center for Health Information and Analysis (CHIA) and the Massachusetts birth certificate data for calendar years 2014 and 2015. In order to prepare data for the linkage, we created a variable that identifies each unique delivery. Within the birth file, we used mother's first and last names, mother's date of birth, and date of delivery (month and year); in APCD files, we used the combination of Carrier Specific Unique Member ID, Payer ID, and service date (month and year). Once each unique delivery was identified within the birth and APCD files, we used an eight-step linkage algorithm to match APCD claims to mothers' delivery records. After the linkage was completed we assigned a new study ID to the linked datasets to create the final dataset. All valid linked records were combined into one dataset of linked deliveries and merged with the original APCD data to create a final linked dataset. Direct Patient Identifiers were removed from the final linked dataset (detailed linkage algorithm attached).

Results: During 2014 and 2015, there were 140,470 unique deliveries from the birth certificates, of which 119,686 (85.2%) were linked to an APCD claim. For the purpose of this analysis, we restricted data to January 2014 through June 2015 to allow women who gave birth during 2014 and 2015 to have up to 6 months postpartum an opportunity to be screened for PPD. During this period (January 2014 through June 2015), there are 89,289 deliveries linked to APCD. The number of women screened for PPD within 6 months after delivery increased steadily from December 2014 to June 2015 (Figure 1).

Out these the 89,289 deliveries during January 2014 through June 2015, 5,852 were screened for PPD and 297 had a positive screen. The proportion of women who were screened for PPD was higher among white non-Hispanic (8.4%) and American Indian (8.0%) compared to 5.5%, 3.1% and 3.0% among Asian, black non-Hispanic and Hispanic respectively. The proportion of PPD screening was higher among women who were covered by private insurance compared to those on public insurance (9.0% vs. 3.0%). A higher proportion of screening was seen among women with higher levels of education and the percentage of screening increased with education level (Table 1). The overall positive percentage was 9.2% in the first 6 months in 2015.

When we look at the results of screening, black non-Hispanic (6.9%) and Hispanic (6.8%) had higher positive proportion compared to white non-Hispanic (4.4%) and Asian (3.1%). Also, the proportion of positive screens was higher among women who were covered by public insurance compared to those on private insurance (6.4% vs. 4.2%). The proportion of positive screening increased with decreasing education level increased (Table 2).

FIGURE 1. NUMBER OF WOMEN SCREENED FOR PPD WITHIN 6 MONTHS AFTER DELIVERY: MASSACHUESTTS, JAN 2014-JUN 2015

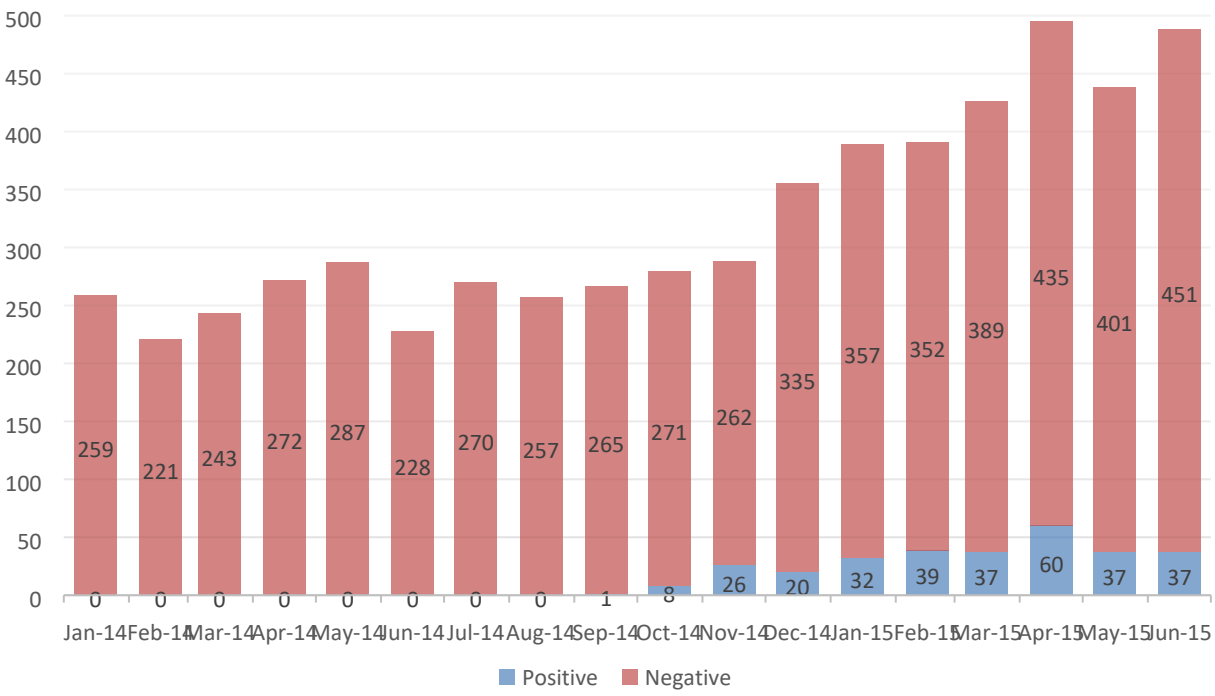


Table 1. Women's Characteristics by Status of PPD Screening, Jan 2014-Jun 2015, MA

	Screened			
	No		Yes	
	N	%	N	%
Race/Ethnicity*				
White NH	48949	91.6	4493	8.4
Black NH	8682	96.9	275	3.1
Hispanic	16426	97.0	501	3.0
Asian/PI NH	7653	94.5	448	5.5
American Indian	254	92.0	22	8.0
Other NH	470	93.1	35	6.9
Unknown	1003	92.8	78	7.2
Insurance*				
Private	48021	91.0	4769	9.0
Public	34382	97.0	1077	3.0
Education*				
<HS	8754	98.1	171	1.9
HS/GED	13926	96.3	534	3.7
Some College/Associate Degree	21325	93.7	1422	6.3
Bachelor Degree	19602	91.4	1834	8.6
Graduate Degrees	18382	91.2	1764	8.8
Preterm Birth*				
No	77095	93.3	5504	6.7
Yes	6183	94.7	347	5.3
Plurality				
Singleton	81676	93.4	5742	6.6
Multiple	1761	94.1	110	5.9
Parity*				
1	37477	93.3	2689	6.7
2	28664	92.9	2198	7.1
3+	17199	94.7	961	5.3
Married *				
No	29354	95.9	1241	4.1
Yes	54083	92.1	4611	7.9

* $P<0.01$

Table 2. Women's Characteristics by Results of PPD Screening, Jan 2014-Jun 2015, MA

	Screen Results			
	Negative		Positive	
	N	%	N	%
Race/Ethnicity				
White NH	4295	95.6	198	4.4
Black NH	256	93.1	19	6.9
Hispanic	467	93.2	34	6.8
Asian/PI NH	434	96.9	14	3.1
American Indian	21	95.5	1	4.5
Other NH	33	94.3	2	5.7
Unknown	75	96.2	3	3.8
Insurance*				
Private	4570	95.8	199	4.2
Public	1008	93.6	69	6.4
Education*				
<HS	153	89.5	18	10.5
HS/GED	489	91.6	45	8.4
Some College/Associate Degree	1342	94.4	80	5.6
Bachelor Degree	1768	96.4	66	3.6
Graduate Degrees	1708	96.8	56	3.2
Preterm Birth				
No	5255	95.5	249	4.5
Yes	325	93.7	22	6.3
Plurality				
Singleton	5473	95.3	269	4.7
Multiple	108	98.2	2	1.8
Parity ł				
1	2585	96.1	104	3.9
2	2084	94.8	114	5.2
3+	908	94.5	53	5.5
Married *				
No	1156	93.2	85	6.8
Yes	4425	96.0	186	4.0

* P<0.01
ł P<0.05

PPD Data Collected through Written Reports

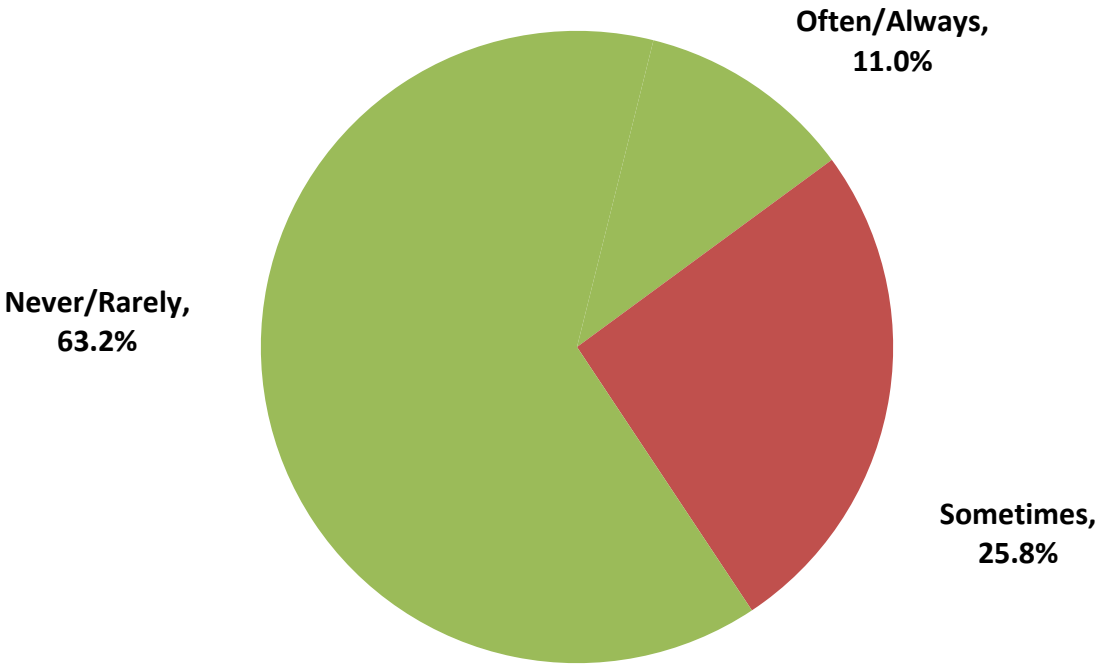
For calendar year 2016, 7 Annual PPD Data Reporting Forms were received. The results include:

- Five sites reporting using the Edinburgh Postnatal Depression Scale (EPDS) and three sites reported using the Patient Health Questionnaire -9 (PHQ-9) to screen women for PPD.
- There were 1,400 patients (85.8%) reported screened for PPD during 1,632 visits.
- Overall, 86 women (6.1%) screened positive for PPD, but there were variations by site ranging from 0% to 12.7%.
- One site had a PPD prevalence of ≥ 10% of the population screened and two sites had a PPD prevalence between 5-10% of the population screened.

Pregnancy Risk Assessment Monitoring System (PRAMS)

Since 2007, DPH has monitored the health of women and children in the Commonwealth with the Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS), an ongoing survey of new mothers. The survey asks a set of two questions related to the experience of postpartum depression (PPD). Based on the most recent data available (2013-2014), an estimated 11.0% of mothers in Massachusetts experience PPD symptoms always or often, 25.8% experience PPD symptoms sometimes, and 63.2% experience PPD symptoms rarely or never (Figure 1).

Figure 1. Frequency of self-reported postpartum depressive symptoms, MA PRAMS, 2013-2014



PRAMS data from 2013-2014 suggests some Massachusetts mothers are more likely to report experiencing PPD symptoms. Compared to White non-Hispanic mothers (7.9%), Black non-Hispanic mothers (19.8%), Asian non-Hispanic mothers (16.7%), and Hispanic mothers (13.4%) were all more likely to experience PPD symptoms often or always. Similarly, Mothers with less than college education and mothers who are not married have higher prevalence of PPD symptoms compared to mothers who completed college and compared to mothers who are married.

Early Intervention Partnerships Program (EIPP) – Social Connectedness & PPD Screening

The Massachusetts Early Intervention Partnerships Program (EIPP) is a high-risk maternal and newborn screening, assessment, and service system. Implemented in 2003 after a one year planning process by an Expert Working Group, EIPP provides services to women with an identified maternal or infant risk factor and links them to services to improve health and developmental outcomes. Through a variety of interventions and strategies to foster continuity of care, EIPP works to address the complex physical, emotional, and environmental health needs of pregnant and postpartum women.

EIPP provides home visiting and group services to over 400 families annually by a maternal child health (MCH) team that includes a MCH nurse, a mental health clinical professional, and a community health worker (CHW). EIPP provides maternal and infant health assessment and monitoring; health education and guidance; screening and appropriate referrals; and linkage with WIC and other resources. Programmatic performance measures and maternal and infant outcomes range from improved management of alcohol, tobacco and other drugs, improved parenting skills, improved emotional health, increased rates of exclusive breastfeeding, increased attendance at postpartum visits, and improved nutrition.

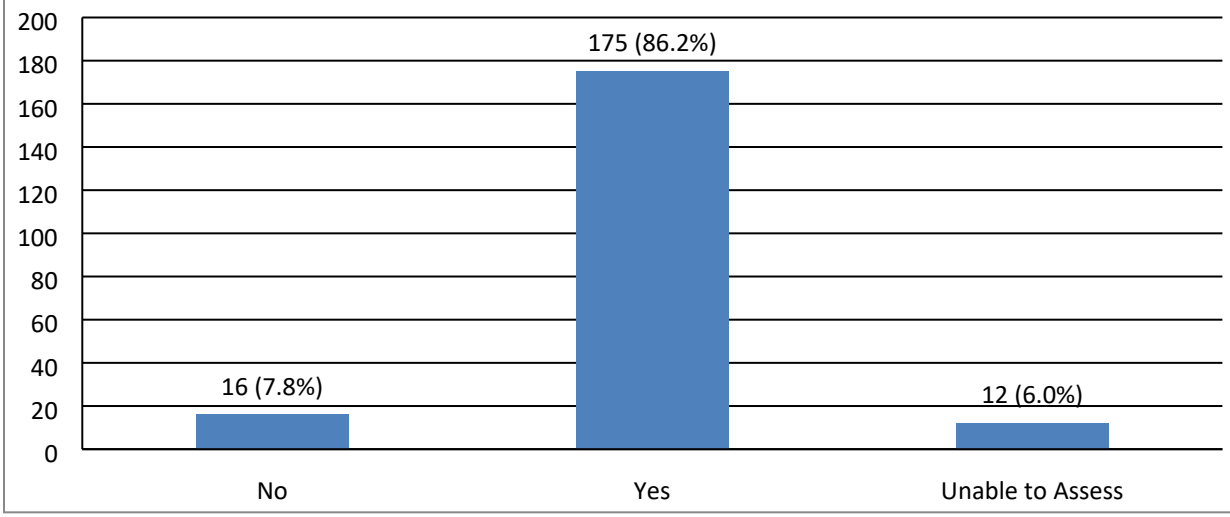
Data on the 434 EIPP Participants enrolled during CY16 include the following select eligibility criteria (mothers may meet more than one):

Percent	Eligibility Criteria
84.8%	High level of stress
55.8%	Inadequate food or clothing
50.9%	History of depression including postpartum depression
34.8%	Homelessness or housing instability
18.0%	Tobacco use
11.5%	Substance abuse in the home
2.5%	Violence in the home

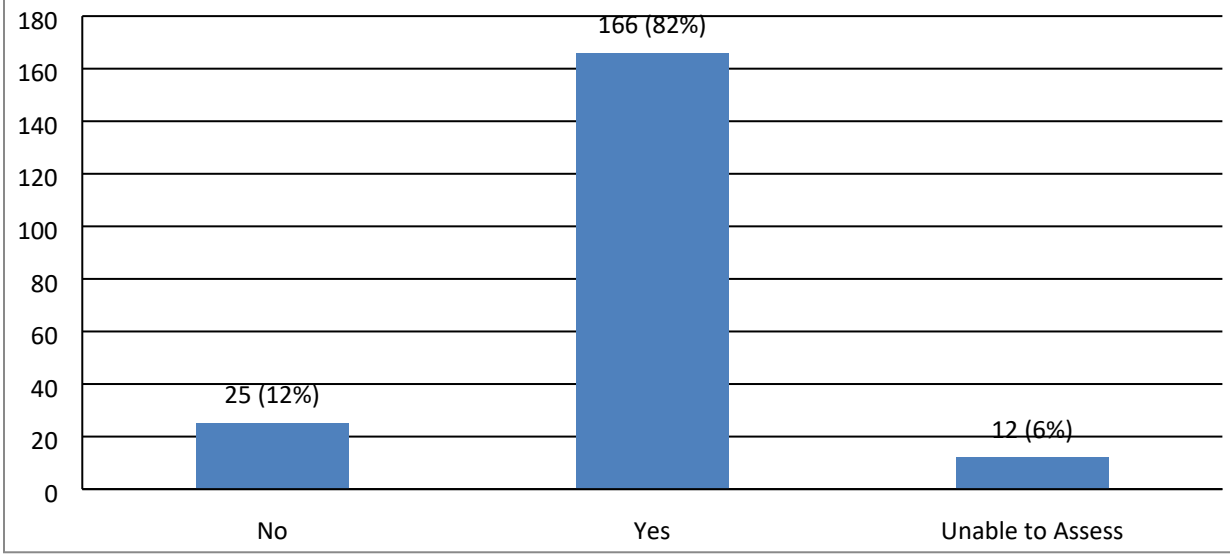
At intake and at key stages of program engagement, all EIPP participants receive a Comprehensive Health Assessment (CHA) that assesses the social, emotional and physical well-being of the pregnant woman, mother and infant in the context of their family. This CHA includes both a Social Connectedness utilizing a three question survey and a PPD screen utilizing the Edinburgh Postnatal Depression Scale (EPDS).

In calendar year 2016, the results of a Social Connectedness Screen and a PPD Screen at 2 months postpartum are below:

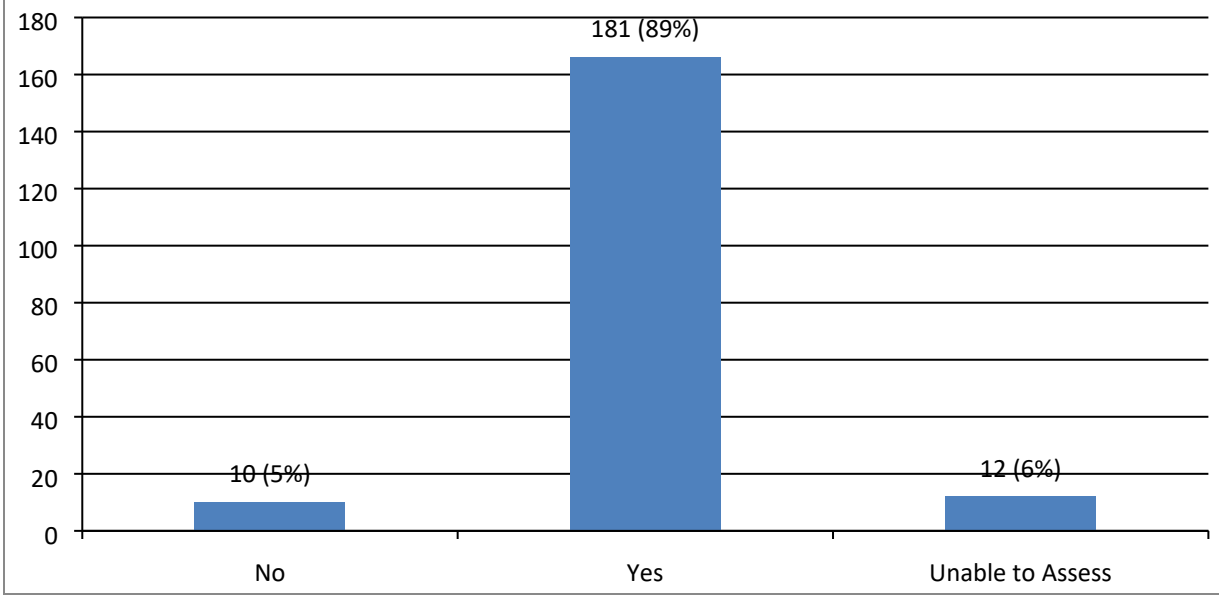
Two Month Postpartum Social Connectedness Screen Q1: Do you feel that you are getting the support you need from others? (N=203)



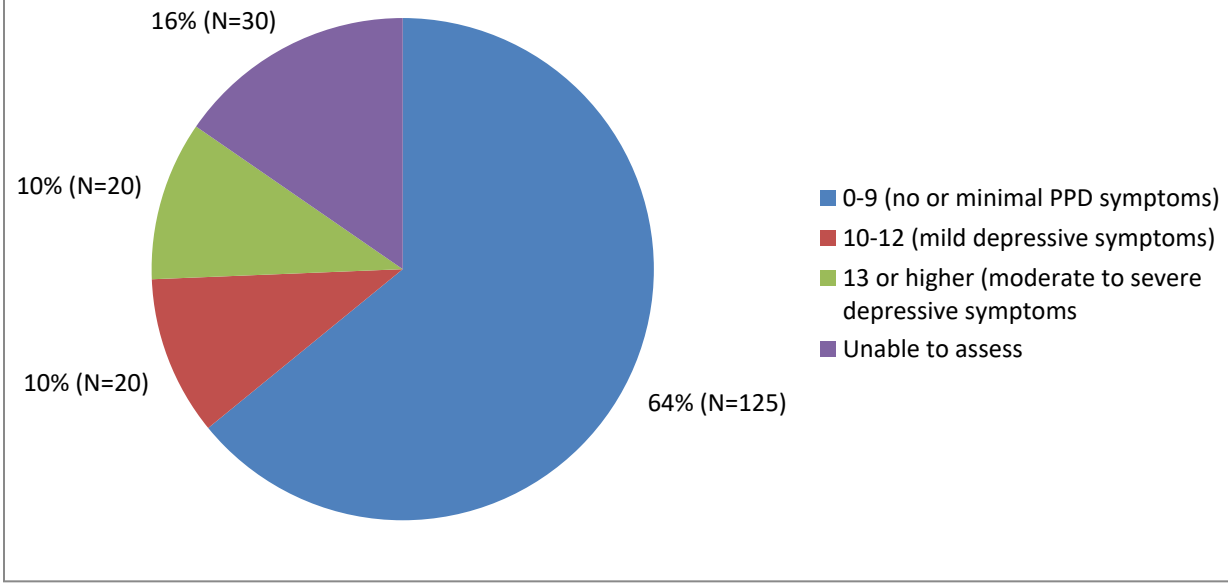
Two Month Postpartum Social Connectedness Screen Q2: Do you have someone to call when you need someone to care for the baby? (N=203)



Two Month Postpartum Social Connectedness Screen Q3: Do you have someone you can count on to listen to you when you need to talk? (N=203)



Score Results of a EPDS Screen conducted at 2 Months Postpartum on EIPP Participants (N=203)



Mothers who screen positive for depression are then supported in accessing mental health services including counseling and support groups. In 2016, 77.93% of the EIPP Participants identified with depression and/or a mental health disorder were connected to mental health services. Barriers to accessing mental health services included language, stigma, transportation, and lack of insurance for undocumented women.

Massachusetts Home Visiting Initiative (MHVI)

Since the spring of 2010, DPH has been implementing the Maternal, Infant, and Early Childhood Home Visiting Program, a federally funded program for states, tribes, and territories to develop and implement one or more evidence-based maternal, infant, and early childhood home visiting model(s). Massachusetts' program is known as the MA Home Visiting Initiative (MHVI).

In April 2016, DPH was awarded $6.8 million in federal funds, marking the sixth year of funding. MHVI funds evidenced-based home visiting programs including Parents as Teachers (PAT), Early Head Start, and Healthy Families America. Depression screening is conducted with all program participants at key stages of program involvement and data is analyzed for all 23 home visiting programs on a quarterly basis and with the annual report to the federal funding agency, HRSA, each October. Screens are conducted within two months of enrollment, within two months of delivery, and at 6-month intervals. In federal FY16, 86% of expected screenings for depressive symptoms were completed within the appropriate time frame.

Welcome Family

Welcome Family is a program that offers a universal, one-time nurse home visit to mothers with newborns and their families, regardless of age, income, risk or other criteria in five Massachusetts communities. The goal of Welcome Family is to promote optimal maternal and infant physical and mental well-being and provide an entry point into a system of care for families with newborns in Massachusetts. The visit is conducted within 8 weeks postpartum, lasts approximately 90 minutes, and is conducted by a nurse with maternal and child health experience. All services are provided at no cost to families. The primary focus of Welcome Family is the mother and her newborn, but any caregiver is eligible for a visit, including fathers, grandparents, adoptive, and foster parents.

During the visit, the Welcome Family nurse assesses the following six areas. Each area includes screening, brief intervention, education, and referrals to services as needed.

- Maternal emotional health, including a PPD screen
- Maternal and infant nutrition, including breastfeeding
- Unmet health needs
- Interpersonal violence
- Substance use, including tobacco
- Maternal and infant clinical assessment

The nurse also spends time addressing the family's questions or concerns. Participants receive a Welcome Family bag with gifts and information to support mom and baby. In addition, participants receive a follow-up phone call to inquire about the outcome of the referrals made during the visit and assess the need for any additional referrals.

Marketing and outreach activities are conducted at the community level to identify and recruit mothers with newborns. Relationships are fostered with potential referral sources in the community including birth hospitals, OB-GYNs, midwives, pediatricians, and WIC.

Welcome Family is available to families living or giving birth in five communities: Fall River, Boston, Lowell, Holyoke, and Springfield. During 2016, 1,596 PPD depression screens were offered during Welcome Family visits. There were 155 positive PPD screens, of which 86 received a referral to services.

> *"I had some concerns about postpartum depression and being able to talk to the nurse about it helped a lot. I had never had postpartum depression previously so it was helpful to learn more about it from the nurse."*

Additional Activities and Products

In CY16, additional activities were conducted and products were developed with the goal of supporting health care providers and health plans as DPH collaboratively implements the PPD Legislation.

1. In partnership with the PPD Legislative Commission subcommittee focused on community resources, DPH began the process for updating the web page dedicated to PPD on the DPH website with additional resources. It can be viewed at: http://www.mass.gov/eohhs/gov/departments/dph/programs/family-health/postpartum-depression

2. At the request of the Department of Children and Families (DCF), DPH has drafted a training curriculum on PPD specifically for child welfare workers. This training will be offered to DCF social workers at regional offices across the state during CY17.

3. DPH secured funding to reproduce the brochure entitled "Being a Mother is Hard Job." This brochure is available for free to Massachusetts residents and health care providers and can be ordered through the Massachusetts Health Promotion Clearinghouse at http://massclearinghouse.ehs.state.ma.us/category/CHILD.html

4. On Friday April 8, 2016, DPH staff conducted a workshop entitled "Both Sides Now: Enhancing the System of Care for Social and Emotional Wellness of Infants and Caregivers in Massachusetts" at the annual Association of Maternal Child Health Programs (AMCHP) conference held in Washington, DC. Information on the PPD Regulations was shared as part of this presentation.

5. DPH secured funding to assess, define, standardize and evaluate EIPP over the next several years. DPH solicited bids for a qualified vendor during the spring of 2016. The contract was awarded to Judge Baker Children's Services with a start date of July 1, 2016.

6. DPH participated in the quarterly PPD Legislative Commission Meetings.

7. DPH continued with an ongoing evaluation process to assess the program effectiveness of the programs funded under MHVI including Welcome Family.

Planned Next Steps

During the next calendar year, DPH plans to:

1. Work with the Department of Corrections on implementing the *Act to Prevent Shackling and Promote Safe Pregnancies for Female Inmates* signed into law in 2014 which includes a provision requiring PPD screening.

2. Offer and conduct training to DCF Social Workers on PPD and the impact of infant development at regional offices across the state.

3. Continue to update and make improvements to the PPD page on the DPH website in partnership with the PPD Legislative Commission subcommittee focused on community resources.

4. Continue to provide training and technical assistance to providers and carriers on the PPD Regulations requiring annual reporting of data on screening for PPD.

5. Continue to work with the All Payers Claim Database (APCD) at Center for Health Information and Analysis (CHIA) to collect the specific data elements from insurance claims with the service code S3005 attached and support the mechanism for CHIA to share this PPD Screening data with DPH who can then analyze and report to the Legislature as required under the PPD Legislation.

6. Continue to participate in the quarterly PPD Legislative Commission Meetings.

7. Continue to manage current EIPP contracts, ensure the provision of ongoing training, conduct periodic site visits with approved vendors to ensure program fidelity, and evaluate program effectiveness in identification of need and referral into services.

8. Continue Welcome Family service provision to ensure ongoing training, conduct periodic site visits with approved vendors to ensure program fidelity, and evaluate program effectiveness in identification of need and referral to services.