DPH Legislative Report



The Commonwealth of Massachusetts Executive Office of Health and Human Services Department of Public Health 250 Washington Street, Boston, MA 02108-4619

MAURA T. HEALEY Governor KIMBERLEY DRISCOLL Lieutenant Governor KATHLEEN E. WALSH Secretary ROBERT GOLDSTEIN, MD, PhD

Commissioner

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January 29th, 2024

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

Michael D. Hurley Senate Clerk State House Room 335 Boston, MA 02133

Dear Mr. Clerk,

Pursuant to Chapter 313 of the Acts of 2010, please find enclosed a report from the Department of Public Health entitled "CY21 Summary of Activities related to Screening for Postpartum Depression."

Sincerely,

Robert Goldstein, MD, PhD Commissioner Department of Public Health

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MAURA T. HEALEY GOVERNOR

KIMBERLEY DRISCOLL LIEUTENANT GOVERNOR



KATHLEEN E. WALSH SECRETARY

ROBERT GOLDSTEIN, MD, PhD COMMISSIONER

CY21 Summary of Activities Related to Screening for Postpartum Depression

December 2023

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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."

Executive Summary

About one in eight American birthing parents experiences depressive symptoms after delivery. Untreated postpartum depression (PPD) has negative consequences for both children and birthing parents. To promote the health and well-being of birthing parents, children, and family, on August 19, 2010, Chapter 313 of the Acts of 2010, *An Act Relative to Postpartum Depression*, was signed into law in Massachusetts. Pursuant to this law, a PPD Special Legislative Commission was established, and the PPD Regulations (105 CMR 271.000) were promulgated in December 2014 requiring data reporting by both carriers and providers for routine clinical appointments in which medical services are provided to a person who has given birth within the previous six months.

To further improve PPD screening data reporting and to investigate the status of perinatal mental health and its impacts on birthing parents and their children, the Massachusetts Department of Public Health adopted depressive symptom questions in the Pregnancy Risk Assessment Monitoring System (PRAMS) in FY11 and starting in FY14, funded PPD screening at community health centers and home visiting programs serving pregnant and parenting families.

Note on Language Used in this Report

The Massachusetts Department of Public Health recognizes that families come in many different forms. A person may become a mother in many ways, including by giving birth, adopting a child, or co-parenting a child with someone else. On the other hand, not everyone who becomes pregnant is a mother - for example, someone who carries a child as a surrogate may not see herself as the child's mother. A non-binary or transgender person who carries a child may also not use the term "mother" to describe themselves.

This report is about experiences related to pregnancy, not about the experiences of all people who may be mothers. For this reason, the terms "pregnant person" and "birthing parent" are used to talk about people affected by postpartum depression. The term "second parent" or "support parent" is used to talk about the people who may be supporting the pregnant person, whether that person is a father, a mother who is not carrying the child, or another adult who is co-parenting with the pregnant person. And when citing specific research and claims codes, the terms used in the data analysis is used.

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Introduction

About one in eight American mothers experienced depressive symptoms after delivery in 2018.¹ Untreated postpartum depression (PPD) has negative consequences for both children and birth parents. Children born to individuals with PPD are more likely to have poor cognitive functioning, behavioral inhibition, emotional maladjustment externalizing disorders, or psychiatric and medical disorders.²⁻⁹ Furthermore, individuals with PPD were more likely to have weight problems, alcohol and illicit drug use, social relationship problems, breastfeeding problems, or persistent depression.¹⁰⁻¹⁵ A 2017 study of births in the United States further estimated that untreated mood and anxiety disorders in birth parents cost a total of \$14 billion from conception to 5 years postpartum, with an average of \$31,800 per mother-infant dyad.¹⁶

To promote the health and well-being of birthing parents, children, and families, 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: (1) establishing a postpartum depression (PPD) Legislative Commission and (2) requiring that the Massachusetts Department of Public Health (DPH) promote a culture of awareness, de-stigmatization, and screening for postpartum 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.

A legislative requirement outlined in Chapter 313 of the Acts of 2010, *An Act Relative to Postpartum Depression*, is the implementation of PPD Screening Regulations, which requires providers to report their PPD screening data through the submission of service codes to the All Payors Claims Database (APCD). Due to challenges in accessing the APCD data from the Center for Health Information and Analysis (CHIA) and linking it to the birth data from Vital Records, there have been considerable delays in meeting this annual reporting component. This report provides a summary of activities for calendar year 2021, except for data from the Center for Health Information & Analysis (CHIA) where the most recent data is from 2020.

Report Body

The Massachusetts Department of Public Health (DPH) collects postpartum depression (PPD) data and funds several programs in PPD service provision. Below is a summary of the PPD data collected and activities conducted in calendar year 2021 (CY21).

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. This data reporting is intended to help DPH understand statewide PPD screening patterns and outcomes, to improve the detection of this prevalent condition, and ultimately facilitate treatment for birthing parents 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 person who has given birth within the previous six months. The regulation also applies to a carrier that receives a claim for this PPD screening.

Provider Data

Providers responsible for adhering to these regulations are obstetrician-gynecologists (OB-GYNs), Family Medicine Practitioners, Advanced Practice Nurses (including Nurse Midwives and Nurse Practitioners), and Physician Assistants, who practice in a family medicine or OB-GYN setting.

Data collection from providers began in calendar year 2015. Providers may report their PPD Screening data to DPH in one of two ways:

- 1. Providers can 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 <u>DPH web</u> page dedicated to PPD.
- Alternatively, providers may use the Healthcare Common Procedure Coding System (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 (see below).

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	U1	U2
Practitioners, & Physician Assistants		

Depending on the private carrier, the service code is set to pay at \$0.00 or at \$0.01. Private carriers have been accepting this service code from the servicing providers identified above and are reporting it directly to the <u>All Payer Claims Database (APCD)</u> at the Massachusetts <u>Center</u> for Health Information & Analysis (CHIA), as required under PPD Regulations.

Effective May 16, 2016, <u>MassHealth</u> began paying perinatal care providers for the administration of standardized depression screening during pregnancy and the postpartum period utilizing the above HCPCS code.

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 submission of data on postpartum depression (PPD) screening to examine the frequency and scope of PPD among new mothers in Massachusetts. PPD is defined as depression occurring within 12 months after giving birth, and 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 birthing people, infants, 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. ¹⁷ It is widely recognized that greater than 50% of mothers with PPD are not identified and thus cannot seek help from a health care or mental health professional. ¹⁸

Methodology: The Public Health Data Warehouse (PHD) was initially created via Chapter 55 of the Acts of 2015 as amended by Chapter 133 of the Acts of 2016 and furthered by Chapter 111 Section 237 of the General Laws in 2017. It provides access to timely, linkable, longitudinal data from across state and local government agencies to enable analysis of priority population health trends. The PHD is a nationally recognized innovation, proven as an effective tool for accelerating data analysis and dissemination of actionable information to guide the Commonwealth's response to priority public health issues, including maternal and child health disparities, substance use, COVID-19, and the effects of climate change on health. Analyses from the PHD are used to inform policies and programs to reduce morbidity and mortality and keep residents healthy. All analyses are guided by a health and racial equity frame that acknowledges the differential impacts among historically marginalized communities and supports the mission of DPH to promote wellness and health equity for all people in the Commonwealth.

To build the PHD, most datasets are linked at the individual level to the All-Payer Claims Database (APCD), which serves as the spine for linking individual information across datasets. This linkage is accomplished using the following fields: first name, last name, date of birth, sex, social security number, and zip code of residence. After each dataset is linked, the personal identifiers (except for the zip codes and dates) are dropped to protect privacy. Lastly, event dates are masked so that this information is retained for analytic purposes while still maintaining the privacy of the data. This linkage process was developed with the Center for Health Information and Analysis' (CHIA) support. It is only through their work developing the Master Patient Index (which assigns a single unique surrogate key to each person, regardless of how many different insurance carriers have submitted data about that person) that the development of the APCD spine was possible.

Note about language: Please note that terms "pregnant person" and "birthing parent" are used throughout this report to talk about people affected by postpartum depression. However, when we are citing research and the use of claims code, we use the terms used in the data analysis.

Results: During the time period of January 2020 through December 2020 (the most recent data available for analysis of PPD by six months post-delivery), there are 63,512 unique deliveries from birth certificates, of which 46,171 (72.7%) were linked to an APCD claim. The numbers of women screened for PPD within 6 months after delivery ranged from 467 in February 2020 to 800 in January 2020 (Figure 1). During the time period of January 2020 through December 2020, 7,570 (16.4%) out of 46,171 deliveries were screened for PPD and 1,047 (13.8%) had a positive screen.

The proportion of women who were screened for PPD was higher among Asian/Pacific Islander non-Hispanic (21.4%) and American Indian or those who identified as "Other" non-Hispanic (17.3%) compared to 16.6%, 15.9% and 14.9% among White non-Hispanic, Hispanic and Black non-Hispanic, respectively. The proportion of PPD screening was higher among deliveries with Medicaid compared to Other¹ deliveries (17.8% vs. 14.3%). A higher proportion of screening was seen among women with lower levels of education and the highest percentage of screening was observed among women with High School degree or GED (16.9%) and No High School degree (16.8%, Table 1 in Appendix).

When looking at the results of screening, Hispanic individuals (17.7%) had a higher positive proportion compared to White non-Hispanic (12.4%), Black non-Hispanic (14.4%), American Indian or "Other" non-Hispanic (15.7%), and Asian/Pacific Islander non-Hispanic (11.3%) women. The positive proportion was higher among women who were covered by Medicaid than others² (15.9% vs. 10.0%). The positive percentage of screening decreased while women's education level increased, except for women who had graduate degrees – they had lower

¹ Other includes people with private insurance, military insurance and those with no insurance.

²Others include people with private insurance, military insurance and those with no insurance.

positive proportions than women with no college education but higher positive proportion than women who only received undergraduate education (Table 2 in Appendix).

PPD Screening Data Collected through Written Reports

For calendar year 2021, two Annual PPD Screening Data Reporting Forms were received from medical practices. Results include:

- The practices reported screening 898 (93.6%) of 841 postpartum patients seen.
- One practice reported using the Edinburgh Postnatal Depression Screen (EPDS) and the other practice reported using the Patient Health Questionnaire – 9 (PHQ-9) to screen for PPD.
- Overall, 52 postpartum individuals (5.8%) screened positive for PPD

PPD Screening Programs

The Fiscal Year (FY) 2021 budget included language requiring DPH to continue PPD screening programs at Community Health Centers (CHC) at four sites across the Commonwealth. A procurement waiver was granted, and the contracts were re-established. Funding for these contracts totaled \$300,000, distributed evenly across all four sites. This funding allowed these CHCs to continue to employ part time Community Health Workers (CHWs) to assist with PPD screening and referral activities. The four CHCs included: Family Health Center in Worcester, Holyoke Health Center, North Shore Community Health in Salem, and the Lynn Community Health Center.

The CHCs are required to submit PPD screening data on a quarterly basis to DPH, inclusive of all dates during which services were provided. Reporting data collected from the CHCs indicated a continued decrease in the number of people physically seen at their site due to the COVID-19 pandemic. Families reported fear of leaving their homes due to the COVID-19 risk exposures, especially while pregnant. Telehealth visits were offered with patients responding well to the follow up, however, not all patients have internet access. As a result, while the overall number of people who received a PPD screening while pregnant increased, the percentage of pregnant people screened compared to the number of pregnant people serviced decreased. The following is a summary of the data received from all four sites:

- CHCs reported 1,777 face-to-face encounters (including telehealth) with pregnant individuals during clinical visits, with 1,191 (67.0%) receiving a PPD screen.
- CHCs reported 1,210 face-to-face encounters with postpartum individuals during clinical visits, with 1,078 (89.1%) receiving a PPD screen.
 - Of the 1,078 postpartum individuals who received a PPD screen, 22 (2.0%) scored either a 10, 11 or 12 on the Edinburgh Postnatal Depression Scale (EPDS) or 1 9 on the Patient Health Questionnaire (PHQ-9), indicating mild depressive symptoms.

- Of the 1,078 postpartum individuals who received a PPD screen, 31 (2.9%) scored either a 13 or above on the <u>EPDS</u> or 10 or above on the <u>PHQ-9</u>, indicating moderate to severe depressive symptoms.
- CHCs reported that their CHW provided 2,463 face-to-face encounters (including telehealth visits) with a parent.
- CHCs reported 7,032 indirect/collateral contacts, including phone calls, made on behalf
 of the parents serviced by the program, including but not limited to: searches for basic
 need items, calls to providers to determine availability versus a wait list for services, and
 referral screens for eligibility with community-based organizations.
- CHCs reported 1,652 referrals initiated with 1,375 (83.2%) referrals completed.

"I have a patient who came to prenatal care late.....I met (with) her several times, referred (her) to food pantry, help for transportation, and guided her how to get the bus to go to supermarket....I referred her to breastfeeding/Baby Cafe for support, and I talked with her and encouraged her to practice breathing techniques every day to help her relaxation, and fresh her mind.....I gave (her a) Cribette, and referred (her) to Injury Prevention for car seat. Now, she is ready to have baby soon. She stated she has all her supports, knowledges, confidences and (she) will do good breastfeeding and taking care of her baby. I will be her doula in hospital with her when she is in labor due she doesn't have any family member here." – Community Health Worker

Early Intervention Parenting Partnerships

DPH's <u>Early Intervention Parenting Partnerships (EIPP)</u> is a home visiting program for expectant parents and families with infants who are high need due to practical barriers (e.g., low financial resources, housing instability), emotional and/or behavioral health challenges (e.g., depression, substance use), or other stressors (e.g., immigration-related stress). The goals of EIPP are to:

- Connect families with local resources;
- Provide and build families' social support;
- Appropriately engage families in health care systems;
- Provide parenting education;
- Promote positive parent-child attachment and healthy child development; and
- Support families experiencing multiple stressors to prevent child social and emotional delays, and link with Early Intervention (EI) services where appropriate.

EIPP provides home visiting and group services to almost 300 families annually by a maternalchild health (MCH) team that includes a MCH nurse, a mental health clinical professional, and a community health worker (CHW). Additional supports are provided by a lactation consultant and nutritionist as requested by participants. EIPP provides parental and infant health assessment and monitoring, health education and guidance, screening and appropriate referrals, and linkage with the <u>Women, Infants & Children (WIC) Program</u> and other resources. Programmatic performance measures and parental and infant outcomes range from improved management of alcohol, tobacco and other drug use, improved parenting skills, improved emotional health, increased rates of exclusive breastfeeding, increased attendance at postpartum visits, and improved nutrition.

Data on the 278 EIPP Participants enrolled during CY21 include the following eligibility criteria (participants may meet more than one):

Percent of Participants	Eligibility Criteria
87.8%	High level of stress
63.7%	Inadequate food or clothing
60.1%	History of depression including postpartum depression
30.6%	Homelessness or housing instability
18.7%	Current High-Risk Pregnancy
14%	Less than a 10 th grade education
13.3%	Tobacco use
11.5%	Substance abuse in the home
5.8%	Violence in the home

At enrollment and at other key stages of program engagement, all EIPP participants receive a Comprehensive Health Assessment (CHA) that assesses the social, emotional, and physical wellbeing of the participant and infant in the context of their family. This CHA includes both a Social Connectedness screen utilizing a three-question survey and a PPD screen, utilizing the <u>Edinburgh Postnatal Depression Scale (EPDS)</u>.

In CY21, 174 participants received the Social Connectedness screening, utilizing a screening tool at 2 months postpartum.

- Twenty-one participants (12.1%) indicated that they felt they were not getting the support they needed from others.
- Thirty-one participants (17.8%) indicated that they did not have someone to call when they needed someone to care for their baby.
- Five participants (2.9%) indicated they did not have someone they could count on to listen to them when they needed to talk.

In addition, 113 PPD screens were conducted with EIPP participants at 2 months postpartum.

- Eighty participants (70.8%) received a score below 9, indicating that they were not experiencing depressive symptoms.
- Thirteen participants (11.5%) received a score between 10 12, indicating mild depressive symptoms.
- Twenty participants (17.7%) reported moderate or high depressive symptoms.

Participants who screen positive for depression are then supported in accessing mental health services including counseling, psychiatric treatment, and support groups. In 2021, 49 EIPP Participants were referred to mental health counseling services and 32 enrolled in services. In addition, 20 EIPP Participants were referred to support group services and 6 enrolled. The most significant barrier to accessing services continued to be the COVID-19 pandemic since many participants were frightened to leave their homes and telehealth services as well as internet access were limited. Additional barriers to accessing mental health services in a timely manner included language, stigma, transportation, and lack of insurance for participants who were undocumented.

Massachusetts Maternal, Infant and Early Childhood Home Visiting (MA MIECHV):

Since the spring of 2010, DPH has been operating the <u>Maternal</u>, <u>Infant</u>, <u>and Early Childhood</u> <u>Home Visiting Program (MIECHV</u>), 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). The state's program is referred to as MA MIECHV.

In September 2021, DPH was awarded \$6.9 million in federal funds in support of MA MIECHV, marking the 10th year of funding. MA MIECHV funds evidenced-based home visiting programs, including <u>Parents as Teachers</u> and <u>Healthy Families America</u>. MA MIECHV prioritized 18 communities for services identified through the 2020 Massachusetts MIECHV needs assessment (list of communities is in the Appendix). The needs assessment ranked communities based on quantitative data indicators in nine domains: (1) socioeconomic status; (2) housing; (3) populations of special interest (e.g., teen births, foreign born residents); (4) substance use; (5) crime; (6) child unintentional injuries; (7) child maltreatment; (8) adverse perinatal outcomes; and (9) child development and health and school outcomes. There are 22 MA MIECHV home visiting programs across the 18 communities. All home visiting services are free and voluntary. If families are eligible for more than one program, the family decides which program they would prefer to participate.

Depression screening is conducted with all program participants and data are analyzed for home visiting programs on a quarterly basis. An annual report to the federal funding agency, the Health Resources and Services Administration (HRSA), is submitted every October. Screens are conducted within three months of enrollment and are updated in compliance with model fidelity respective to each evidence-based home visiting program.

In federal FY20 (September 30, 2019 – September 29, 2020), 93% of expected screenings for depressive symptoms were completed within three months of enrollment.

Welcome Family

The <u>Welcome Family</u> program, funded through MA MIECHV, offers a one-time nurse home visit to all birthing parents with newborns and their families, regardless of age, income, or other criteria, in five Massachusetts communities. The goal of Welcome Family is to promote optimal parental and infant physical and mental well-being and to provide an entry point into a system of care for families with newborns. Each 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 birthing parent and their newborn, but any caregiver is eligible for a visit, including fathers, grandparents, adoptive parents, 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:

- Parental emotional health, including a depression screen
- Parental and infant nutrition, including breastfeeding
- Unmet health needs
- Domestic violence
- Substance use
- Parental 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 parents 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 2021, 1,696 PPD depression screens were offered during Welcome Family visits. There were 163 (9.6%) positive PPD screens, of which 105 (64%) received a referral to services. A family may decline a referral, or the nurse may not offer a referral if the family is already receiving services. Families who did not receive a referral received brief interventions by the Welcome Family nurse.

"I really enjoyed the resources and information that was provided to me by the Welcome Family Visit. I especially enjoyed knowing that there was a program that checks on parents

and baby after baby has been born as some families do not have resources or help to reach out to while struggling." – Welcome Family participant

The Welcome Family Learning Collaborative is a forum for the five local agencies to plan and implement quality improvement projects and share best practices and lessons learned across programs. The Learning Collaborative typically has two in-person meetings per year, each of which is followed by a six-month action period during which the programs carry out Plan-Do-Study-Act cycles. In the past, improvement projects have focused on topics such as increasing referrals to the program, reducing racial and ethnic inequities in home visit completion, and increasing domestic violence and depression screening rates.

In January 2021, the Learning Collaborative focused on depression screening using a validated screening tool and the local programs agreed that the PHQ-2 screen is effective in identifying symptoms of depression when coupled with the expertise from the Welcome Family nurses. Therefore, it was decided not to integrate the EPDS into standard program practice.

This is just one example of how DPH programs work to continuously improve PPD screening across the Commonwealth and to ensure that current practices are meeting the needs of population.

Pregnancy Risk Assessment Monitoring System (PRAMS)

Since 2007, DPH has monitored the health of birthing parents and children in the Commonwealth with the <u>Massachusetts Pregnancy Risk Assessment Monitoring System</u> (<u>PRAMS</u>), an ongoing survey of new birthing parents. The survey asks a set of two questions related to the experience of postpartum depression (PPD). Based on the most recent data available (2021, N=1,321 survey participants), an estimated 10.4% of birthing parents in Massachusetts experience PPD symptoms always or often, 25.6% experience PPD symptoms sometimes, and 64.0% experience PPD symptoms rarely or never (Figure 2 in Appendix).

PRAMS data from 2021 suggest that some Massachusetts birthing parents are more likely to report experiencing PPD symptoms than others. Compared to White non-Hispanic birthing parents (8.6%), Black non-Hispanic birthing parents (15.0%) and Asian non-Hispanic birthing parents (15.7%) were more likely to experience PPD symptoms always or often, although these differences were not statistically significant. Statistically higher prevalence of PPD symptoms was observed among birthing parents with a high school education (16.4%) compared to birthing parents with a college education (7.5%). Birthing parents with Medicaid had a significantly higher prevalence of reporting experiencing PPD symptoms compared to parents with private insurance (14.3% vs 7.4%). Those who self-identified as having a disability reported significantly higher PPD symptoms compared to those who reported having no disability (34.4% vs 7.1%). Although higher prevalence of PPD symptoms was observed among those who are not married (14.7%) compared to birthing parents who are married (8.4%), and those whose nativity was non-US-born reported higher PPD symptoms compared to birthing parents born in the US (12.0% vs 9.6%), these differences were not statistically significant.

The 2021 PRAMS data also suggests that some Massachusetts birthing parents are less likely to be screened for PPD during their postpartum visit. Overall, 88.3% of birthing parents reported that their health care providers asked if they were depressed (proxy for PPD screening). Compared to White non-Hispanic birthing parents (91.3%), Hispanic birthing parents (79.9%) were significantly less likely to be screened for PPD. Black non-Hispanic birthing parents (86.1%) and Asian non-Hispanic birthing parents (88.5%) were also less likely to be screened, but these differences were not statistically significant. Similarly, statistically lower prevalence of PPD screening was observed among birthing parents with less than a high school education (77.9%) compared to birthing parents with a college education (91.9%).

PRAMS data are self-reported surveillance data, and so causality cannot be determined. The findings of lower education and specific groups by race/ethnicity among birthing people with lower prevalence of being screened and/or higher reporting of PPD have been consistent across multiple years of our data sources (PRAMS and APCD). PRAMS is also not able to identify PPD per se but identifies self-reported depressive symptoms. Screening for PPD is not mandatory or universal, and there are likely biases in who is getting screened. These biases can be at the provider level as well as the systems level. As PPD is thought to have multi-factorial causes including stressors of several types, lack of sleep, and lack of social and emotional support, as well as hormonal changes after delivery, it is probable that the social determinants of health play a large role in both lack of screening and development of PPD.

Additional Activities

In CY21, additional activities were conducted, and products were developed with the goal of supporting health care providers and health plans, as DPH implements the PPD Legislation.

Activities included:

- In partnership with the PPD Legislative Commission subcommittee focused on community resources, DPH maintains and updates the web <u>page dedicated to PPD</u> with additional resources.
- 2. DPH continues to make available free to the public the brochure entitled "<u>Being A</u> <u>Mother Is A Hard Job</u>" through the Massachusetts Health Promotion Clearinghouse.
- 3. DPH has funded Tufts University from FY20-FY23 to evaluate the effectiveness of EIPP with a focus on PPD Screening and referral services.
- 4. DPH participated in the quarterly PPD Legislative Commission Meetings and the annual PPD Awareness Day event at the State House.

Conclusion

Postpartum depression has significant adverse impacts on birthing parents, infants, and their families. Access to appropriate and quality treatment and support are essential.

Massachusetts is working on innovative health policies to address postpartum depression. The Massachusetts Department of Public Health will continue to work diligently to improve the health and wellbeing of all birthing parents and infants across the Commonwealth, by prioritizing comprehensive PPD data collection and analysis, while also promoting early detection and treatment across health sectors.

However, more work and support are needed to close the gaps in the percentage of birthing parents screened for postpartum depression and successful completion of referrals to timely, high-quality supports and treatment.

References

- Bauman, B.L., Ko, J.Y., Cox, S., D'Angelo, D.V., Warner, L., Folger, S., Tevendale, H.D., Coy, K.C., Harrison, L., Barfield, W.D. (2020). Vital Signs – Postpartum Depression Symptoms and Provider Discussions about Perinatal Depression. *MMWR Morb Mortal Wkly Rep*; 69: 575–581.
- 2. Misri S, Reebye P, Kendrick K, et al. Internalizing behaviors in 4-year-old children exposed in utero to psychotropic medications. Am J Psychiatry 2006; 163(6): 1026–1032.
- Carter AS, Garrity-Rokous FE, Chazan-Cohen R, et al. Maternal depression and comorbidity: predicting early parenting, attachment security, and toddler social-emotional problems and competencies. J Am Acad Child Adolesc Psychiatry 2001; 40(1): 18–26.
- 4. Sohr-Preston SL, Scaramella LV. Implications of timing of maternal depressive symptoms for early cognitive and language development. Clin Child Fam Psychol Rev 2006; 9(1): 65–83.
- 5. Oberlander TF, Reebye P, Misri S, et al. Externalizing and attentional behaviors in children of depressed mothers treated with a selective serotonin reuptake inhibitor antidepressant during pregnancy. Arch Pediatr Adolesc Med 2007; 161(1): 22–29.
- 6. Weissman MM, Pilowsky DJ, Wickramaratne PJ, et al. Remissions in maternal depression and child psychopathology: a STAR*D-child report. JAMA 2006; 295(12): 1389–1398.
- 7. Hay DF, Pawlby S, Angold A, et al. Pathways to violence in the children of mothers who were depressed postpartum. Dev Psychol 2003; 39(6): 1083–1094.
- 8. Weissman MM, Wickramaratne P, Nomura Y, et al. Offspring of depressed parents: 20 years later. Am J Psychiatry 2006; 163(6): 1001–1008.
- 9. Society CP. Maternal depression and child development. Paediatr Child Health 2004; 9(8): 575–598.
- 10. Xiao RS, Kroll-Desrosiers AR, Goldberg RJ, et al. The impact of sleep, stress, and depression on postpartum weight retention: a systematic review. J Psychosom Res 2014; 77(5): 351–358.
- 11. Milgrom J, Skouteris H, Worotniuk T, et al. The association between ante- and postnatal depressive symptoms and obesity in both mother and child: a systematic review of the literature. Women's Health Issues 2016; 22(3): e319–e328.
- 12. Chapman SLC, Wu L-T. Postpartum substance use and depressive symptoms: a review. Women Health 2013; 53(5): 479– 503.
- 13. Jones E, Coast E. Social relationships and postpartum depression in South Asia: a systematic review. Int J Soc Psychiatry 2013; 59(7): 690–700.
- 14. Dias CC, Figueiredo B. Breastfeeding and depression: a systematic review of the literature. J Affect Disord 2014; 171: 142– 154.
- 15. Vliegen N, Casalin S, Luyten P. The course of postpartum depression: a review of longitudinal studies. Harv Rev Psychiatry 2016; 22(1): 1–22.
- 16. Luca DL, Margiotta C, Staatz C, Garlow E, Christensen A, Zivin K, "Financial Toll of Untreated Perinatal Mood and Anxiety Disorders Among 2017 Births in the United States", *American Journal of Public Health* 110, no. 6 (June 1, 2020): pp. 888-896.
- Wouk K, Stuebe AM, Meltzer-Brody S. Postpartum mental health and breastfeeding practices: an analysis using the 2010– 2011 Pregnancy Risk Assessment Monitoring System. Matern Child Health J 2016. Epub July 22, 2016. <u>CrossRefExternal PubMedExternal</u>
- 18. Stein A, Gath DH, Bucher J, Bond A, Day A, Cooper PJ. The relationship between post-natal depression and mother-child interaction. Br J Psychiatry 1991;158:46–52. <u>CrossRefExternal PubMedExternal</u>
- 19. Kingston D, Tough S, Whitfield H. Prenatal and postpartum maternal psychological distress and infant development: a systematic review. Child Psychiatry Hum Dev 2012;43:683–714. <u>CrossRefExternal PubMedExternal</u>

Addendum



1

DPH-Funded Programs Engaged in PPD Screening by Community

Updated October 2023





The 18 Massachusetts Home Visiting Initiative Communities in Massachusetts include:

- Boston
- Brockton
- Chelsea
- Everett
- Fall River
- Fitchburg
- Holyoke
- Lawrence
- Lowell
- Lynn
- New Bedford
- North Adams
- Pittsfield
- Revere
- Southbridge
- Springfield
- Webster
- Worcester

	Screened			
	No		Yes	
	Ν	%	Ν	%
Race/Ethnicity l				
White non-Hispanic	19,188	83.4	3,806	16.6
Black non-Hispanic	4,906	85.1	856	14.9
Asian/PI non-Hispanic	2,641	78.6	718	21.4
Hispanic	10,191	84.1	1,921	15.9
American Indian or Other non-	42.4	02.7	00	47.2
Hispanic	424	82.7	89	17.3
Unknown	1,251	87.4	180	12.6
Insurancet				
Medicaid	22,996	82.2	4,971	17.8
Other [#]	15605	85.7	2599	14.3
Education				
No HS degree	3,974	83.2	804	16.8
HS degree or GED	8,081	83.0	1,652	17.0
Associate or bachelor's degree	10,766	83.9	2,070	16.1
Post graduate	7,147	86.5	1,117	13.5
Preterm Birth l				
No	35,216	83.5	6,968	16.5
Yes	3,249	84.4	599	15.6
Plurality l				
Singleton	38,010	83.6	7,453	16.4
Multiple	591	83.5	117	16.5
Paritył				
1	16,549	83.5	3,268	16.5
2	12,786	83.4	2,536	16.6
3+	9,266	84.0	1,766	16.0
Marriedt				
No	15,981	82.3	3,435	17.7
Yes	22,333	84.5	4,111	15.5

Table 1. Deliveries Screened for Postpartum Depression within 6 Months Postpartum byMaternal Characteristics – Massachusetts, 2020

ł p<0.01

[‡]Other includes people with private insurance, military insurance and those with no insurance

 Table 2. Results for Screening for Postpartum Depression within 6 Months Postpartum by

 Maternal Characteristics – Massachusetts, 2020

	Screen Results			
	Negat	ive	Positive	
	Ν	%	Ν	%
Race/Ethnicity \				
White non-Hispanic	3,335	87.6	471	12.4
Black non-Hispanic	733	85.6	123	14.4
Asian/PI non-Hispanic	637	88.7	81	11.3
Hispanic	1,581	82.3	340	17.7
American Indian or Other	75	84.3	14	15.7
Unknown	162	90.0	18	10.0
Insurancet				
Medicaid	4,183	84.1	788	15.9
Other [‡]	2340	90.0	259	10.0
Education				
<hs< td=""><td>679</td><td>84.5</td><td>125</td><td>15.5</td></hs<>	679	84.5	125	15.5
HS/GED	1,380	83.5	272	16.5
Some College/Associate Degree	1,821	88.0	249	12.0
Bachelor's degree	1,003	89.8	114	10.2
Graduate Degrees	1,640	85.1	287	14.9
Preterm Birth*				
No	6,028	86.5	940	13.5
Yes	493	82.3	106	17.7
Plurality				
Singleton	6,427	86.2	1,026	13.8
Multiple	96	82.1	21	17.9
Parity				
1	2,848	87.1	420	12.9
2	2,169	85.5	367	14.5
3+	1,506	85.3	260	14.7
Marriedt				
No	2,848	82.9	587	17.1
Yes	3,656	88.9	455	11.1

* p<0.05

ł p<0.01

[#]Other includes people with private insurance, military insurance and those with no insurance