

Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) 2011 Surveillance Report



Massachusetts Department of Public Health
Bureau of Family Health and Nutrition
Office of Data Translation

September 2015



PRAMS
Massachusetts

**Massachusetts PRAMS
2011 Surveillance Report**

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Marylou Sudders, Secretary of Health and Human Services
Monica Bharel, MD, MPH, Commissioner of Public Health

Ron Benham, Director
Bureau of Family Health and Nutrition
Hafsatou Diop, MD, MPH, Director
Office of Data Translation

Massachusetts Department of Public Health

September 2015

Acknowledgments

This report was prepared by Emily Lu and Hafsatou Diop of the Office of Data Translation, Bureau of Family Health and Nutrition, Massachusetts Department of Public Health.

Special thanks go to:

Diane Gradozzi, Roger Wong, Susan E. Manning, Sarah Lederberg Stone, Jonathan Gottlieb, Ana Sanchez, and Maxene Spolidoro, Bureau of Family Health and Nutrition; Alice Mroszczyk, Privacy and Data Access Office; The Research and Data Access Review Committee; Antonio Sousa, Maria Vu, Kevin Foster, Charlene Zion, Sharon Pagnano, and Karin Barrett, Registry of Vital Records and Statistics; Seema Gupta, Centers for Disease Control and Prevention.

We also wish to thank the PRAMS Advisory Committee*, the DPH peer reviewers and the Commissioner's Office for their comprehensive review of this publication.

Most importantly, our thanks go to all the mothers who completed the 2011 Massachusetts PRAMS questionnaires which led to this report.

Suggested Citation:

Massachusetts Department of Public Health. *Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) 2011 Surveillance Report*. Boston, MA; September 2015.

To obtain additional copies of this report, please contact:

Massachusetts Department of Public Health
Bureau of Family Health and Nutrition
Office of Data Translation - PRAMS
250 Washington Street, 6th Floor
Boston, MA 02108
Telephone: 617-624-5517
TTY: 617-624-5992
Email: DPH_MA_PRAMS@state.ma.us

This publication can be downloaded from the following website:
<http://www.mass.gov/dph/prams>

Funding for Massachusetts Pregnancy Risk Assessment Monitoring System was provided in part by the Centers for Disease Control and Prevention Grant # UR6DP003110.

The contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

*See Appendix F for an alphabetical list of PRAMS Advisory Committee Members.

TABLE OF CONTENTS	PAGE
Acknowledgements	3
Table of Contents	4-5
List of Figures	6-9
List of Tables (for main document)	10-11
List of Tables (for Appendix A)	12-14
Executive Summary	15-17
Introduction	18
Methodology	19
Limitations	20
PRAMS Sample Characteristics (weighted)	21-22
Pre-Pregnancy	
Pre-pregnancy health insurance	23-24
Body Mass Index (BMI)	25
Preconception health & type 1 or 2 diabetes	26
Maternal self-rated health before pregnancy	27
Reactions to racism	28
Prenatal multivitamin use	29
Pregnancy intention	30-32
Contraceptive use	33-34
Fertility treatment	35-36
Previous birth outcomes	37
Pregnancy	
WIC participation during pregnancy	38-39
Health complications during pregnancy	40
Gestational diabetes & follow-up care	41-42
Exercise and diet	43
Stressful life events	44
Intimate partner violence	45-47
Prenatal care	48-54

TABLE OF CONTENTS	PAGE
HIV testing during pregnancy	55-58
Method of delivery	59
Cesarean delivery request	60
Infant birth hospitalization	61
Delivery payer source	62
Postpartum	
Contraceptive use	63
Maternal disability status	64
Postpartum depressive symptoms	65-70
Postpartum health care	71-72
Infant health care	73
Infant sleep position	74
Infant sleep location	75-76
Infant safety & knowledge of shaken baby syndrome	77
Breastfeeding	78-85
Oral Health Care	86-88
Substance Use	
Alcohol consumption	89-90
Tobacco smoking & smoking rule inside the home	91-92
Appendix A. Supplemental data tables	93
Tables from questions in order of MA PRAMS 2011 survey	94-112
Technical notes	113
Appendix B. MA PRAMS 2011 survey	114-129
Appendix C. PRAMS weighting system	130-131
Appendix D. Adequacy of prenatal care utilization index	132-133
Appendix E. List of references	134-137
Appendix F. Alphabetical list of PRAMS advisory committee members	138-140

LIST OF FIGURES	PAGE
Figure 1. Prevalence of insurance types prior to pregnancy, 2011 MA PRAMS	23
Figure 2. Maternal Body Mass Index (BMI) prior to pregnancy, 2011 MA PRAMS	25
Figure 3. Preconception health indicators, 2011 MA PRAMS	26
Figure 4. Prevalence of mothers with type 1 or 2 diabetes, 2011 MA PRAMS	26
Figure 5. Maternal self-rated health before pregnancy, 2011 MA PRAMS	27
Figure 6. Prevalence of reactions to racism during the 12 months before delivery, 2011 MA PRAMS	28
Figure 7. Prevalence of reactions to racism during the 12 months before delivery, by maternal race/ethnicity, 2011 MA PRAMS	28
Figure 8. Prevalence of multivitamin use in the month prior to pregnancy, 2011 MA PRAMS	29
Figure 9. Feelings about becoming pregnant prior to this pregnancy, 2011 MA PRAMS	30
Figure 10. Proportion of mothers trying to get pregnant, 2011 MA PRAMS	30
Figure 11. Prevalence of pre-pregnancy contraceptive use among mothers who were <u>not</u> trying to get pregnant, 2011 MA PRAMS	33
Figure 12. Reasons for not using a contraceptive method prior to this pregnancy among mothers who were not trying to get pregnant, 2011 MA PRAMS	34
Figure 13. Prevalence of fertility treatment use, 2011 MA PRAMS	35
Figure 14. Prevalence of previous low birth weight, preterm births, and Cesarean delivery among multiparous mothers, 2011 MA PRAMS	37
Figure 15. Proportion of mothers participating in WIC during pregnancy, 2011 MA PRAMS	38
Figure 16. Prevalence of maternal health complications during pregnancy, 2011 MA PRAMS	40
Figure 17. Prevalence of follow-up care received by mothers with gestational diabetes, 2011 MA PRAMS	42
Figure 18. Frequency of physical activity during last three months of pregnancy, 2011 MA PRAMS	43

LIST OF FIGURES	PAGE
Figure 19. Consumption of fruits/vegetables per day in the last three months of pregnancy, 2011 MA PRAMS	43
Figure 20. Prevalence of stressful life events in the 12 months before birth, by type, 2011 MA PRAMS	44
Figure 21. Prevalence of stressful life events in the 12 months before birth, by event, 2011 MA PRAMS	44
Figure 22. Prevalence of physical abuse in the 12 months before pregnancy, during pregnancy, and during either time period, 2011 MA PRAMS	45
Figure 23. Prevalence of intimate partner violence postpartum, 2011 MA PRAMS	47
Figure 24. Gestational age when pregnancy was confirmed, 2011 MA PRAMS	48
Figure 25. Timing of initiation of prenatal care (PNC), 2011 MA PRAMS	48
Figure 26. Adequacy of prenatal care (as measured by Adequacy of Prenatal Care Utilization Index, APNCU), 2011 MA PRAMS	50
Figure 27. Reasons for not receiving prenatal care as early as wanted among those with late prenatal care entry, 2011 MA PRAMS	52
Figure 28. Topics discussed with health care providers during prenatal care visits, 2011 MA PRAMS	53
Figure 29. Prevalence of maternal satisfaction with prenatal care provided by health care providers, 2011 MA PRAMS	54
Figure 30. Proportion of mothers offered HIV testing during pregnancy, 2011 MA PRAMS	55
Figure 31. Proportion of mothers tested for HIV during pregnancy, 2011 MA PRAMS	55
Figure 32. Proportion of mothers who refused HIV testing during pregnancy (among those offered), 2011 MA PRAMS	57
Figure 33. Reasons for refusing HIV testing during pregnancy, 2011 MA PRAMS	58
Figure 34. Proportion of births by vaginal and Cesarean delivery, 2011 MA PRAMS	59
Figure 35. Source and timing of Cesarean delivery request among mothers who delivered by Cesarean, 2011 MA PRAMS	60
Figure 36. Source and timing of Cesarean delivery request among mothers who delivered by Cesarean, by prior-birth history, 2011 MA PRAMS	60

LIST OF FIGURES	PAGE
Figure 37. Proportion of infants staying in the neonatal intensive care unit, 2011 MA PRAMS	61
Figure 38. Infant length of hospital stay at birth, 2011 MA PRAMS	61
Figure 39. Prevalence of delivery payment sources, 2011 MA PRAMS	62
Figure 40. Proportion of mothers using contraception postpartum, 2011 MA PRAMS	63
Figure 41. Reasons for not using contraception postpartum (among those reporting no use), 2011 MA PRAMS	63
Figure 42. Prevalence of mothers with a disability and length of time disabled, 2011 MA PRAMS	64
Figure 43. Proportion of mothers often/always feeling down, depressed, or sad postpartum, 2011 MA PRAMS	65
Figure 44. Proportion of mothers often/always feeling hopeless postpartum, 2011 MA PRAMS	66
Figure 45. Proportion of mothers often/always feeling slowed down postpartum, 2011 MA PRAMS	67
Figure 46. Proportion of mothers with postpartum depression (a combined scoring of depressed, hopeless, and slowed down ≥ 10), 2011 MA PRAMS	68
Figure 47. Proportion of mothers seeking help for postpartum depression (among all mothers regardless of frequency of depressive symptoms), 2011 MA PRAMS	70
Figure 48. Proportion of mothers seeking help for postpartum depression (among those scoring ≥ 10 on the combined measure of depressive symptoms), 2011 MA PRAMS	70
Figure 49. Proportion of mothers receiving a postpartum checkup by the time of survey, 2011 MA PRAMS	71
Figure 50. Proportion of mothers receiving a postpartum checkup, by insurance type, 2011 MA PRAMS	71
Figure 51. Proportion of infants seen by health care provider within one week of leaving birth hospital, 2011 MA PRAMS	73
Figure 52. Prevalence of infant sleep positions, 2011 MA PRAMS	74
Figure 53. Prevalence of infant sleep locations, 2011 MA PRAMS	75
Figure 54. Prevalence of infant safety practices, 2011 MA PRAMS	77

LIST OF FIGURES	PAGE
Figure 55. Prevalence of breastfeeding (BF) initiation, duration, and exclusivity, all mothers, 2011 MA PRAMS	78
Figure 56. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by maternal race/ethnicity, 2011 MA PRAMS	79
Figure 57. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by maternal age (years), 2011 MA PRAMS	80
Figure 58. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by maternal education, 2011 MA PRAMS	81
Figure 59. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by federal poverty level (FPL), 2011 MA PRAMS	82
Figure 60. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by maternal nativity, 2011 MA PRAMS	83
Figure 61. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by WIC participation during pregnancy, 2011 MA PRAMS	84
Figure 62. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by feelings about this pregnancy, 2011 MA PRAMS	85
Figure 63. Prevalence of teeth cleaning, ever, before, during, and after pregnancy, 2011 MA PRAMS	86
Figure 64. Prevalence of teeth cleaning, never, ever but not recently, or recently, 2011 MA PRAMS	86
Figure 65. Prevalence of maternal alcohol consumption prior to and during pregnancy, 2011 MA PRAMS	89
Figure 66. Prevalence of maternal tobacco use prior to, during, and after pregnancy, 2011 MA PRAMS	91
Figure 67. PRAMS Data Weighting Illustration	131

LIST OF TABLES	PAGE
Table 1. Maternal characteristics, PRAMS respondents vs. state birth population, 2011 MA PRAMS	22
Table 2. Prevalence of no insurance coverage prior to pregnancy, by socio-demographic characteristics, 2011 MA PRAMS	24
Table 3. Prevalence of fair/poor self-rated health before pregnancy, by socio-demographic characteristics, 2011 MA PRAMS	27
Table 4. Prevalence of daily multivitamin use in the month prior to pregnancy, by socio-demographic characteristics, 2011 MA PRAMS	29
Table 5. Prevalence of pregnancy intention and feelings about the timing of most recent pregnancy, by socio-demographic characteristics and history of abuse, 2011 MA PRAMS	31
Table 6. Prevalence of wanting the pregnancy sooner by socio-demographic characteristics, 2011 MA PRAMS	32
Table 7. Prevalence of fertility treatment use, by socio-demographic characteristics, 2011 MA PRAMS	36
Table 8. Prevalence of WIC participation during pregnancy, by socio-demographic characteristics, 2011 MA PRAMS	39
Table 9. Prevalence of gestational diabetes, by socio-demographic characteristics, 2011 MA PRAMS	41
Table 10. Prevalence of physical abuse (12 months before pregnancy, during pregnancy, and during either time period), 2011 MA PRAMS	46
Table 11. Prevalence of entry into prenatal care in the first trimester, by socio-demographic characteristics, 2011 MA PRAMS	49
Table 12. Prevalence of inadequate/no prenatal care, as measured by the Adequacy of Prenatal Care Utilization (APNCU) Index, by socio-demographic characteristics, 2011 MA PRAMS	51
Table 13. Prevalence of offer-of-testing/HIV testing during pregnancy, by socio-demographic characteristics, 2011 MA PRAMS	56
Table 14. Prevalence of mothers who refused HIV testing during pregnancy (among those offered), by socio-demographic characteristics, 2011 MA PRAMS	57
Table 15. Prevalence of “often” or “always” feeling down, depressed or sad postpartum, by socio-demographic characteristics, 2011 MA PRAMS	65
Table 16. Prevalence of “often” or “always” feeling hopeless, by socio-demographic characteristics, 2011 MA PRAMS	66

LIST OF TABLES	PAGE
Table 17. Prevalence of “often” or “always” feeling slowed down, by socio-demographic characteristics, 2011 MA PRAMS	67
Table 18. Prevalence of mothers with postpartum depression (a combined scoring of depressed, hopeless, and slowed down ≥ 10), by socio-demographic characteristics, 2011 MA PRAMS	69
Table 19. Prevalence of mothers who received a postpartum checkup, by socio-demographic characteristics, 2011 MA PRAMS	72
Table 20. Prevalence of placing infant to sleep on back, by socio-demographic characteristics, 2011 MA PRAMS	74
Table 21. Prevalence of infant sleeping on an adult bed with other person(s), by socio-demographic characteristics, 2011 MA PRAMS	76
Table 22. Prevalence of teeth cleaning (ever), by socio-demographic characteristics, 2011 MA PRAMS	87
Table 23. Prevalence of teeth cleaning in the 12 months before pregnancy and during pregnancy, by socio-demographic characteristics, 2011 MA PRAMS	88
Table 24. Prevalence of maternal alcohol consumption in the last three months of pregnancy, by socio-demographic characteristics, 2011 MA PRAMS	90
Table 25. Prevalence of maternal tobacco use during the last three months of pregnancy, by socio-demographic characteristics, 2011 MA PRAMS	92

LIST OF TABLES (APPENDIX A)	PAGE
Table 1. Question 1, Prevalence of things done during the 12 months before pregnancy (preconception health indicators), 2011 MA PRAMS	94
Table 2. Question 2, Prevalence of insurance types prior to pregnancy, 2011 MA PRAMS	95
Table 3. Question 3, Prevalence of daily multivitamin use in the month prior to pregnancy, 2011 MA PRAMS	95
Table 4. Questions 4-5, Maternal Body Mass Index (BMI) immediately prior to pregnancy (derived from maternal report of height and weight), 2011 MA PRAMS	95
Table 5. Question 7, Maternal self-rated health before pregnancy, 2011 MA PRAMS	96
Table 6. Question 8, Prevalence of Type 1 or Type 2 diabetes, 2011 MA PRAMS	96
Table 7. Questions 9-12, Questions 9-12, Prevalence of previous low birth weight, previous preterm births, and previous Cesarean deliveries among multiparous mothers, 2011 MA PRAMS	96
Table 8. Question 13, Feelings about becoming pregnant just prior to this pregnancy, 2011 MA PRAMS	97
Table 9. Question 14, Proportion of mothers trying to get pregnant, 2011 MA PRAMS	97
Table 10. Question 15, Prevalence of pre-pregnancy contraceptive use among mothers who were not trying to get pregnant, 2011 MA PRAMS	97
Table 11. Question 16, Reasons for not using a contraceptive method prior to pregnancy among mothers not trying to get pregnant, 2011 MA PRAMS	97
Table 12. Questions 17-18, Prevalence of fertility treatment use, 2011 MA PRAMS	98
Table 13. Question 19, Weeks pregnant when sure of pregnancy, 2011 MA PRAMS	98
Table 14. Question 20, Timing of entry to prenatal care (PNC), 2011 MA PRAMS	98
Table 15. Question 21, Prevalence of mothers receiving prenatal care as early as wanted, 2011 MA PRAMS	99
Table 16. Question 22, Reasons for not receiving prenatal care as early as wanted among those with late prenatal care entry, 2011 MA PRAMS	99
Table 17. Question 23, Sources of payment for prenatal care, 2011 MA PRAMS	99

LIST OF TABLES (APPENDIX A)	PAGE
Table 18. Question 24, Topics discussed by health care providers during prenatal care visits, 2011 MA PRAMS	100
Table 19. Question 25, Prenatal care satisfaction, 2011 MA PRAMS	100
Table 20. Questions 26-29, Prevalence of HIV testing, offer and refusal during pregnancy, and reasons for declining HIV testing, 2011 MA PRAMS	100
Table 21. Question 30, Prevalence of WIC participation during pregnancy, 2011 MA PRAMS	101
Table 22. Questions 31-32, Prevalence of gestational diabetes and follow-up care received during pregnancy, 2011 MA PRAMS	101
Table 23. Question 33, Prevalence of maternal health complications during pregnancy, 2011 MA PRAMS	101
Table 24. Questions 34-38, Prevalence of maternal tobacco use prior to, during and after pregnancy, change in smoking status, and smoking rules inside the home, 2011 MA PRAMS	102
Table 25. Questions 39-41, Prevalence of maternal alcohol consumption and bingeing prior to and during pregnancy, and changes in alcohol drinking during pregnancy, 2011 MA PRAMS	103
Table 26. Question 42, Prevalence of stressful life events during pregnancy, 2011 MA PRAMS	104
Table 27. Questions 43-44, Prevalence of physical abuse prior to and during pregnancy, 2011 MA PRAMS	104
Table 28. Questions 12 & 48-49, Prevalence of prior Cesarean delivery, mode of delivery for current birth, and source of Cesarean request, 2011 MA PRAMS	105
Table 29. Question 51, Prevalence of delivery payment sources, 2011 MA PRAMS	105
Table 30. Questions 52-53, Infant stay in the neonatal intensive unit (NICU) and length of infant hospital stay at birth, 2011 MA PRAMS	106
Table 31. Questions 54-55, Infant alive now and infant living with mother, 2011 MA PRAMS	106
Table 32. Questions 56-59, Prevalence of ever breastfeeding, any breastfeeding at 4-week and 8-week postpartum, and exclusivity at 4-week and 8-week postpartum, 2011 MA PRAMS	106
Table 33. Question 60, Prevalence of infant sleep position, 2011 MA PRAMS	107

LIST OF TABLES (APPENDIX A)	PAGE
Table 34. Question 61, Proportion of infants seen by a health care provider (HCP) within a week after leaving hospital, 2011 MA PRAMS	107
Table 35. Questions 62-63, Prevalence of contraceptive use postpartum and reasons for not using a contraceptive method, 2011 MA PRAMS	107
Table 36. Question 64, Prevalence of maternal postpartum checkup, 2011 MA PRAMS	108
Table 37. Question 65, Prevalence of maternal postpartum depressive symptoms, 2011 MA PRAMS	108
Table 38. Question 66, Prevalence of reactions to racism during the 12 months before delivery, 2011 MA PRAMS	108
Table 39. Questions 67-68, Frequency of physical activity and servings of fruits/vegetables intake per day in the last three months of pregnancy, 2011 MA PRAMS	109
Table 40. Question 69, Infant sleep location and bed sharing, 2011 MA PRAMS	109
Table 41. Question 70, Awareness of shaken baby syndrome, 2011 MA PRAMS	109
Table 42. Question 71, Prevalence of infant safety practices, 2011 MA PRAMS	110
Table 43. Question 72, Prevalence of seeking professional help for postpartum depression, 2011 MA PRAMS	110
Table 44. Question 73, Prevalence of intimate partner violence postpartum, 2011 MA PRAMS	111
Table 45. Question 74, Prevalence of maternal health insurance types postpartum, 2011 MA PRAMS	111
Table 46. Questions 75-76, Prevalence of maternal disability status and length of disability, 2011 MA PRAMS	111
Table 47. Questions 77-78, Prevalence of maternal teeth cleaning prior to, during, and after pregnancy, 2011 MA PRAMS	112
Table 48. Questions 77-78, Prevalence of maternal teeth cleaning, never, ever but not recently, or recently, 2011 MA PRAMS	112
Table 49. Question 79, Total household income during the 12 months before your new baby was born, 2011 MA PRAMS	112
Table 50. Question 80, Total number of people including yourself in the household during the 12 months before your new baby was born, 2011 MA PRAMS	112

Executive Summary

This report contains results from analyses of data from the 2011 Massachusetts Pregnancy Risk Assessment Monitoring System (MA PRAMS). MA PRAMS is a collaborative surveillance project between the Centers for Disease Control and Prevention (CDC) and the Massachusetts Department of Public Health. PRAMS collects state-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. MA PRAMS oversamples by race and Hispanic ethnicity to ensure adequate representation of racial and ethnic minority mothers. The 2011 Report contains numbers that are relatively small for some maternal experiences, attitudes, and behaviors. Interpretations of these numbers must be made with caution until more years of data are available to provide stable estimates. A total of 2,506 mothers were sampled and 1,603 responded to the survey in 2011, for a weighted response rate of 69%. Final results were weighted to represent the cohort of Massachusetts resident mothers who delivered a live infant in 2011. Results from PRAMS are used to assess the health of mothers and infants across the state and for planning and evaluation of public health programs and policy. This is the fifth consecutive PRAMS report for Massachusetts.

The key findings contained in this report are highlighted below by timing of pregnancy and topic area.

Pre-pregnancy

- *Self-rated health:* About 95% of mothers rated their overall health as good, very good or excellent, and 4.7% as fair or poor. Mothers with less than a high school education (14.3%), other, non-Hispanic mothers (14.2%), and those who were living at or below 100% of the Federal Poverty Level (FPL) (11.6%) were the most likely to report fair/poor health.
- *Healthy behavior/life style:* The most commonly cited healthy behaviors in the 12 months before pregnancy included (1) getting teeth cleaned by a dentist or dental hygienist (65.7%); (2) exercising three or more days a week (45.0%); and (3) talking to a health care worker about family medical history (37.8%).
- *Pregnancy intention and birth control use:* About 33% of mothers reported they did not intend to become pregnant (i.e. wanting to be pregnant either at a later time [26.1%] or never [6.4%]) and 41.1% of mothers indicated that they had not been trying to become pregnant when they did. Among those not trying to become pregnant, 57.2% were not using any birth control method at the time of conception.
- *Fertility treatment:* Among the 58.9% of women who reported trying to become pregnant, 7.7% reported that they had used some forms of fertility treatment when they became pregnant.

Pregnancy

- *Participation in the Special Supplemental Nutrition Program for Women, Infants and Children:* Almost 42% of mothers reported being enrolled in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) during this pregnancy.
- *Gestational diabetes & follow-up care during prenatal care visits:* About 10% of mothers reported that they had gestational diabetes mellitus (GDM), diabetes that started during pregnancy. The prevalence of GDM was highest among those who were obese (Body Mass Index \geq 30) just before becoming pregnant (10.1%). Among those with GDM, 87.2% reported learning about the importance of exercise, 81.2% learned about the risk of developing type 2 diabetes, 75.3% learned about the benefits of getting to and maintaining a healthy weight after delivery, 71.4% were educated about the health benefits of breastfeeding (71.4%); and 85.4% were referred to a nutritionist.
- *Intimate partner violence:* About 2% of mothers reported that they experienced physical abuse from an intimate partner either in the 12 months before they became pregnant or during pregnancy. The reported prevalence of physical abuse either before or during pregnancy was highest among those who were living at or below 100% of the FPL (5.3%). In addition to physical abuse, 3.4% of mothers reported that their husband or partner had tried to control their daily activities, 1.7% of mothers reported having been threatened or feeling unsafe in some way, and 1.2% reported being frightened about their own safety or the safety of their family members because of the anger or threats of their husband or partner since the new baby was born.
- *Prenatal care:* About 92% of mothers reported that they initiated prenatal care within the first trimester of pregnancy. First-trimester initiation of care was lowest among those who had less than a high school education (78.8%) and mothers under 20 years of age (80.1%). The most frequently cited barriers to getting care as early as wanted among those who had late prenatal care entry (after the first trimester of pregnancy) were not knowing they were pregnant (23.9%) and not having their MassHealth cards (13.6%).
- *HIV testing:* About 66% of mothers reported that they received an HIV test during pregnancy. Overall, about one-fifth reported that they were not offered an HIV test. Hispanic mothers were more likely than any other racial and ethnic groups to be offered an HIV test (88.2%) and the rate of offering was significantly higher than White, non-Hispanics (72.8%).
- *Cesarean delivery by maternal request:* Overall, about 14% of mothers who had a Cesarean delivery reported that they made the decision to have a Cesarean delivery prior to going into labor. Among those delivering by Cesarean for the first time (primary Cesarean), 4.3% reported that they made the decision prior to going into labor. Among those with a repeat Cesarean, about 26.7% reported that they made the decision prior to going into labor.

- *Stressors:* Overall, about 3% of mothers reported feeling stressed due to their race or ethnic background. About 3% of mothers reported feeling emotionally upset as a result of how they were treated, and about 3% reported experiencing physical symptoms related to treatment based on their race or ethnic background. A high proportion of Massachusetts mothers reported experiencing at least one type of family-related (31.7%), financial (46.9%) or illness/death-related (30.5%) stressors during the year before the baby was born.

Postpartum

- *Postpartum depression:* Overall, 9.0% of mothers reported that they felt depressed often or always after birth. Among these mothers, only about 45% reported seeking help for depression from a health care provider.
- *Infant sleep position and location:* About 80% of mothers reported placing babies to sleep only on their backs and 84.1% reported that their babies slept in a crib or bassinet alone.
- *Breastfeeding:* Overall, about 86% of mothers reported initiating breastfeeding. Highest rates of initiation were observed among those who were born outside of the United States (94.3%), Black, non-Hispanic mothers (93.0%), and mothers who had a college degree (92.2%). About 74% reported any breastfeeding for at least four weeks, and 64.0% for at least eight weeks. Exclusive breastfeeding was less prevalent, with 56.4% reporting exclusive breastfeeding for at least four weeks, and 46.5% for at least eight weeks.

Substance use

- *Alcohol:* About 11% of mothers reported drinking alcoholic beverages during the last three months of pregnancy.
- *Tobacco:* About 9% of mothers reported using tobacco during the last three months of pregnancy. The prevalence of tobacco use was highest among those living at or below 100% of the FPL (21.4%), and among White, non-Hispanics (9.6%).

Oral health

- About 75% of mothers reported that they had their teeth cleaned within the last two years. About 66% of mothers reported that they had their teeth cleaned during the 12 months before pregnancy, 49.9% during their most recent pregnancy, and 39.0% since the baby was born.
- Teeth cleaning during pregnancy was less prevalent among mothers who were other, non-Hispanic, living at or below 100% of the FPL, with less than a high school education, and born outside of the United States at 31.6%, 36.1%, 37.5%, 41.5%, respectively.

Note: A copy of the 2011 MA PRAMS survey is included in Appendix B.

Introduction

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a collaborative surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments. PRAMS collects state-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. Mothers are sampled for participation between two and six months postpartum, with the majority sampled two months postpartum. The goal of the PRAMS project is to improve the health of mothers and infants by supporting the reduction of adverse outcomes such as low birth weight, infant morbidity and mortality, and maternal morbidity.

Initiated in 1987 as part of the CDC's initiative to reduce infant mortality and low birth weight, the program has been expanded in recent years in support of the CDC's Safe Motherhood Initiative to promote healthy pregnancies and the delivery of healthy infants. Currently, there are 41 PRAMS sites (40 states and New York City) participating in ongoing surveillance. In September 2011, CDC funded three new states (Connecticut, New Hampshire, and Iowa). CDC is also funding a teen pregnancy oversample in Mississippi and New York, a tribal influenza project in New Mexico, Oregon and Washington, and a Kellogg Foundation minority oversample in Mississippi, Michigan, New Mexico and Louisiana. States participating in PRAMS now account for 78% of all U.S. births.

Massachusetts (MA) PRAMS began collecting data in 2007. This represents the fifth report of results from the MA PRAMS Program. A copy of the 2011 MA PRAMS survey can be found in Appendix B.

Methodology

The MA PRAMS is an ongoing, population-based surveillance system designed to identify and monitor selected maternal attitudes, experiences and behaviors that occur before, during and after pregnancy. The PRAMS survey consists of three types of questions. All surveys include a required set of questions (“Core” questions), which allow for multi-state analyses. Each state can select additional questions from a CDC-approved-questions list (“Standard” questions), or can create questions tailored to meet its needs (“State-developed” questions). The MA PRAMS 2011 survey included a total of 81 questions: 56 Core questions required by CDC, 19 Standard questions and six Massachusetts-developed questions (see Appendix B for a copy of 2011 MA PRAMS survey). The questionnaire was administered in English and Spanish only.

PRAMS survey participants were sampled from a frame of eligible birth certificates which included all live-born infants of Massachusetts resident mothers, delivered in the state, for whom a birth certificate was available. Based on CDC’s PRAMS protocol, stillbirths, fetal deaths, induced abortions and multiple-births with quadruplets or more were excluded from the sampling frame.

Since 2007, Massachusetts has used a stratified sampling methodology, sampling disproportionately from four racial and Hispanic ethnic groups: (1) White, non-Hispanic; (2) Black, non-Hispanic; (3) Hispanic; and (4) Other, non-Hispanic. All but White, non-Hispanic mothers were oversampled to improve precision in examining disparities by race and ethnicity. For oversampling purposes, the category of Other, non-Hispanic includes all racial and ethnic groups besides White, Black, and Hispanic. Similar to the 2009/2010 report, in the 2011 report, Massachusetts separates Asian, non-Hispanics from the “Other, non-Hispanic” category for analytical purposes. Therefore, the “Other, non-Hispanic” group has a small sample size which resulted in having prevalence estimates with wider 95% Confidence Limits and the findings in this group should be interpreted with caution. Additional demographic information was obtained from the birth file, including maternal education, age, marital status, parity, preferred language and country of birth.

Mothers who were two to six months postpartum were selected to receive up to three mailed paper surveys. Mothers who did not respond to the survey after the third mailing were contacted by telephone. About three percent of Massachusetts mothers with a live-birth in our study period were sampled. The data were weighted using selected maternal demographics to account for non-response and adjusted for sampling probabilities and coverage to represent the Massachusetts birth population in 2011.

Analyses for the MA PRAMS 2011 report accounted for the stratified sampling method and included the final survey weights. SAS v9.3 and SUDAAN v11.0 were used to calculate prevalence and bivariate statistics. The 95% Confidence Limits (95% CL) are included whenever possible in this report. When comparing estimates, if the 95% CLs do not overlap, we indicate that there is a difference. Otherwise, differences that are not significant are reported as having no statistical difference or not statistically significant.

Limitations

The data presented in this report are generalizable only to pregnancies resulting in a live birth of singletons or multiples of fewer than four, to Massachusetts residents who gave birth in the state.

The PRAMS survey is currently only administered in English and Spanish. This might present a limitation in collecting data from mothers who speak neither survey language.

Because PRAMS is based on self-reported information, there is the potential for misclassification error. Bias may occur if some groups of mothers recall experiences more or less accurately than others.

Income data were collected; however, about 9% of respondents declined to report income, and analyses involving household poverty could not include these respondents. In general, income level tends to be underreported on surveys.

Lastly, while PRAMS data are weighted to reflect the population of women giving birth in Massachusetts, in 2011, about 31% of those surveyed did not respond and results may be biased if weighting did not account for certain characteristics or experiences associated with non-response.

PRAMS SAMPLE CHARACTERISTICS (Weighted)

Race/ethnicity and nativity

After applying sampling weights, PRAMS 2011 respondents were largely reflective of the overall population of Massachusetts mothers by race/Hispanic ethnicity. White, non-Hispanics constituted 62.1% of the sample, Hispanics represented 17.6%, Black, non-Hispanics, 9.4%, Asian, non-Hispanics, 7.9%, and Other, non-Hispanics, 3.0%. About 31% of respondents were not born in the US and this profile is similar to what was reported according to the birth certificate (Table 1).

Marital Status

About 35% of PRAMS respondents were unmarried in Massachusetts and this profile is similar to what was reported according to the birth certificate.

Parity

About 46% in the PRAMS sample had previously given birth to a live-born infant and this profile is similar to the prevalence of mothers who had previously given birth according to the birth certificate.

Education

Among the respondents, about 24% had a high school education, and 43% hold a college degree. The educational profile of the respondents is similar to the mothers giving birth in Massachusetts.

Preferred Language

The majority of respondents, 90.1%, preferred to read or discuss health-related materials in English, followed by Spanish, 5.5%, Portuguese, 1.7%, Chinese, 0.4%, and all other languages, 2.3%. The preferred language profile of the respondents is similar to the mothers giving birth in Massachusetts.

Age

About 91% of mothers were between 20 and 39 years of age, 5.1% were less than 20 years old and 4.0% were 40 years or older. The age distribution of the respondents is similar to the mothers giving birth in Massachusetts.

Income

About one in four respondents were living at or below 100% of the Federal Poverty Level* (FPL) in the year before their babies were born. For a family of four, the income for 100% federal poverty threshold was \$22,350 in 2011. Income information is not collected on the birth certificate.

Disability

Almost 5% of mothers reported having a current emotional or physical disability. Most indicated that the disability had existed for at least a month. Disability status is currently not collected on the birth certificate.

**See Appendix A for technical note on the calculation of household federal poverty level.*

PRAMS SAMPLE CHARACTERISTICS (Weighted)[†]

Table 1. Maternal characteristics, PRAMS respondents vs. state birth population, 2011 MA PRAMS

Characteristic	Sample n	Weighted n	Weighted %*	State %***
Total	1603	70302	100.0	n/a
Maternal race/ethnicity				
White, non-Hispanic	552	43451	62.1	62.8
Black, non-Hispanic	324	6578	9.4	9.6
Hispanic	409	12313	17.6	17.5
Asian, non-Hispanic	226	5554	7.9	8.2
Other/Unknown, non-Hispanic	87	2120	3.0	1.9
Maternal age (years)				
<20	75	3615	5.1	4.8
20-29	668	27848	39.6	40.2
30-39	785	35997	51.2	50.5
40+	75	2842	4.0	4.5
Maternal education				
<High school	200	7255	10.5	11.1
High school diploma	377	16839	24.3	21.9
Some college	369	15421	22.3	21.1
College graduate	636	29760	43.0	45.9
Household poverty status (approximate)**				
≤ 100% Federal Poverty Level (FPL)	461	17627	27.6	n/a
> 100% Federal Poverty Level (FPL)	955	46242	72.4	n/a
Maternal nativity				
Non-US-born	757	21662	30.9	30.0
US-born	845	48509	69.1	70.0
Preferred language				
English	1380	63369	90.1	88.5
Spanish	127	3897	5.5	5.0
Portuguese	35	1167	1.7	1.6
Chinese	11	283	0.4	0.5
Other	50	1586	2.3	4.4
Marital status				
Unmarried	594	24717	35.2	34.8
Married	1009	45578	64.8	65.2
Maternal disability				
No	1475	64848	95.2	n/a
Yes	65	3259	4.8	n/a
Duration of disability				
Non-disabled	1475	64848	95.6	n/a
1 to 29 days	12	533	0.8	n/a
30+ days	47	2464	3.6	n/a
Parity				
No previous live births	745	31964	46.2	45.9
Previous live births	840	37232	53.8	54.1

*Does not include missing in proportions.

**See Methodology for explanation of "household poverty status" used in this report.

***Massachusetts Births, 2011, Registry of Vital Records and Statistics, Massachusetts Department of Public Health.

[†]The data were weighted using selected maternal demographics to account for non-response and adjusted for sampling probabilities and coverage to represent the Massachusetts birth population in 2011.

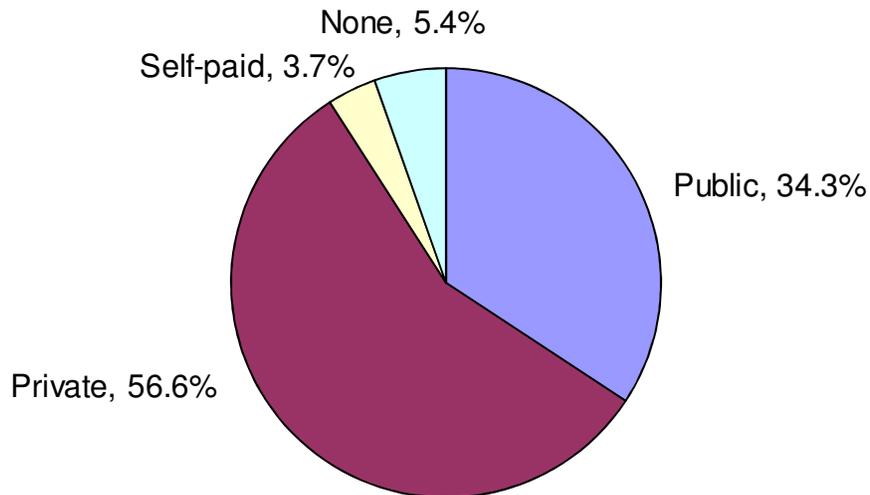
PRE-PREGNANCY

Pre-pregnancy health insurance

Having a source of health insurance is essential for gaining access to health care. Pregnant women who do not have a source of insurance may delay entry into prenatal care (Bengiamin, 2010). On April 12, 2006, Massachusetts enacted legislation that would provide nearly universal health care coverage to Massachusetts residents and beginning July 1, 2007, all Massachusetts residents were required to have health insurance.

Prior to pregnancy, about 57% of Massachusetts mothers had private health insurance, 34.3% had a government sponsored health insurance (i.e., MassHealth, Commonwealth Care, TRICARE), 3.7% were self-paid, and 5.4% reported no source of health insurance (Figure 1).

Figure 1. Prevalence of insurance types prior to pregnancy, 2011 MA PRAMS



PRE-PREGNANCY

Pre-pregnancy health insurance

Massachusetts' landmark health reform law has resulted in significant improvements in health insurance coverage; however, many challenges and barriers remain to obtaining health care coverage or accessing health care services (Health of Massachusetts, 2010). This is particularly true for younger women, low income women, and minority populations.

The proportions of mothers reporting that they did not have health insurance coverage prior to pregnancy were highest among those who were living at or below 100% of the FPL (13.1%), Asian, non-Hispanics (11.1%), or those born outside of the United States (10.2%) (Table 2).

Table 2. Prevalence of no insurance coverage prior to pregnancy, by socio-demographic characteristic, 2011 MA PRAMS

Characteristic	Weighted n	Weighted %	95% CL
Total	3754	5.4	4.2 - 6.9
Maternal race/ethnicity			
White, non-Hispanic	1461	3.4	2.0 - 5.7
Black, non-Hispanic	614	9.4	6.7 - 13.0
Hispanic	1034	8.4	6.1 - 11.6
Asian, non-Hispanic	550	11.1	6.1 - 19.2
Other, non-Hispanic	95	3.6	1.5 - 8.5
Maternal age (years)			
<20	299	8.3	3.1 - 20.1
20-29	2814	10.2	7.6 - 13.5
30-39	487	1.4	0.8 - 2.2
40+			<i>Insufficient data to report</i>
Maternal education			
<High school	688	9.7	5.8 - 15.6
High school diploma	1356	8.1	5.1 - 12.6
Some college	975	6.3	3.9 - 10.1
College graduate	669	2.3	1.3 - 4.0
Household poverty level			
≤100% FPL	2285	13.1	9.4 - 17.9
>100% FPL	941	2.0	1.2 - 3.4
Maternal nativity			
Non-US-born	2184	10.2	7.9 - 13.1
US-born	1569	3.2	2.0 - 5.2

Insufficient data to report: Less than 5 mothers.

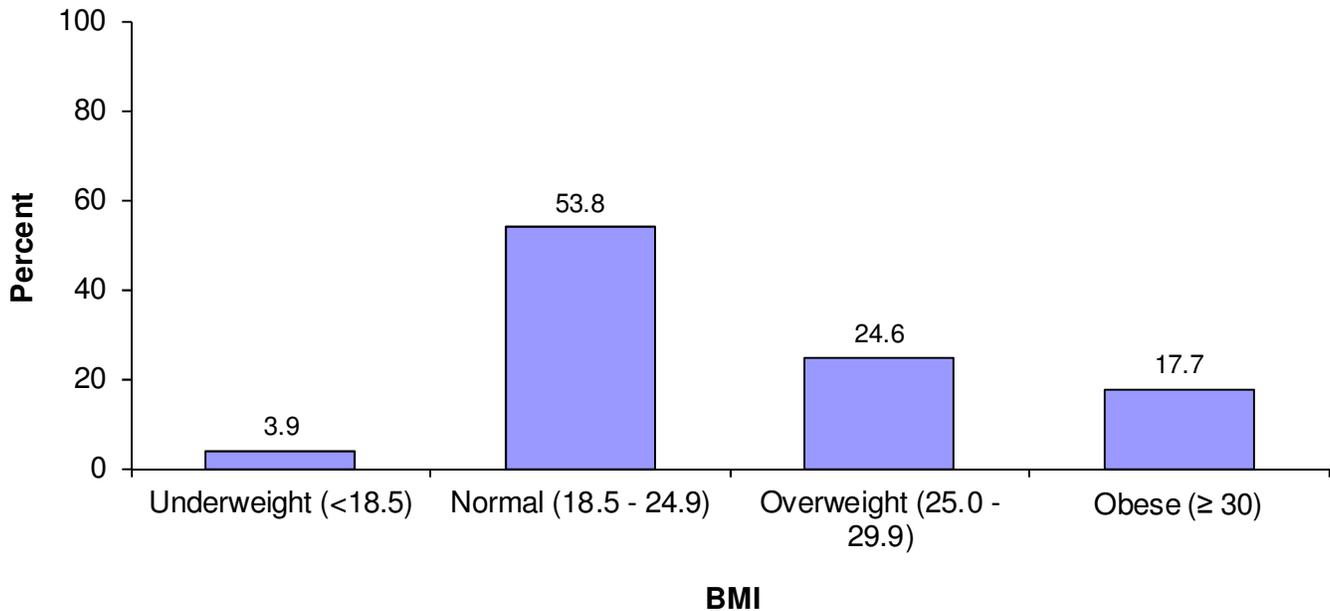
PRE-PREGNANCY

Body Mass Index (BMI)

The US prevalence of overweight among women aged 20-39 years was 26.7%, and the prevalence of obesity was 31.8% in 2011-2012 (Ogden, 2014). Women who are overweight or obese when they become pregnant may have a greater risk of health complications including hypertension, gestational diabetes, higher risk of Cesarean deliveries and have stillbirth, preterm delivery, congenital birth defects, and respiratory problems such as asthma (Papachatzi, 2013, Kristensen, 2005).

More than half of mothers, 53.8%, had a normal BMI prior to becoming pregnant. Almost 25% were overweight and almost 18% were obese (Figure 2).

Figure 2. Maternal Body Mass Index (BMI) prior to pregnancy, 2011 MA PRAMS



PRE-PREGNANCY

Preconception health & type 1 or 2 diabetes

Preconception care provides opportunities to intervene and improve outcomes for both the mother and her baby by identifying and managing risks before conception. It is important to identify and keep type 1 or 2 diabetes under control prior to becoming pregnant since it is known that maternal diabetes can cause malformations of an embryo or fetus and other complications of pregnancy (IOM, 1995).

The most commonly cited preconception health indicators in the 12 months before pregnancy included (1) getting teeth cleaned by a dentist or dental hygienist (65.7%); (2) exercising three or more days a week (45.0%); and (3) talking to a health care worker about family medical history (37.8%) (Figure 3). About 2% of mothers had type 1 or 2 diabetes prior to becoming pregnant (Figure 4).

Figure 3. Preconception health indicators, 2011 MA PRAMS

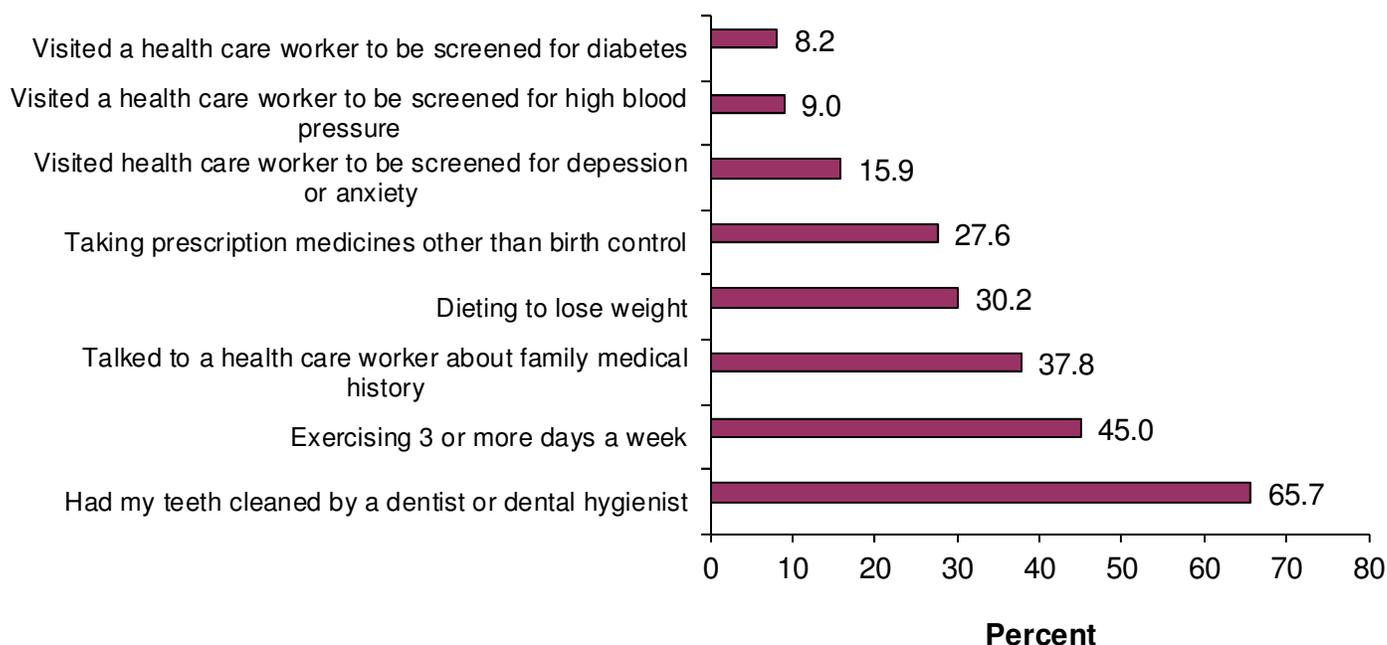
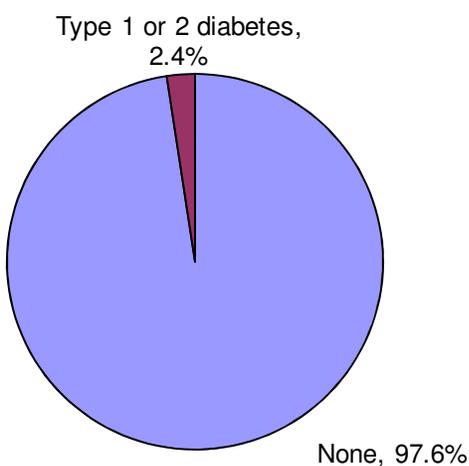


Figure 4. Prevalence of mothers with type 1 or 2 diabetes, 2011 MA PRAMS



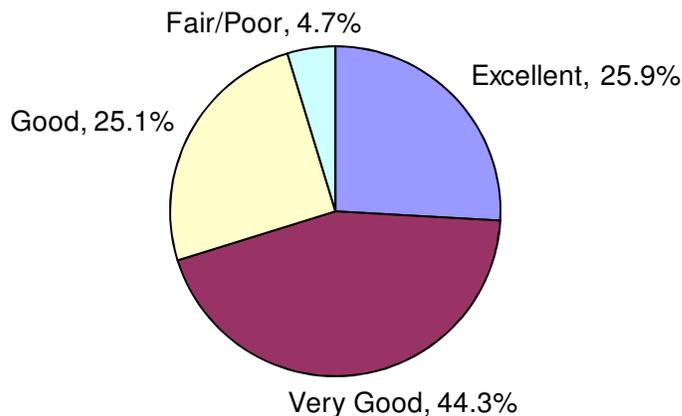
PRE-PREGNANCY

Maternal self-rated health before pregnancy

Self-rated health has been suggested to be a valid predictor of morbidity and mortality in adults and a useful tool in assessing the overall well-being of populations (Singh-Manoux, 2006).

About 70% of mothers reported that their health was very good or excellent, and another 25.1% reported that their health was good (Figure 5). Overall, 4.7% reported their health to be fair or poor.

Figure 5. Maternal self-rated health before pregnancy, 2011 MA PRAMS



Reported fair/poor self-rated health were most prevalent among those with less than a high school education (14.3%), other, non-Hispanic mothers (14.2%), or those who were living at or below 100% of the FPL (11.6%) (Table 3).

Table 3. Prevalence of fair/poor self-rated health before pregnancy, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Weighted	Weighted	95% CL	
	n	%		
Total	3257	4.7	3.5	6.2
Maternal race/ethnicity				
White, non-Hispanic	1189	2.8	1.5	5.1
Black, non-Hispanic	345	5.3	3.4	8.1
Hispanic	1280	10.3	7.5	13.9
Asian, non-Hispanic	66	1.3	0.6	3.1
Other, non-Hispanic	377	14.2	5.2	33.3
Maternal age (years)				
<20	546	15.1	7.4	28.3
20-29	1794	6.5	4.3	9.6
30-39	879	2.4	1.5	4.0
40+	<i>Insufficient data to report</i>			
Maternal education				
<High school	1040	14.3	8.9	22.2
High school diploma	1215	7.3	4.5	11.7
Some college	430	2.8	1.5	5.1
College graduate	408	1.4	0.6	3.1
Household poverty level				
≤100% FPL	2028	11.6	8.1	16.5
>100% FPL	710	1.5	0.9	2.7
Maternal nativity				
Non-US-born	1595	7.4	5.2	10.3
US-born	1663	3.4	2.2	5.4

Insufficient data to report: Less than 5 mothers.

PRE-PREGNANCY

Reactions to racism

The definitions of racism vary, but all include some notion of unequal treatment based on skin color and/or other physical characteristics. Stress due to racism influences birth outcomes among minority women (Nuru-Jeter, 2009).

About 3% of mothers reported feeling stressed due to their race/ethnic background, 3% of mothers reported feeling emotionally upset as a result of how they were treated, and about 3% reported experiencing physical symptoms related to treatment based on their race/ethnic background (Figure 6). Minority mothers reported more negative experiences due to racism (Figure 7).

Figure 6. Prevalence of reactions to racism during the 12 months before delivery, 2011 MA PRAMS

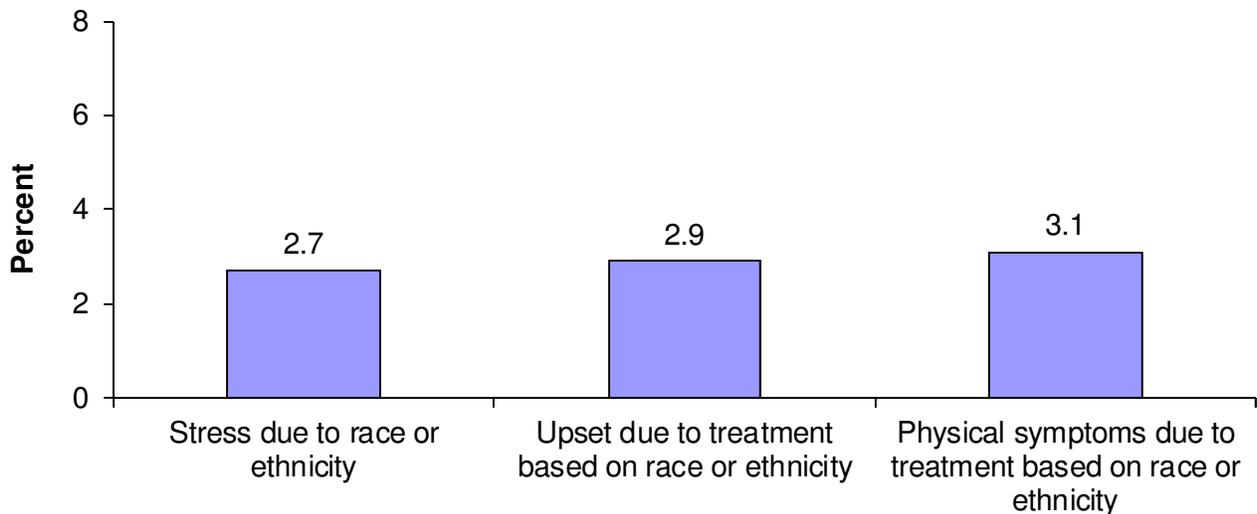
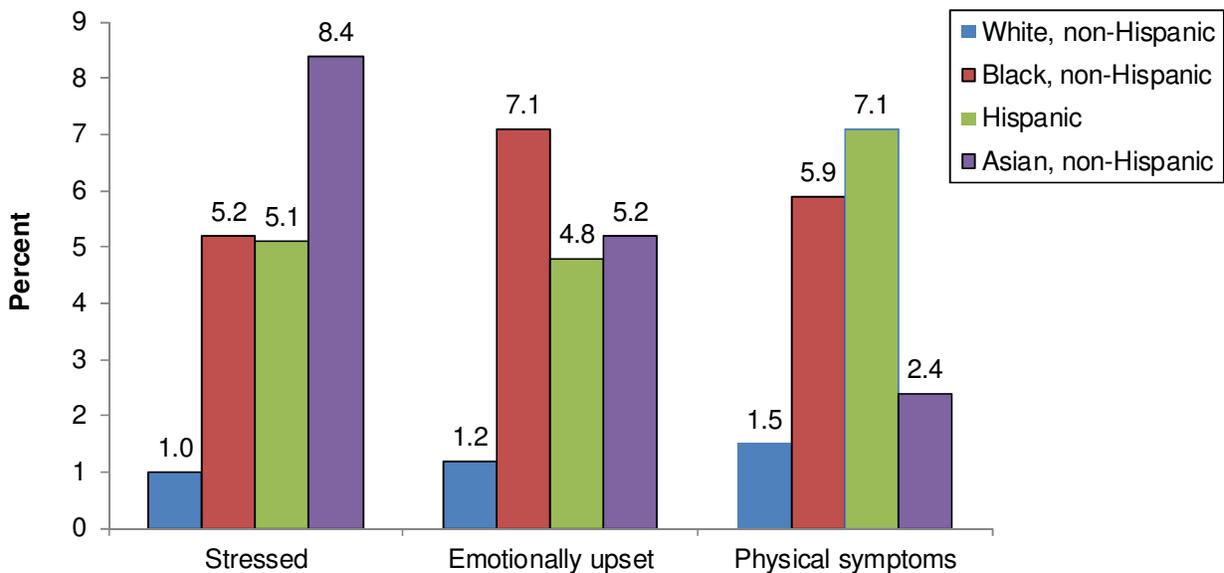


Figure 7. Prevalence of reactions to racism during the 12 months before delivery, by maternal race/ethnicity, 2011 MA PRAMS



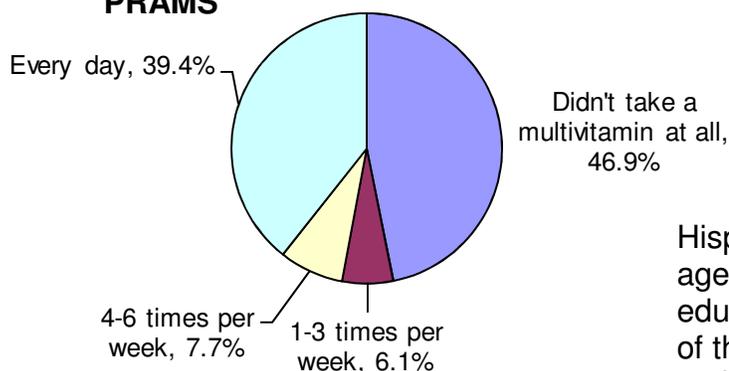
PRE-PREGNANCY

Prenatal multivitamin use

The use of multivitamins containing folic acid before conception and during the first 6 weeks of pregnancy may reduce the risk of neural tube defects in developing embryos (Milunsky, 1989). There have recently been increased efforts to deliver this important public health message to women of childbearing age who may be considering becoming pregnant.

About 39% of mothers reported taking multivitamins every day of the week in the month before becoming pregnant. About 47% reported never taking them during that time (Figure 8).

Figure 8. Prevalence of multivitamin use in the month prior to pregnancy, 2011 MA PRAMS



Hispanic mothers (25.7%), those under 20 years of age (14.7%), mothers with a less than high school education (19.9%), or those living at or below 100% of the FPL (22.2%) were the least likely to take multivitamins every day (Table 4).

Table 4. Prevalence of daily multivitamin use in the month prior to pregnancy, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Weighted n	Weighted	
		%	95% CL
Total	27520	39.4	36.2 - 42.7
Maternal race/ethnicity			
White, non-Hispanic	18917	43.9	39.2 - 48.7
Black, non-Hispanic	2019	31.4	24.7 - 39.0
Hispanic	3190	25.7	21.0 - 31.0
Asian, non-Hispanic	2202	44.6	35.1 - 54.5
Other, non-Hispanic	890	33.6	20.5 - 49.9
Maternal age (years)			
<20	530	14.7	6.7 - 29.2
20-29	7524	27.1	22.6 - 32.0
30-39	17910	50.2	45.5 - 54.9
40+	1557	55.4	39.9 - 70.0
Maternal education			
<High school	1432	19.9	13.7 - 28.1
High school diploma	4055	24.2	18.6 - 30.8
Some college	4692	30.6	24.5 - 37.4
College graduate	16759	56.6	51.4 - 61.6
Household poverty level			
≤100% FPL	3892	22.2	17.5 - 27.7
>100% FPL	21909	47.5	43.3 - 51.8
Maternal nativity			
Non-US-born	7548	35.3	30.7 - 40.2
US-born	19840	41.0	36.8 - 45.3

PRE-PREGNANCY

Pregnancy intention

Having an unplanned pregnancy could result in later awareness of the pregnancy and subsequently later cessation of dangerous and unhealthy behaviors, such as smoking or substance use. Unintended pregnancy is associated with delayed entry into prenatal care (IOM, 1995, Altfeld, 1997).

The PRAMS survey measures two distinct elements of pregnancy intention: whether the mother had been actively trying to get pregnant at the time of conception, and how she felt about becoming pregnant right before the pregnancy occurred.

Among all mothers, about 67% reported that they had wanted the pregnancy then or sooner, and about 33% had wanted the pregnancy either later or never (Figure 9).

About 41% of mothers reported that they had not been trying to get pregnant when they conceived (Figure 10).

Figure 9. Feelings about becoming pregnant prior to this pregnancy, 2011 MA PRAMS

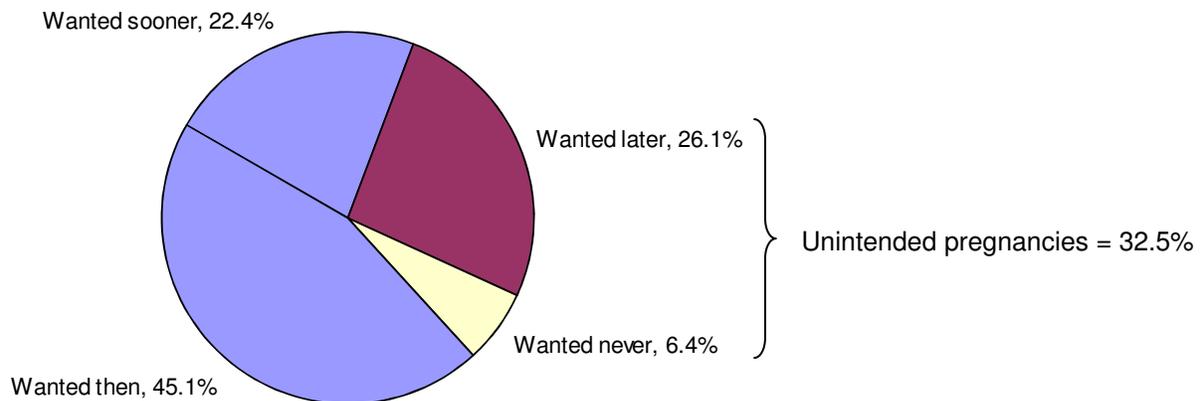
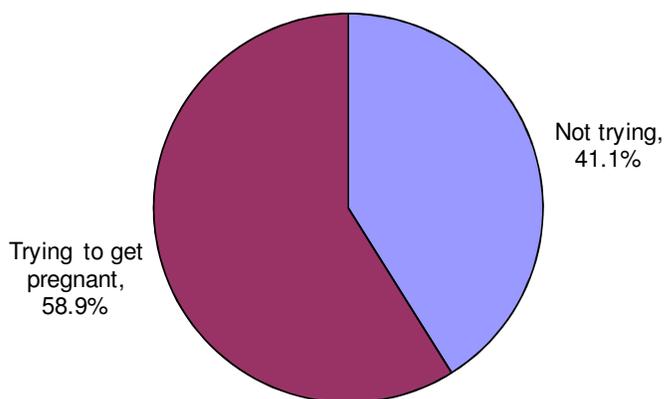


Figure 10. Proportion of mothers trying to get pregnant, 2011 MA PRAMS



PRE-PREGNANCY

Pregnancy intention

The proportions of mothers reporting they had not been trying to become pregnant were highest among mothers aged 16-17 years (89.5%), those who reported a history of physical abuse (72.8%), unmarried (68.5%), Black, non-Hispanics (66.7%), or those living at or below 100% of the FPL (65.9%) (Table 5).

Similar socio-demographic patterns were observed among those who reported wanting the pregnancy “later” or “never” as were observed for the question around not trying to become pregnant. The proportions of mothers who reported that they wanted the pregnancy “later” or “never” were highest among mothers aged 16-17 years (84.0%), with a history of physical abuse (71.7%), with a less than high school education (66.2%), unmarried (58.4%), living at or below 100% of the FPL (57.1%), or Black, non-Hispanics (51.9%) (Table 5).

Table 5. Prevalence of pregnancy intention and feelings about the timing of most recent pregnancy, by socio-demographic characteristics and history of abuse, 2011 MA PRAMS

Characteristic	% Not trying to become pregnant			% Wanted pregnancy later/never		
	Weighted n	Weighted %	95% CL	Weighted n	Weighted %	95% CL
Total	28664	41.1	37.8 - 44.4	22541	32.5	29.4 - 35.6
Maternal race/ethnicity						
White, non-Hispanic	14992	34.7	30.2 - 39.5	11569	27.0	22.8 - 31.6
Black, non-Hispanic	4303	66.7	60.2 - 72.6	3350	51.9	44.7 - 59.1
Hispanic	6399	52.1	46.7 - 57.6	4953	40.0	34.8 - 45.4
Asian, non-Hispanic	1722	34.9	26.1 - 44.8	1592	32.8	24.3 - 42.8
Other, non-Hispanic	1227	47.4	31.9 - 63.4	1077	41.3	26.5 - 58.0
Maternal age (years)						
≤15			<i>Insufficient data to report</i>			<i>Insufficient data to report</i>
16-17	610	89.5	69.9 - 96.9	572	84.0	63.1 - 94.1
18-19	2110	76.9	57.8 - 89.0	1846	66.4	48.1 - 80.9
20-29	14005	50.8	45.5 - 56.0	11399	41.6	36.5 - 46.9
30-39	10259	28.7	24.6 - 33.1	7673	21.4	17.8 - 25.6
40+	1547	54.7	39.3 - 69.3	897	32.9	20.0 - 49.0
Maternal education						
<High school	4699	66.2	57.4 - 74.0	3692	51.6	42.2 - 60.8
High school diploma	9966	59.8	52.7 - 66.5	7715	46.3	39.4 - 53.5
Some college	7585	49.5	42.5 - 56.4	6242	40.7	34.0 - 47.7
College graduate	6091	20.5	16.7 - 24.9	4649	15.8	12.5 - 19.9
Household poverty level						
≤100% FPL	11505	65.9	59.9 - 71.5	9851	57.1	50.9 - 63.2
>100% FPL	13941	30.2	26.5 - 34.3	10513	22.9	19.5 - 26.6
Maternal nativity						
Non-US-born	8599	40.4	35.7 - 45.2	6383	29.9	25.7 - 34.5
US-born	20066	41.5	37.3 - 45.8	16158	33.6	29.7 - 37.8
Marital status						
Unmarried	16544	68.5	63.2 - 73.3	14091	58.4	52.9 - 63.7
Married	12120	26.6	23.1 - 30.4	8450	18.6	15.6 - 22.0
History of physical abuse						
No	27158	40.4	37.1 - 43.8	21167	31.6	28.5 - 34.8
Yes	1095	72.8	51.6 - 87.1	1078	71.7	50.6 - 86.3

Insufficient data to report: Less than 5 mothers.

PRE-PREGNANCY

Pregnancy intention

The proportions of mothers reporting they wanted to be pregnant “sooner” were highest among 30-39 years old mothers (29.2%), those aged 40 years or older (37.6%), married (29.1%), with at least a college education (29.0%), or those living above 100% of the FPL (25.7%) (Table 6).

Table 6. Prevalence of wanting the pregnancy sooner by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	% Wanted pregnancy sooner		
	Weighted n	Weighted %	95% CL
Total	15592	22.4	19.7 - 25.4
Maternal race/ethnicity			
White, non-Hispanic	10154	23.7	19.9 - 28.0
Black, non-Hispanic	1446	22.4	16.6 - 29.6
Hispanic	1707	13.8	10.5 - 17.8
Asian, non-Hispanic	1637	33.8	24.9 - 44.0
Other, non-Hispanic	517	19.8	10.5 - 34.4
Maternal age (years)			
<20		<i>Insufficient data to report</i>	
20-29	3899	14.2	10.9 - 18.4
30-39	10451	29.2	25.1 - 33.7
40+	1026	37.6	23.7 - 54.0
Maternal education			
<High school	945	13.2	7.7 - 21.7
High school diploma	3054	18.3	13.4 - 24.5
Some college	2699	17.6	13.0 - 23.4
College graduate	8509	29.0	24.5 - 33.9
Household poverty level			
≤100% FPL	2333	13.5	9.8 - 18.3
>100% FPL	11816	25.7	22.9 - 29.1
Maternal nativity			
Non-US-born	5905	27.7	23.2 - 32.6
US-born	9556	19.9	16.7 - 23.5
Marital status			
Unmarried	2375	9.8	7.1 - 13.5
Married	13217	29.1	25.4 - 33.1
History of physical abuse			
No	15259	22.8	20.0 - 25.8
Yes		<i>Insufficient data to report</i>	

Insufficient data to report: Less than 5 mothers.

PRE-PREGNANCY

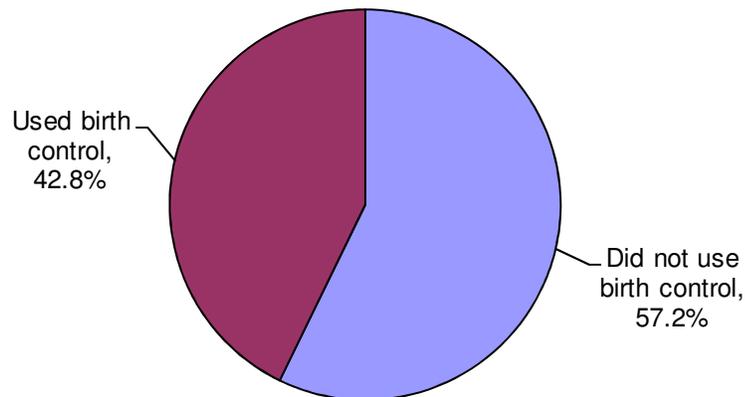
Contraceptive use

A key to successful family planning programming and policy is exploring why mothers who were not intending to become pregnant did not or could not use a method of contraception. Better understanding of these issues could potentially lead to more effective strategies to improve access to and utilization of contraception.

PRAMS mothers who had not been trying to become pregnant were asked whether they or their partners had been “doing anything to keep from getting pregnant” at the time of pregnancy.

Among those who reported that they had not been trying to get pregnant, 57.2% reported *not* using any form of contraception (Figure 11).

Figure 11. Prevalence of pre-pregnancy contraceptive use among mothers who were not trying to get pregnant, 2011 MA PRAMS

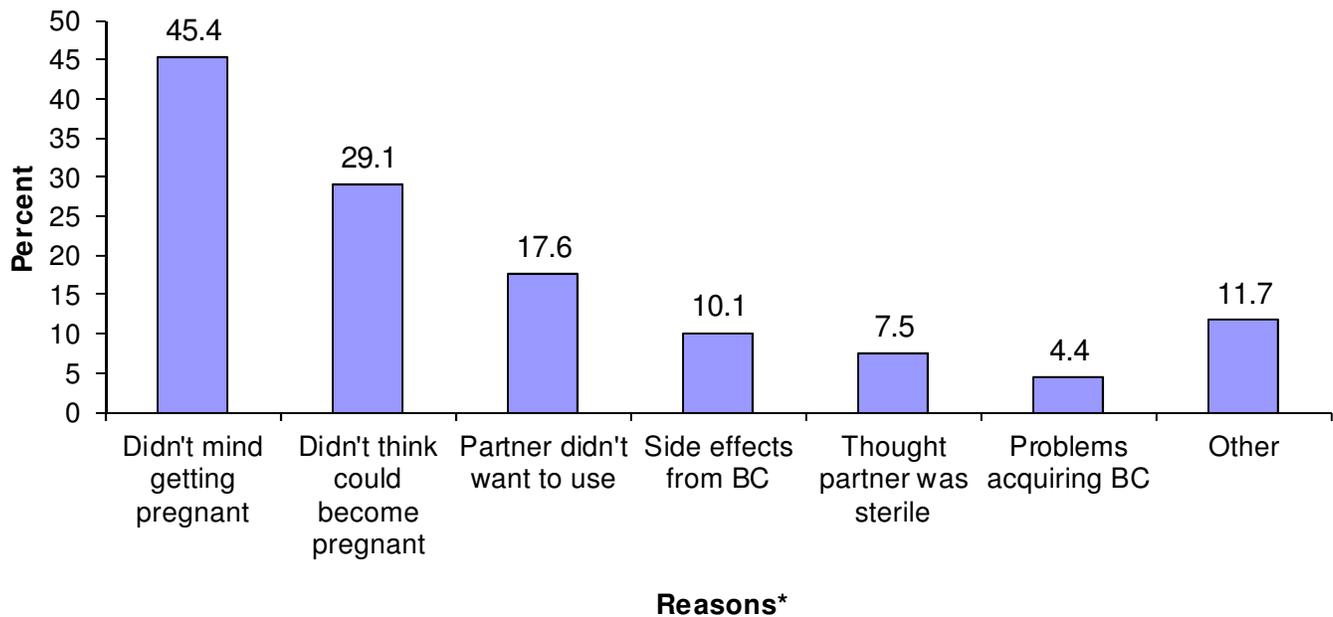


PRE-PREGNANCY

Contraceptive use

Among mothers who were not trying to get pregnant, some of the top reasons for not using any contraception included mothers not minding getting pregnant (45.4%), perception that one could not get pregnant at that time (29.1%), or husbands/partners not wanting to use birth control (17.6%) (Figure 12).

Figure 12. Reasons for not using a contraceptive method prior to this pregnancy among mothers who were not trying to get pregnant, 2011 MA PRAMS



**Reasons for not using a contraceptive method are not mutually exclusive.*

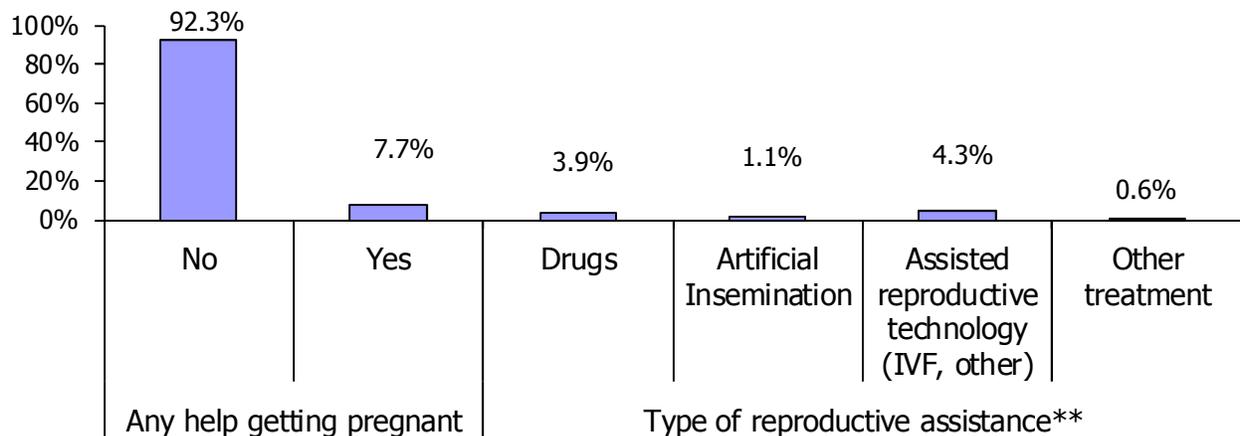
PRE-PREGNANCY

Fertility treatment

An estimated 11% of women of reproductive age experienced fertility problems in 2006-2010 (Chandra, 2013). A variety of fertility treatments are now available. These include fertility-enhancing drugs, artificial insemination, and assisted reproductive technology (such as in vitro fertilization (IVF), gamete intrafallopian transfer (GIFT), zygote intrafallopian transfer (ZIFT), intracytoplasmic sperm injection (ICSI), frozen embryo transfer, or donor embryo transfer).

Among all mothers, 7.7% reported receiving some form of assistance from a health care provider in becoming pregnant. Among all mothers, 4.3% used assisted reproductive technology (ART), 3.9% received fertility drugs, 1.1% received artificial insemination, and 0.6% used other forms of treatment (Figure 13).

Figure 13. Prevalence of fertility treatment use*, 2011 MA PRAMS



*Figure based on population prevalence of reproductive therapies.

**Types of fertility treatments are not mutually exclusive.

PRE-PREGNANCY

Fertility treatment

White, non-Hispanic mothers (10.1%) reported higher use of fertility treatment. Mothers aged 30-39 years and 40 years or older reported higher use of fertility treatment (11.7%, 17.7%, respectively). Those who were married reported higher use of fertility treatment than those who were unmarried (10.6% vs. 2.1%). While there were some variations in the prevalence of fertility treatment use by other maternal characteristics, none was statistically significant. Analysis by other socio-demographic characteristics was limited by small cell size (Table 7).

Table 7. Prevalence of fertility treatment use, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Had any medical assistance in becoming pregnant		
	Weighted n	Weighted %	95% CL
Total	5380	7.7	6.0 - 9.7
Maternal race/ethnicity			
White, non-Hispanic	4364	10.1	7.6 - 13.3
Black, non-Hispanic	162	2.5	1.3 - 4.5
Hispanic	341	2.7	1.5 - 4.8
Asian, non-Hispanic	224	4.5	1.9 - 10.1
Other, non-Hispanic	<i>Insufficient data to report</i>		
Maternal age (years)			
<20	<i>Insufficient data to report</i>		
20-29	650	2.3	1.1 - 5.0
30-39	4199	11.7	8.9 - 15.2
40+	503	17.7	8.9 - 32.2
Maternal education			
<High school	<i>Insufficient data to report</i>		
High school diploma	1022	6.1	3.3 - 11.0
Some college	855	5.5	3.1 - 9.7
College graduate	3480	11.7	8.7 - 15.5
Household poverty level			
≤100% FPL	<i>Insufficient data to report</i>		
>100% FPL	4870	10.5	8.2 - 13.5
Maternal nativity			
Non-US born	1366	6.3	4.1 - 9.5
US born	4015	8.3	6.2 - 11.0
Marital Status			
Not Married	503	2.1	1.0 - 4.4
Married	4877	10.6	8.3 - 13.6

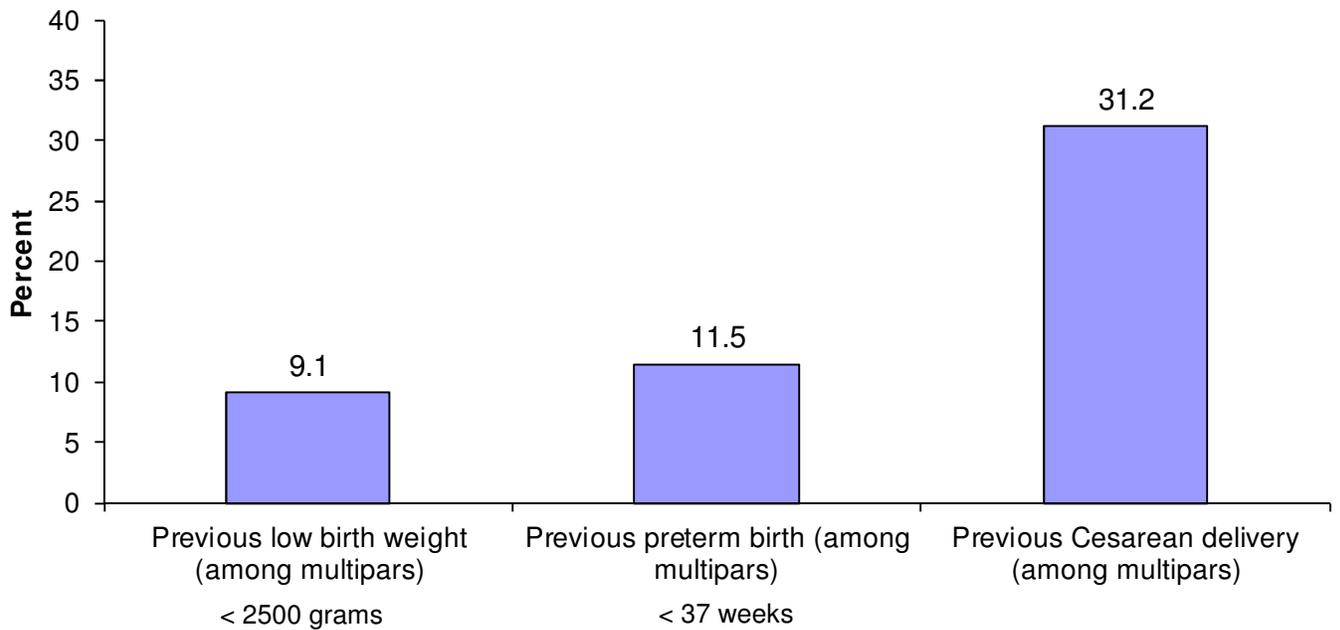
Insufficient data to report: Less than 5 mothers.

PRE-PREGNANCY

Previous birth outcomes

Among multiparous mothers (those who have previously given birth to a live infant), 31.2% reported having had a previous Cesarean delivery, 11.5% reported having had a previous preterm birth, and 9.1% reported having had a previous low birth weight baby (Figure 14).

Figure 14. Prevalence of previous low birth weight, preterm births, and Cesarean delivery among multiparous mothers, 2011 MA PRAMS



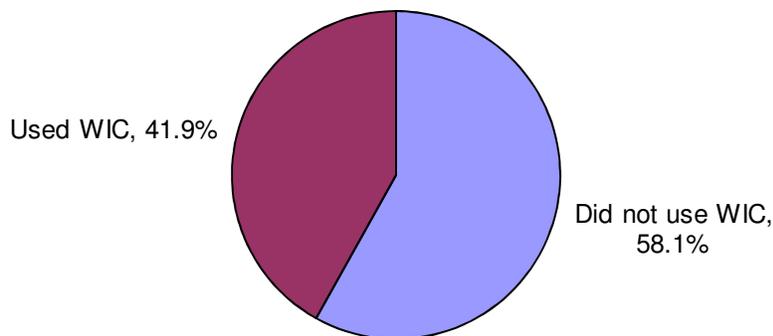
PREGNANCY

WIC participation during pregnancy

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides low income women (income at or below 185% of the Federal Poverty Level) with a variety of essential supportive services during and after pregnancy and until their children turn five years old. WIC provides supplemental food packages to families, as well as nutritional counseling, breastfeeding support, and referrals to medical and social services.

About two in five women with a live birth (41.9%) reported participating in WIC during their most recent pregnancy (Figure 15).

**Figure 15. Proportion of mothers participating in WIC during pregnancy, 2011
MA PRAMS**



PREGNANCY

WIC participation during pregnancy

The highest rates of WIC participation were among mothers under 20 years of age (90.4%), living at or below 100% of the FPL (86.9%), with a less than high school education (81.9%), on Medicaid (81.3%), unmarried (80.3%), Hispanic (79.7%), or born outside of the US (56.7%) (Table 8).

Table 8. Prevalence of WIC participation during pregnancy, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	% Participated in WIC		
	Weighted n	Weighted %	95% CL
Total	28940	41.9	38.8 - 45.0
Maternal race/ethnicity			
White, non-Hispanic	11875	27.8	23.5 - 32.5
Black, non-Hispanic	4988	78.0	73.0 - 82.4
Hispanic	9756	79.7	74.4 - 84.1
Asian, non-Hispanic	1180	24.7	17.2 - 34.0
Other, non-Hispanic	1081	42.5	27.5 - 59.0
Maternal age (years)			
<20	3221	90.4	79.0 - 95.9
20-29	16379	60.4	55.0 - 65.5
30-39	8389	23.6	20.1 - 27.4
40+	951	33.7	21.6 - 48.3
Maternal education			
<High school	5680	81.9	71.9 - 88.8
High school diploma	12308	74.2	67.2 - 80.1
Some college	8313	54.5	47.4 - 61.4
College graduate	2345	8.0	5.9 - 10.7
Household poverty level			
≤100% FPL	15154	86.9	81.8 - 90.7
>100% FPL	9767	21.2	18.1 - 24.7
Marital status			
Unmarried	19247	80.3	75.3 - 84.6
Married	9693	21.5	18.5 - 24.7
Maternal nativity			
Non-US born	11960	56.7	51.8 - 61.4
US born	16980	35.5	31.5 - 39.6
Prenatal care payer source			
Non-Medicaid	7270	17.1	14.3 - 20.4
Medicaid	20888	81.3	76.5 - 85.3

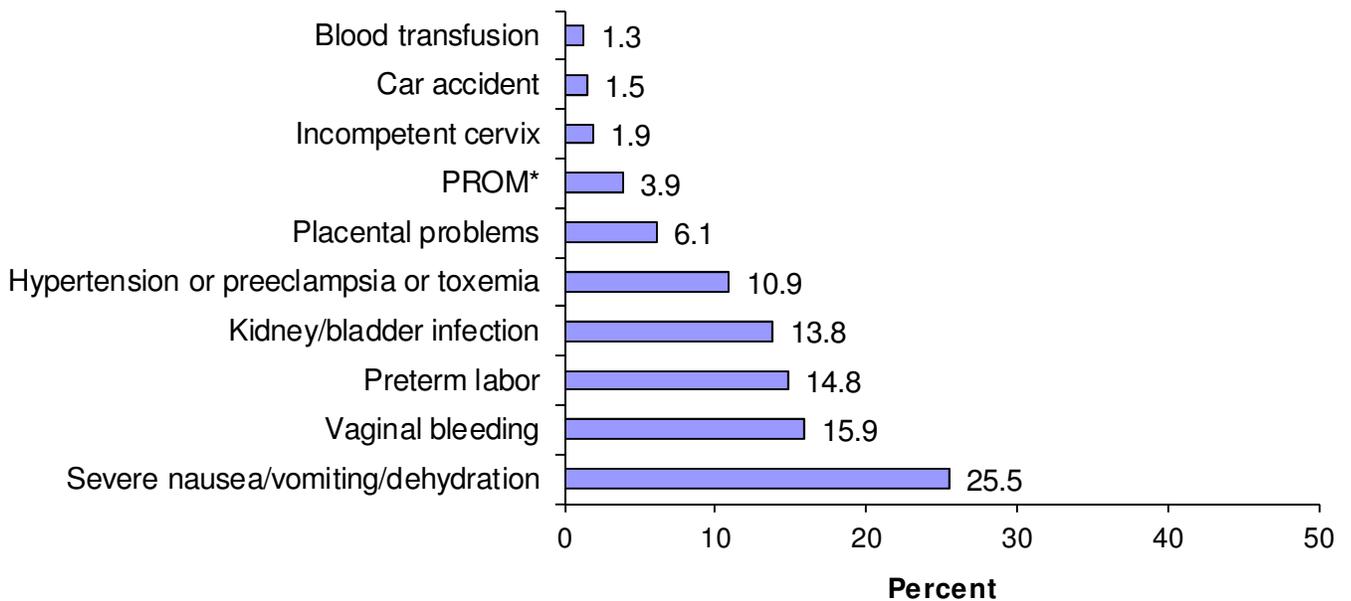
PREGNANCY

Health complications during pregnancy

A number of health complications can arise during pregnancy, from milder conditions needing little or no medical intervention to more severe complications leading to hospitalization prior to birth (Callaghan, 2012).

The most commonly reported health complications during pregnancy were severe nausea, vomiting, or dehydration (25.5%) (Figure 16). See Table 9 for details on gestational diabetes mellitus.

Figure 16. Prevalence of maternal health complications during pregnancy, 2011 MA PRAMS**



*PROM = premature rupture of membranes

**Types of maternal health complications are not mutually exclusive.

PREGNANCY

Gestational diabetes & follow-up care

Gestational diabetes mellitus (GDM) is defined as glucose intolerance which did not exist immediately prior to the pregnancy, but was diagnosed during pregnancy (Kjos, 1999). GDM can cause health complications for infants, including macrosomia (high birth weight) and increased risk of childhood obesity and type 2 diabetes. Delivery may be complicated by having a larger baby, leading to greater likelihood of Cesarean delivery or injury to the child during birth. Mothers with GDM may be at increased risk of type 2 diabetes later in life (Metzger, 2007). GDM follow-up care for these women is important to reduce the risk of GDM recurrence and to prevent or delay future diabetes.

The overall prevalence of reported GDM was 10.1% with the highest occurrence among mothers who were obese (19.7%) (Table 9).

Table 9. Prevalence of gestational diabetes, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Gestational Diabetes		
	Weighted n	Weighted %	95% CL
Total	6994	10.1	8.3 - 12.3
Maternal race/ethnicity			
White, non-Hispanic	3333	7.8	5.5 - 10.8
Black, non-Hispanic	741	11.6	7.0 - 18.4
Hispanic	1584	13.0	9.8 - 17.2
Asian, non-Hispanic	691	14.4	8.5 - 23.2
Other, non-Hispanic	<i>Insufficient data to report</i>		
Maternal age (years)			
<20	<i>Insufficient data to report</i>		
20-29	2441	9.0	6.3 - 12.7
30-39	3464	9.7	7.3 - 12.8
40+	467	16.6	7.7 - 32.3
Maternal education			
<High school	838	12.1	7.3 - 19.5
High school diploma	1689	10.2	6.7 - 15.3
Some college	1929	12.7	8.6 - 18.4
College graduate	1923	6.5	4.5 - 9.4
Household poverty level			
≤100% FPL	1832	10.5	7.2 - 15.0
>100% FPL	3817	8.3	6.2 - 10.9
Maternal nativity			
Non-US-born	2568	12.2	9.3 - 15.9
US-born	3976	8.3	6.2 - 11.0
Body Mass Index (BMI)			
Normal or underweight	2603	6.8	4.9 - 9.3
Overweight	1411	8.6	5.7 - 13.0
Obese	2332	19.7	13.7 - 27.5

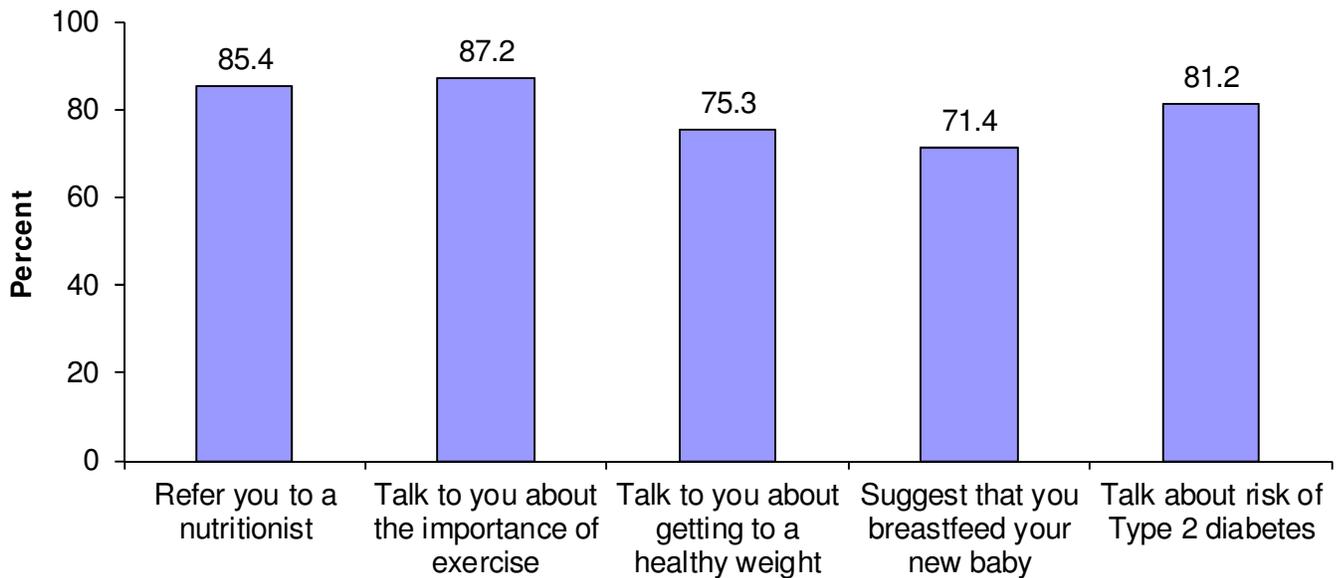
Insufficient data to report: Less than 5 mothers.

PREGNANCY

Gestational diabetes & follow-up care

The overall prevalence of reported GDM was 10.1%. Among mothers with GDM, 87.2% reported that their prenatal care provider talked to them about the importance of exercise, 85.4% reported that their prenatal care provider referred them to a nutritionist, 81.2% learned about their risk of type 2 diabetes from their prenatal care provider, 75.3% reported that their prenatal care provider taught them about getting to and maintaining a healthy weight, and 71.4% reported that their prenatal care provider suggested breastfeeding the new baby (Figure 17). This indicates that more efforts are needed to encourage women with GDM to breastfeed.

Figure 17. Prevalence of follow-up care received by mothers with gestational diabetes, 2011 MA PRAMS



Massachusetts mothers say...

“Since I was diagnosed with gestational diabetes, I needed more help with the kind of food I should eat. Even though I was referred to a nutritionist, I didn’t find that helpful since they were not well-informed about Asian foods. I wish nutritionists were well-informed about other cuisines other than American dishes.”

PREGNANCY

Exercise and diet

Appropriate exercise is key to maintaining good health during pregnancy and beyond. Unless otherwise advised, healthy women can maintain a regular schedule of exercise during pregnancy. The American College of Obstetricians and Gynecologists (ACOG) recommends that most women exercise 30 minutes or more on most, if not all, days of the week (ACOG, 2009).

The majority of mothers (63.4%) reported performing some types of exercise at least once a week during the last three months of pregnancy. Almost 6% of mothers were told by a health care provider that they should not exercise at all during the last three months of pregnancy (Figure 18).

Figure 18. Frequency of physical activity during last three months of pregnancy, 2011 MA PRAMS

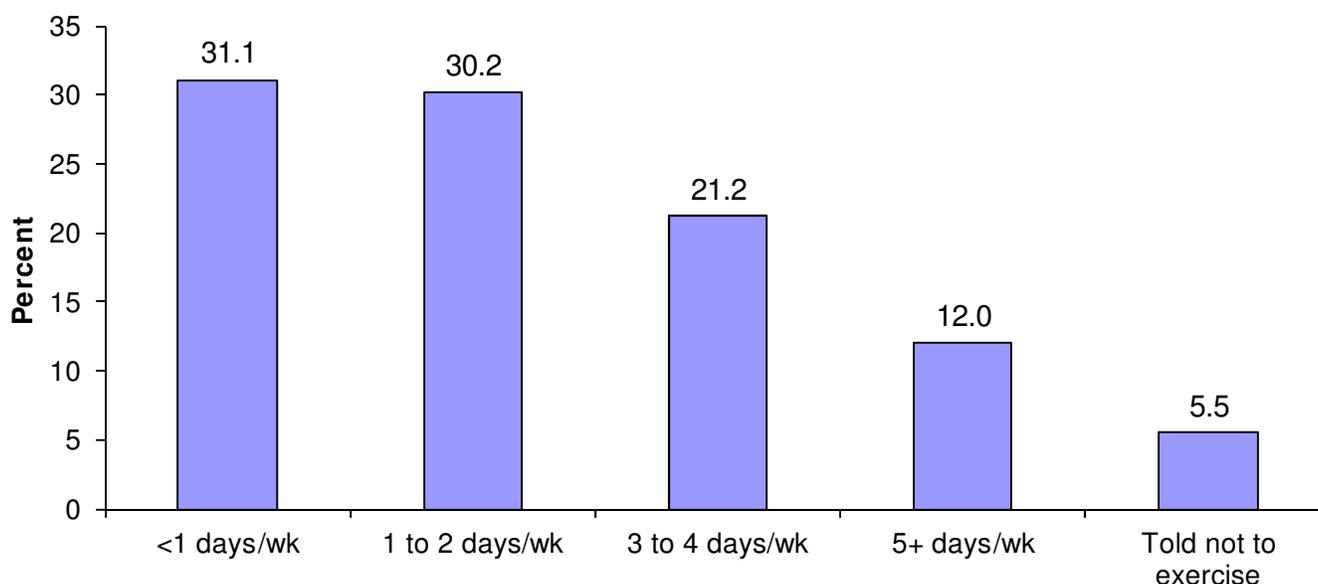
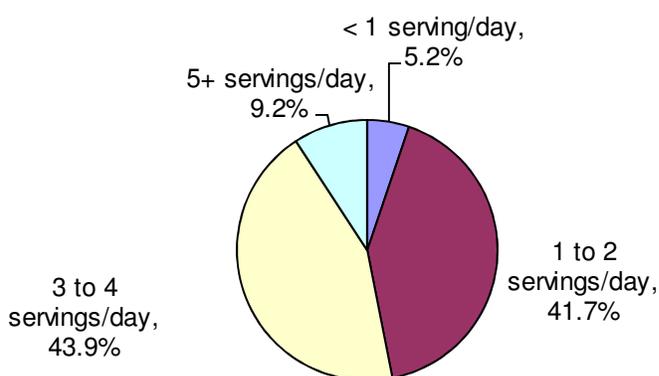


Figure 19. Consumption of fruits/vegetables per day in the last three months of pregnancy, 2011 MA PRAMS



Current recommendations state that pregnant women should eat at least 2½ cups or five servings of vegetables and 1½ to two cups or three to four servings of fruits per day (ACOG, 2008).

About 94.8% of mothers reported eating at least one serving* of fruits or vegetables per day in the last three months of pregnancy. However, only 9.2% achieved five or more per day (Figure 19).

*A "serving" of fruit/vegetable has been defined by the US Department of Agriculture as ½ cup; however, "serving" was not defined for respondents in the PRAMS survey.

PREGNANCY

Stressful life events

The perinatal period can be a stressful time for mothers and their families. A high proportion of MA mothers reported experiencing at least one type of family-related (31.7%), financial (46.9%) or illness/death-related (30.5%) stressor during the year before their babies were born* (Figure 20). Stressors are not mutually exclusive.

The most common stressful life event mothers experienced was moving to a new address (28.9%). Some mothers also reported having a very sick family member (23.7%), or arguing with their partners more than usual during this time (20.1%) (Figure 21).

Figure 20. Prevalence of stressful life events in the 12 months before birth, by type, 2011 MA PRAMS

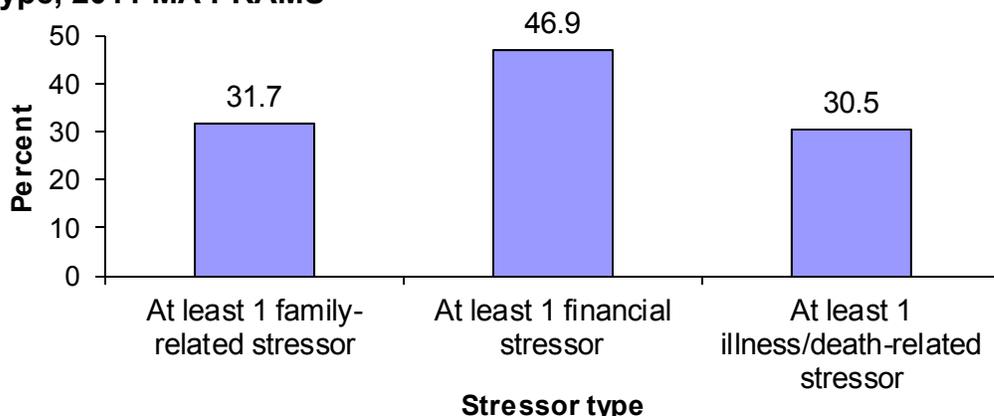
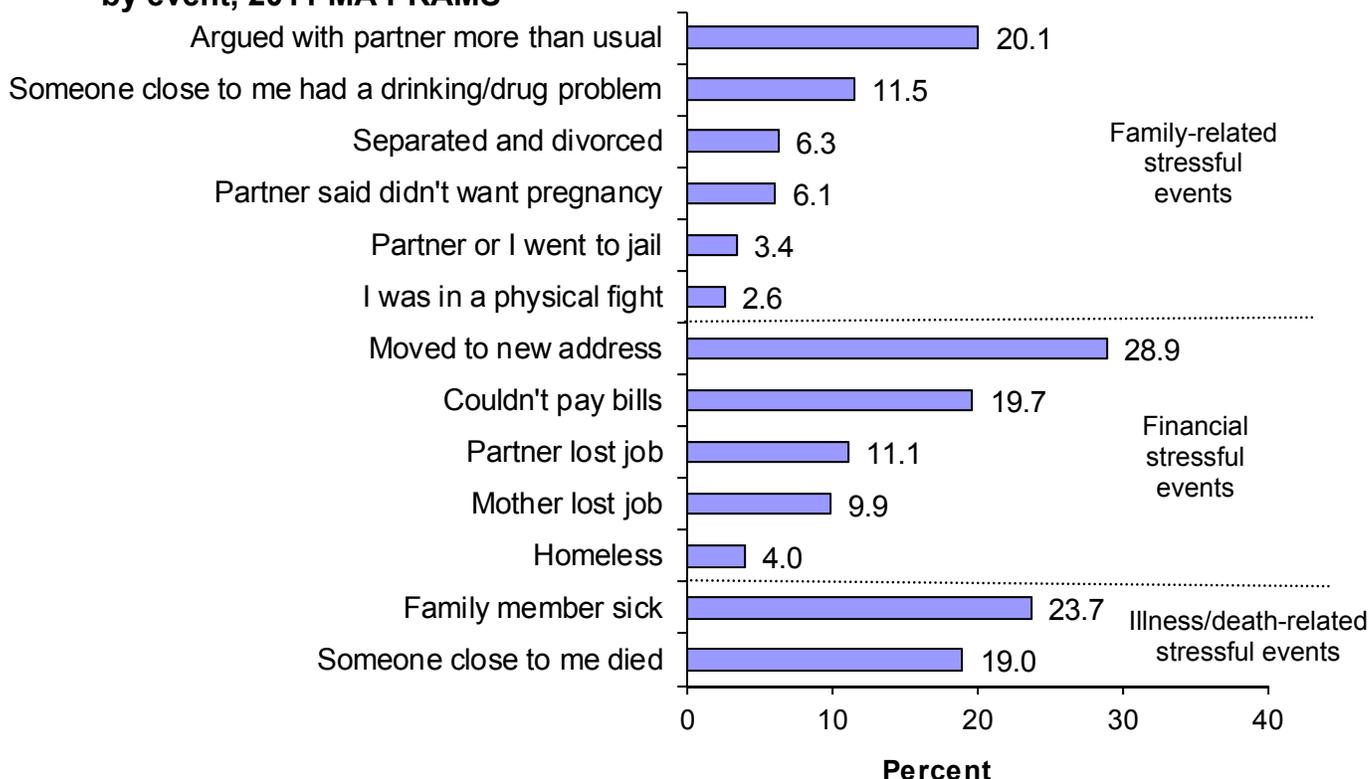


Figure 21. Prevalence of stressful life events in the 12 months before birth, by event, 2011 MA PRAMS



*Family-related stressors: Separation/divorce, physical fight, partner said didn't want pregnancy, argued with partner more than usual, someone close had a problem with drinking/drugs, or partner went to jail; Financial stressors: Moving to a new address, being homeless, mom lost job, partner lost job, or had bills couldn't pay; Illness/death-related stressors: Family member sick/had to go to hospital, or someone close died.

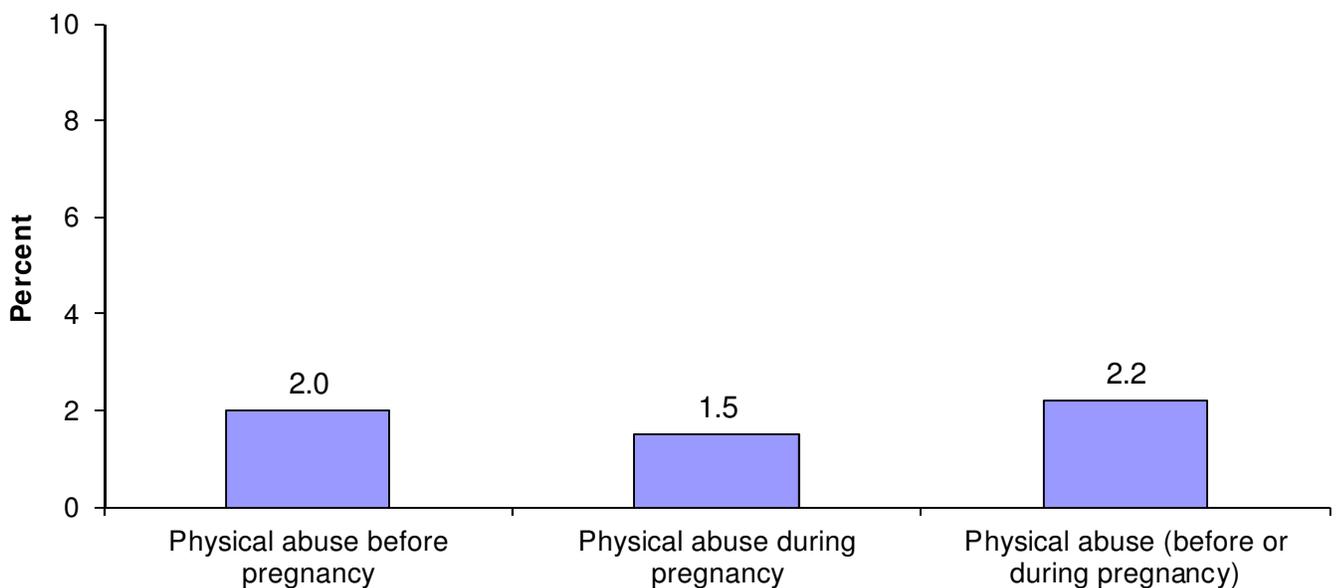
PREGNANCY

Intimate partner violence

Intimate partner violence (IPV) is an important public health problem in the US. It is estimated that one out of four women will experience IPV in her lifetime, and pregnant women may be at a higher risk for IPV than non-pregnant women (Tjaden, 2000, Jasinski, 2004). Homicide is the leading cause of death among pregnant women in the US (Chang, 2005). IPV may lead to pregnancy complications including vaginal bleeding and infection, and adverse outcomes such as preterm delivery and low birth weight infants (Janssen, 2003; Sarkar, 2008).

A small percentage of mothers reported experiencing physical abuse from an intimate partner (one type of IPV) in the 12 months before (2.0%) or during (1.5%) pregnancy. About 2% of mothers reported having experienced physical abuse during either time (Figure 22). However, these percentages may not reflect the true prevalence of physical abuse because negative experiences tend to be underreported (Bacchus, 2002).

Figure 22. Prevalence of physical abuse in the 12 months before pregnancy, during pregnancy, and during either time period, 2011 MA PRAMS



Differences in the reported prevalence of physical abuse are most notable by poverty level. The reported prevalence of physical abuse either before or during pregnancy was highest among those who were living at or below 100% of the FPL (5.3%) (Table 10). Analysis by other socio-demographic characteristics was limited by small cell sizes.

PREGNANCY

Table 10. Prevalence of physical abuse (12 months before pregnancy, during pregnancy, and during either time period), 2011 MA PRAMS

Characteristic	Abuse before pregnancy			Abuse during pregnancy			Abuse before or during pregnancy		
	n	Weighted %	95% CL	n	Weighted %	95% CL	n	Weighted %	95% CL
Total	1351	2.0	1.2 - 3.2	1018	1.5	0.9 - 2.5	1504	2.2	1.4 - 3.4
Maternal race/ethnicity									
White, non-Hispanic	<i>Insufficient data to report</i>								
Black, non-Hispanic	422	6.7	2.8 - 15.2	<i>Insufficient data to report</i>					
Hispanic	407	3.4	1.6 - 7.1	439	3.7	1.8 - 7.3	455	7.1	3.2 - 15.2
Asian, non-Hispanic	<i>Insufficient data to report</i>								
Other, non-Hispanic	<i>Insufficient data to report</i>								
Maternal age (years)									
<20	<i>Insufficient data to report</i>								
20-29	773	2.9	1.6 - 5.3	710	2.6	1.3 - 5.0	840	3.1	1.7 - 5.4
30-39	<i>Insufficient data to report</i>								
40+	<i>Insufficient data to report</i>								
Maternal education									
<High school	<i>Insufficient data to report</i>								
High school diploma	670	4.2	1.9 - 8.9	<i>Insufficient data to report</i>					
Some college	350	2.3	1.0 - 5.2	382	2.5	1.2 - 5.4	433	2.9	1.4 - 5.6
College graduate	74	0.3	0.1 - 0.6	<i>Insufficient data to report</i>					
Household poverty level									
≤100% FPL	886	5.1	2.8 - 9.1	769	4.4	2.2 - 8.5	921	5.3	2.9 - 9.2
>100% FPL	334	0.7	0.3 - 1.8	193	0.4	0.2 - 0.8	395	0.9	0.4 - 1.9
Maternal nativity									
Non-US-born	<i>Insufficient data to report</i>								
US-born	1043	2.2	1.2 - 3.9	262	1.3	0.7 - 2.2	447	2.1	1.0 - 4.3
				757	1.6	0.8 - 3.2	1056	2.2	1.2 - 3.8

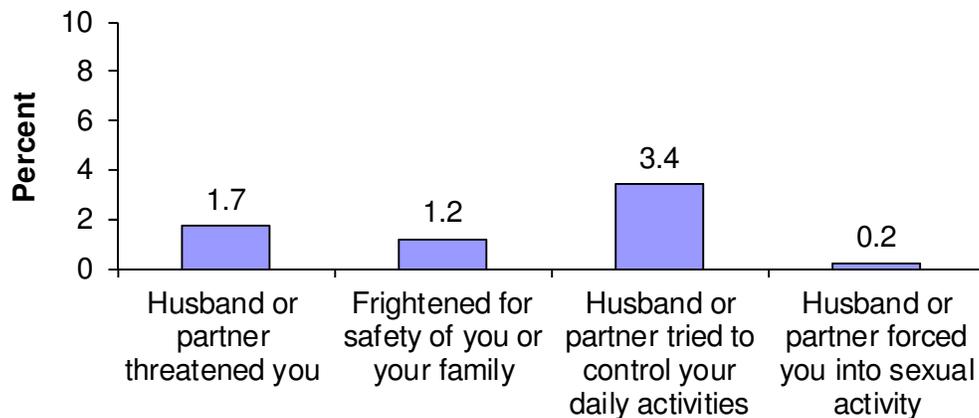
Insufficient data to report: Less than 5 mothers.

PREGNANCY

Intimate partner violence

A small percentage of mothers reported experiencing intimate partner violence since the birth of their new baby. About 3% of mothers reported that their husband or partner had tried to control their daily activities; 1.7% of mothers reported having been threatened by their husband or partner or feeling unsafe in some way; 1.2% reported that they were worried about their safety or the safety of their family because of the anger or threats of their husband or partner; and 0.2% reported that their husband or partner had forced them to take part in touching or any sexual activity when they did not want to (Figure 23). These percentages may not reflect the true prevalence of intimate partner violence because negative experiences tend to be underreported.

Figure 23. Prevalence of intimate partner violence postpartum, 2011 MA PRAMS

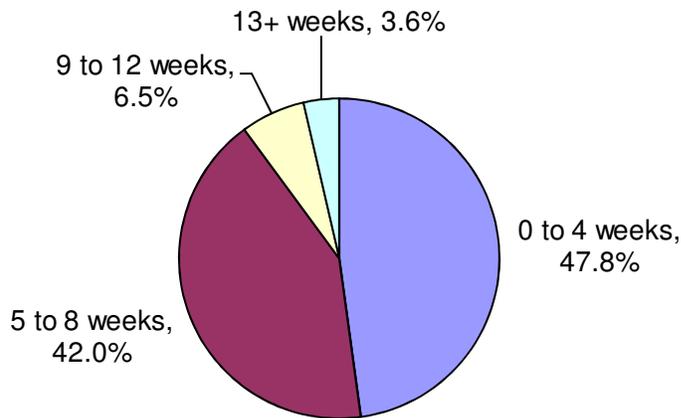


PREGNANCY

Prenatal care: Entry to care

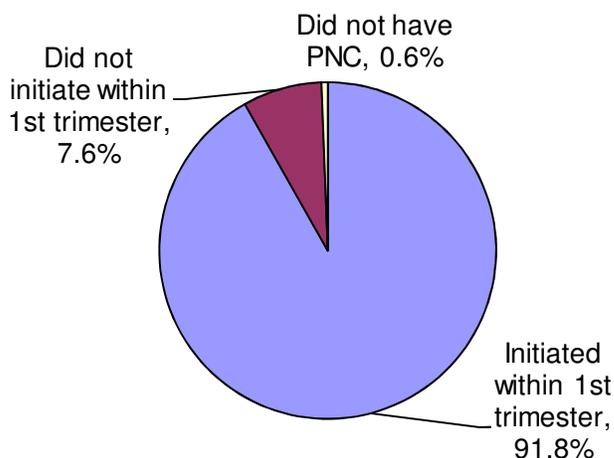
Early knowledge of pregnancy and timely entry into prenatal care provide women with access to important preventive health services as well as screening, monitoring and treatment for pregnancy-related health issues. Complications like GDM and hypertension can cause harm to the mother and fetus if left untreated (Misra, 1998, Alexander and Kotelchuck, 2001).

Figure 24. Gestational age when pregnancy was confirmed, 2011 MA PRAMS



Almost half of women (47.8%) had their pregnancy confirmed by a pregnancy test or by a doctor or nurse within the first month, and 3.6% did not do so until after the first trimester of the pregnancy (Figure 24).

Figure 25. Timing of initiation of prenatal care (PNC), 2011 MA PRAMS



About 92% of women began prenatal care within the first trimester of pregnancy. Less than one percent of women did not receive any prenatal care (Figure 25).

PREGNANCY

Prenatal care: Entry into prenatal care

While Massachusetts mothers demonstrated high levels of timely prenatal care entry overall (91.8%), differences were evident across socio-demographic groups.

Initiating care during the first trimester were lowest among those mothers without a high school diploma (78.8%), mothers under 20 years of age (80.1%), or other, non-Hispanics (81.1%). About 81% of those living at or below 100% of the FPL entered care in the first trimester. About 85% of mothers on Medicaid initiated care during the first trimester (Table 11).

Table 11. Prevalence of entry into prenatal care in the first trimester, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Entered prenatal care in 1st trimester		
	Weighted n	Weighted %	95% CL
Total	65033	91.8	89.8 - 93.3
Maternal race/ethnicity			
White, non-Hispanic	40704	95.4	92.7 - 97.2
Black, non-Hispanic	5386	85.6	81.2 - 89.1
Hispanic	10081	83.9	79.4 - 87.5
Asian, non-Hispanic	4618	93.4	90.0 - 95.7
Other, non-Hispanic	2128	81.1	61.5 - 92.0
Maternal age (years)			
<20	2798	80.1	67.4 - 88.7
20-29	24740	89.9	86.6 - 92.4
30-39	33225	94.8	92.3 - 96.5
40+	2516	89.1	75.3 - 95.6
Maternal education			
<High school	5486	78.8	70.5 - 85.3
High school diploma	14529	88.3	83.2 - 92.0
Some college	13885	91.7	87.5 - 94.6
College graduate	28517	97.3	95.4 - 98.5
Household poverty level			
≤100% FPL	14006	80.6	75.0 - 85.1
>100% FPL	44188	96.8	95.1 - 97.9
Maternal nativity			
Non-US-born	18392	88.4	85.1 - 91.1
US-born	44756	93.3	91.0 - 95.1
Prenatal care payer source			
Non-Medicaid	40879	96.7	94.9 - 98.0
Medicaid	22289	85.4	81.6 - 88.6

PREGNANCY

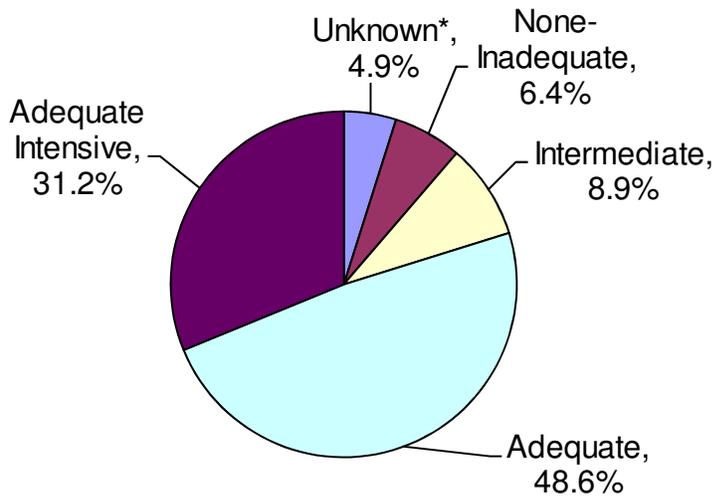
Prenatal care: Adequacy of prenatal care utilization index

The Adequacy of Prenatal Care Utilization (APNCU) Index describes several aspects of prenatal care, including the timing of entry to care and the volume of care received. Prenatal care classified as “adequate” starts early in the pregnancy and involves the expected number of prenatal care visits given the duration of the pregnancy as recommended by the American College of Obstetricians and Gynecologists (ACOG). Less than adequate care generally involves late entry to care and/or an insufficient number of visits given the length of the pregnancy (Alexander & Kotelchuck, 2001).

Overall, about 80% of the population received prenatal care deemed either adequate or adequate intensive. About 6% received inadequate or no prenatal care (Figure 26).

(See Appendix D. for full description of the APNCU Index.)

Figure 26. Adequacy of prenatal care (as measured by Adequacy of Prenatal Care Utilization Index, APNCU), 2011 MA PRAMS



*Unknown: Prenatal care information not recorded.

PREGNANCY

Prenatal care: Adequacy of prenatal care utilization index (APNCU)

Adequacy of care differed across groups, with inadequate or no care most prevalent among those with less than a high school education (18.1%), other, non-Hispanic (17.1%), under 20 years of age (16.2%), living at or below 100% of the FPL (12.2%), or on Medicaid (11.0%) (Table 12).

Table 12. Prevalence of inadequate/no prenatal care, as measured by the Adequacy of Prenatal Care Utilization (APNCU) Index, by socio-demographic characteristics, 2011 MA PRAMS

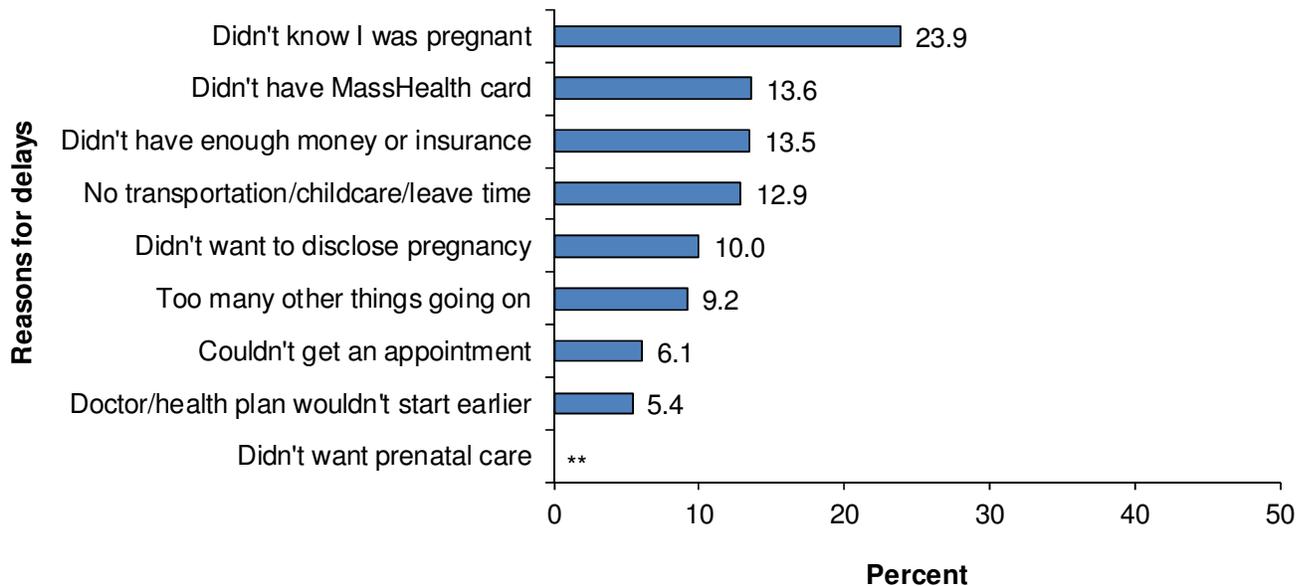
Characteristic	Inadequate/no prenatal care		
	Weighted n	Weighted %	95% CL
Total	3501	6.4	5.0 - 8.2
Maternal race/ethnicity			
White, non-Hispanic	1310	3.0	1.7 - 5.3
Black, non-Hispanic	1051	16.0	11.1 - 22.6
Hispanic	1085	8.7	6.3 - 11.8
Asian, non-Hispanic	172	3.5	2.0 - 6.0
Other, non-Hispanic	454	17.1	6.7 - 37.3
Maternal age (years)			
<20	587	16.2	8.2 - 29.7
20-29	2133	7.7	5.5 - 10.7
30-39	1244	3.5	2.1 - 5.5
40+	107	3.8	1.6 - 8.4
Maternal education			
<High school	1316	18.1	11.4 - 27.7
High school diploma	1400	8.3	5.5 - 12.4
Some college	771	5.0	3.1 - 8.1
College graduate	566	1.9	1.0 - 3.7
Household poverty level			
≤100% FPL	2145	12.2	8.6 - 16.9
>100% FPL	1352	2.9	1.8 - 4.6
Maternal nativity			
Non-US-born	1862	8.6	6.2 - 11.8
US-born	2208	4.6	3.1 - 6.6
Prenatal care payer source			
Non-Medicaid	1015	2.4	1.3 - 4.1
Medicaid	2944	11.0	8.3 - 14.4

PREGNANCY

Prenatal care: Reasons for delay

About 10% of mothers reported not receiving prenatal care as early as they had wanted regardless of the timing of their first prenatal care visit. Among those who did not receive prenatal care as early as wanted and had late prenatal care entry (after the first trimester of pregnancy), the top four reasons reported included not knowing about the pregnancy (23.9%), not having a MassHealth card (13.6%), lack of money or insurance (13.5%), and lack of transportation, childcare, or unable to take time off from work or school (12.9%) (Figure 27).

Figure 27. Reasons for not receiving prenatal care as early as wanted among those with late prenatal care entry*, 2011 MA PRAMS



*Reasons for not receiving prenatal care as early as wanted are not mutually exclusive.

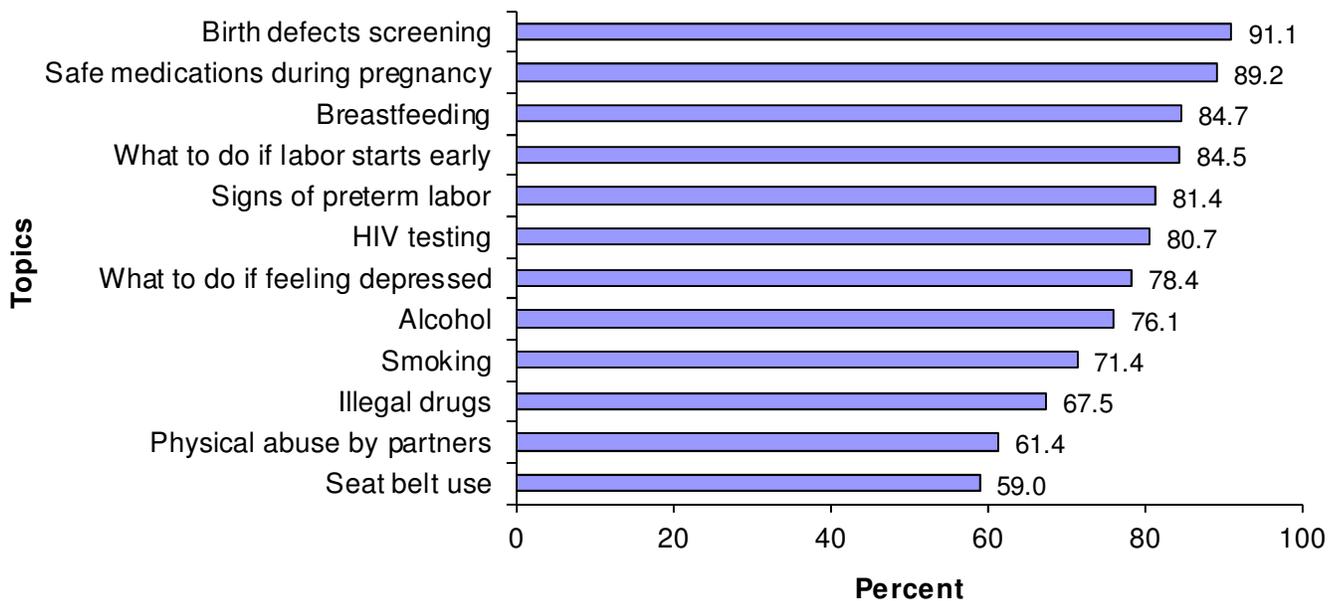
**Insufficient data to report: Less than 5 mothers.

PREGNANCY

Prenatal care: Topics discussed with health care providers

Mothers reported discussing certain health topics with their health care providers more often than others. The two most frequently discussed topics included birth defects screening (91.1%) and safe medications to use during pregnancy (89.2%). The two least frequently discussed topics were physical abuse by partners (61.4%) and seat belt use (59.0%) (Figure 28).

Figure 28. Topics discussed with health care providers during prenatal care visits, 2011 MA PRAMS

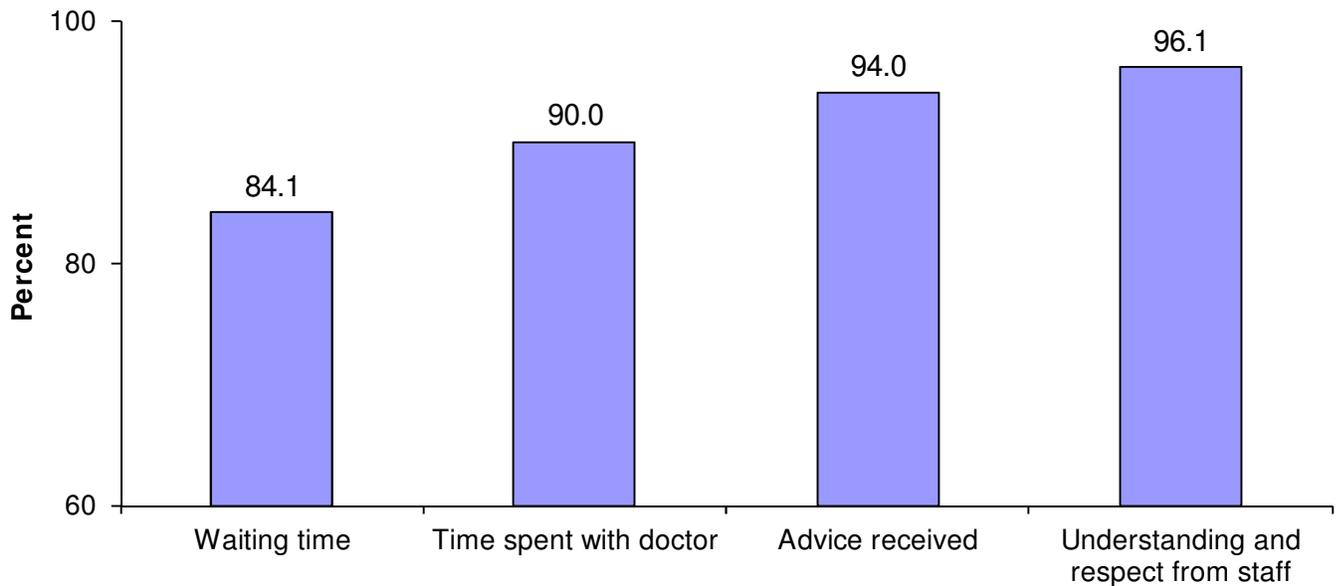


PREGNANCY

Prenatal care satisfaction

About 96% of mothers reported that they were satisfied with the understanding and respect received from office staff at their prenatal care visit, and 94% were satisfied with advice received on how to take care of themselves. About 90% were satisfied with the amount of time the prenatal care provider spent with them during the visits, and 84.1% were satisfied with the amount of time they had to wait after they arrived for their visits (Figure 29).

Figure 29. Prevalence of maternal satisfaction with prenatal care provided by health care providers, 2011 MA PRAMS



PREGNANCY

HIV testing during pregnancy: Testing and offer of testing

It is recommended by the ACOG that pregnant women have the opportunity to know their HIV status. Anti-retroviral treatment for HIV-positive women during pregnancy can drastically reduce the chances of transmission to the fetus during pregnancy and delivery (Branson, 2006).

Overall, about 77% of mothers reported that they were offered an HIV test during pregnancy (Figure 30). About 66% of mothers reported having received an HIV test during their pregnancy, 25.2% reported not being tested, and another 8.7% reported not knowing whether they had been tested (Figure 31).

Figure 30. Proportion of mothers offered HIV testing during pregnancy, 2011 MA PRAMS

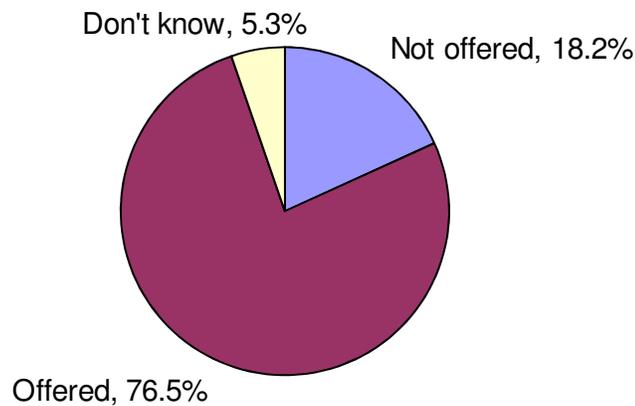
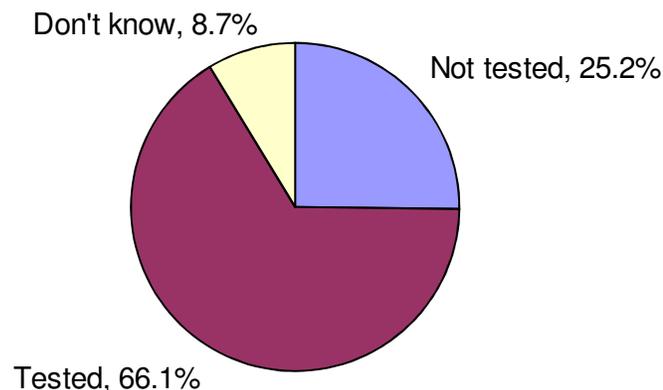


Figure 31. Proportion of mothers tested for HIV during pregnancy, 2011 MA PRAMS



PREGNANCY

HIV testing during pregnancy: Offering and testing

Being offered an HIV testing varied across socio-demographic groups. Hispanic mothers (88.2%) were more likely to report being offered an HIV test than White, non-Hispanic mothers (72.4%). Mothers aged 20-29 years (84.2%) were more likely to report being offered an HIV test than mothers aged 30-39 years (69.5%). About 85% of mothers living at or below 100% of the FPL were offered an HIV test compared to 72.9% of mothers living above 100% of the FPL. About 87% of mothers on Medicaid were offered an HIV test compared to 70.5% of mothers who were not on Medicaid (Table 13).

Being tested for HIV also varied across socio-demographic groups. Hispanic (81.2%) and Black, non-Hispanic (77.1%) mothers were more likely to be tested for HIV than White, non-Hispanic mothers (59.5%). Testing was also associated with living at or below 100% of the FPL (79.7%), or being on Medicaid (78.7%) (Table 13).

Table 13. Prevalence of offer-of-testing/HIV testing during pregnancy, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Offered HIV test			Tested for HIV		
	Weighted n	Weighted %	95% CL	Weighted n	Weighted %	95% CL
Total	46474	76.5	73.5 - 79.2	46474	66.1	62.9 - 69.2
Maternal race/ethnicity						
White, non-Hispanic	31486	72.8	68.4 - 76.9	26229	60.7	55.9 - 65.3
Black, non-Hispanic	5440	82.9	76.6 - 87.8	5062	77.1	70.7 - 82.5
Hispanic	11056	88.2	84.8 - 91.0	10172	81.2	76.8 - 84.9
Asian, non-Hispanic	3543	71.2	61.1 - 79.5	2894	58.1	48.3 - 67.3
Other, non-Hispanic	2020	76.3	62.6 - 86.1	1909	72.1	58.4 - 82.7
Maternal age (years)						
<20	3123	86.4	72.7 - 93.8	2522	69.8	54.1 - 81.9
20-29	23435	84.2	79.9 - 87.6	20486	73.6	68.6 - 78.0
30-39	25035	69.5	65.0 - 73.8	21594	60.0	55.3 - 64.5
40+	2182	76.8	59.5 - 88.2	1873	65.9	49.4 - 79.3
Maternal education						
<High school	5447	75.1	65.3 - 82.8	4963	68.4	58.4 - 76.9
High school diploma	14721	87.4	82.1 - 91.4	13178	78.3	71.8 - 83.6
Some college	12885	83.6	77.5 - 88.2	11272	73.1	66.3 - 79.0
College graduate	20150	67.7	62.6 - 72.4	16549	55.6	50.4 - 60.7
Household poverty level						
≤100% FPL	15050	85.4	80.0 - 89.5	14054	79.7	74.0 - 84.5
>100% FPL	33707	72.9	68.9 - 76.5	27860	60.2	56.0 - 64.3
Maternal nativity						
Non-US-born	16640	76.8	72.1 - 80.9	14816	68.4	63.5 - 72.9
US-born	37136	76.6	72.7 - 80.0	31658	65.3	61.0 - 69.3
Prenatal care payer source						
Non-Medicaid	30274	70.5	66.3 - 74.4	25106	58.5	54.0 - 62.8
Medicaid	23227	86.6	82.7 - 89.8	21107	78.7	74.1 - 82.7

PREGNANCY

HIV testing during pregnancy: Refusal

Among mothers who were offered an HIV test during pregnancy, 9.9% indicated that they had refused the test (Figure 32).

Figure 32. Proportion of mothers who refused HIV testing during pregnancy (among those offered), 2011 MA PRAMS

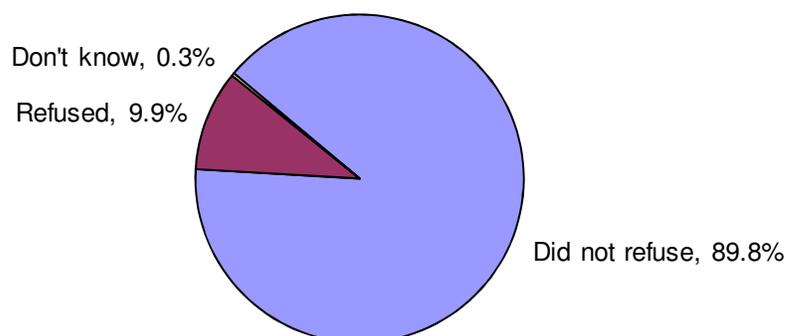


Table 14. Prevalence of mothers who refused HIV testing during pregnancy (among those offered), by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Refused HIV test		
	Weighted n	%	95% CL
Total	5348	9.9	7.8 - 12.6
Maternal race/ethnicity			
White, non-Hispanic	4173	13.3	9.9 - 17.6
Black, non-Hispanic	151	2.8	1.5 - 5.2
Hispanic	555	5.0	2.8 - 8.9
Asian, non-Hispanic	369	10.4	5.9 - 17.8
Other, non-Hispanic	<i>Insufficient data to report</i>		
Maternal age (years)			
<20	<i>Insufficient data to report</i>		
20-29	2170	9.3	6.3 - 13.5
30-39	2817	11.3	8.1 - 15.4
40+	<i>Insufficient data to report</i>		
Maternal education			
<High school	<i>Insufficient data to report</i>		
High school diploma	1173	8.0	4.5 - 13.8
Some college	1097	8.5	4.9 - 14.5
College graduate	3014	15.0	11.0 - 20.0
Household poverty level			
≤100% FPL	<i>Insufficient data to report</i>		
>100% FPL	4759	14.1	10.9 - 18.0
Maternal nativity			
Non-US-born	970	5.8	3.6 - 9.4
US-born	4378	11.8	8.9 - 15.4
Prenatal care payer source			
Non-Medicaid	4103	13.6	10.3 - 17.6
Medicaid	1246	5.4	3.2 - 9.0

Insufficient data to report: Less than 5 mothers.

PREGNANCY

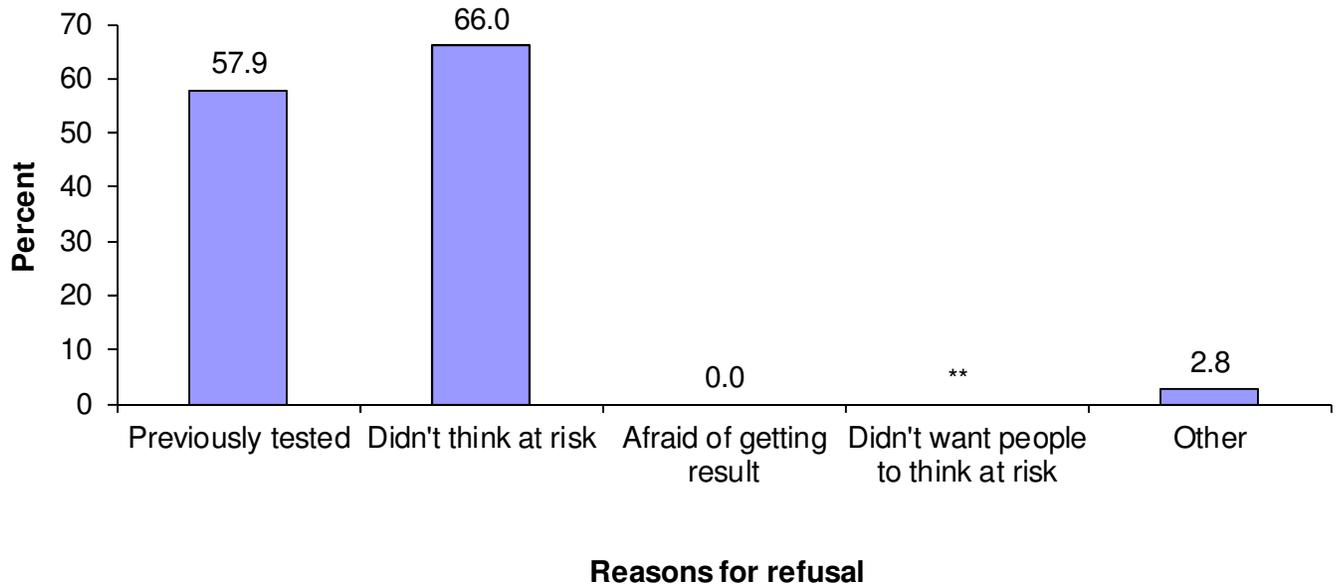
HIV testing during pregnancy: Refusal

White, non-Hispanic mothers were more likely to refuse an HIV test than Black, non-Hispanic mothers and Hispanic mothers (13.8%, 2.8%, 5.0%, respectively). Refusal rates were higher among those who were not on Medicaid (13.6%) (Table 14).

Analysis by other socio-demographic characteristics was limited by small cell sizes.

Among those refusing an HIV test, the most common reasons for refusal included not believing oneself to be at risk for HIV (66.0%), and having been previously tested (57.9%) (Figure 33).

Figure 33. Reasons for refusing HIV testing during pregnancy*, 2011 MA PRAMS



*Reasons for refusing HIV testing during pregnancy are not mutually exclusive.

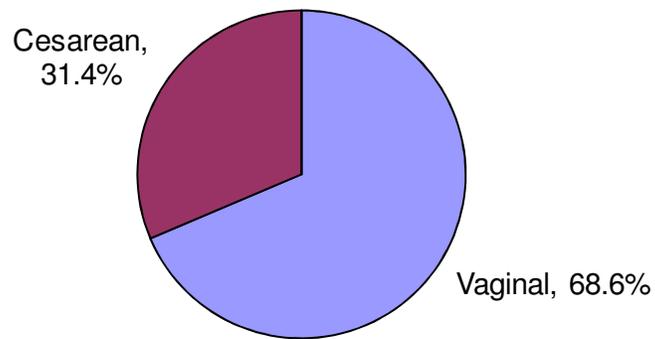
**Insufficient data to report: Less than 5 mothers.

PREGNANCY

Method of delivery

Cesarean delivery is a birth where the baby is delivered through an incision in the abdomen. About 31% of mothers reported that their most recent baby was delivered by Cesarean (Figure 34). According to Massachusetts Births 2011 and 2012 report, the Cesarean delivery rate has been declining (MA Births 2011 and 2012, 2014).

Figure 34. Proportion of births by vaginal and Cesarean delivery, 2011 MA PRAMS

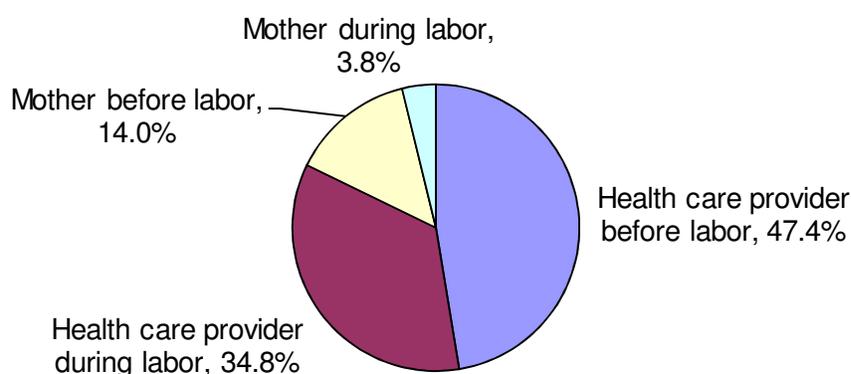


PREGNANCY

Cesarean delivery request

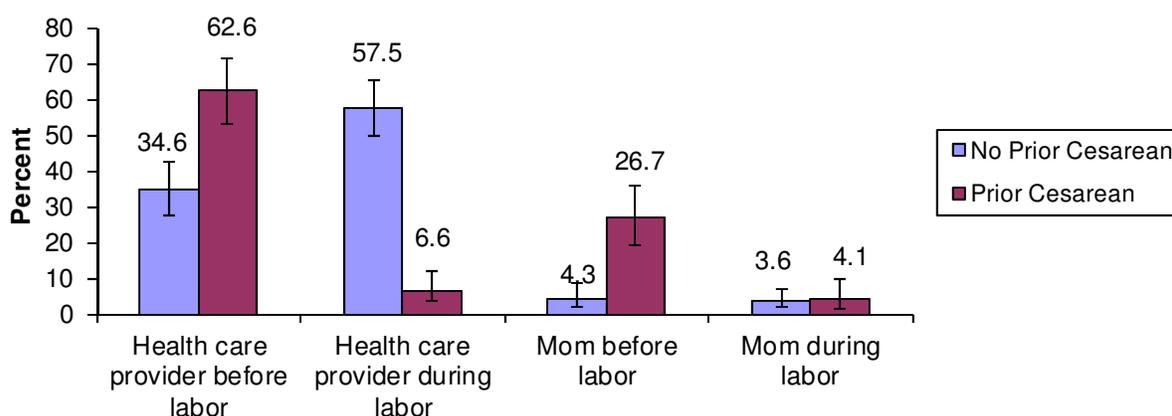
The MA PRAMS survey asks mothers whose infant was delivered by Cesarean to report who made the decision for a Cesarean delivery and when (*i.e.*, before or during labor). Among those who delivered by Cesarean, about 82% reported that it was the decision of a health care provider to perform the Cesarean, either before or during labor. About 14% of mothers who had a Cesarean reported that it was their idea to have a Cesarean before labor, and 3.8% said it was their decision during labor (Figure 35).

Figure 35. Source and timing of Cesarean delivery request among mothers who delivered by Cesarean, 2011 MA PRAMS



When examined by prior Cesarean history, relatively few mothers with no prior Cesarean reported that they (as opposed to the health care provider) requested a Cesarean delivery before labor (4.3%), whereas 26.7% of those with a prior Cesarean said that it was their idea before labor began (Figure 36).

Figure 36. Source and timing of Cesarean delivery request among mothers who delivered by Cesarean, by prior-birth history, 2011 MA PRAMS

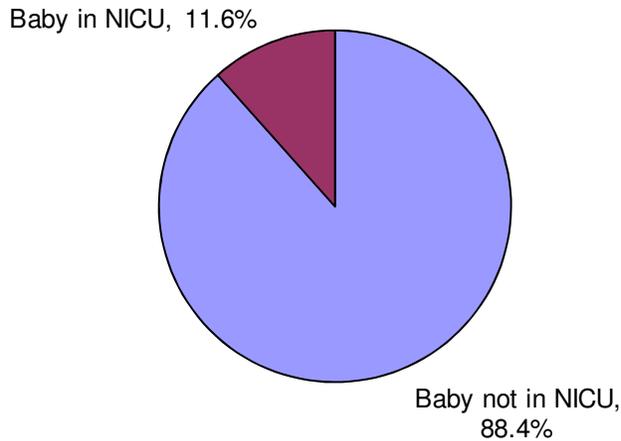


PREGNANCY

Infant birth hospitalization

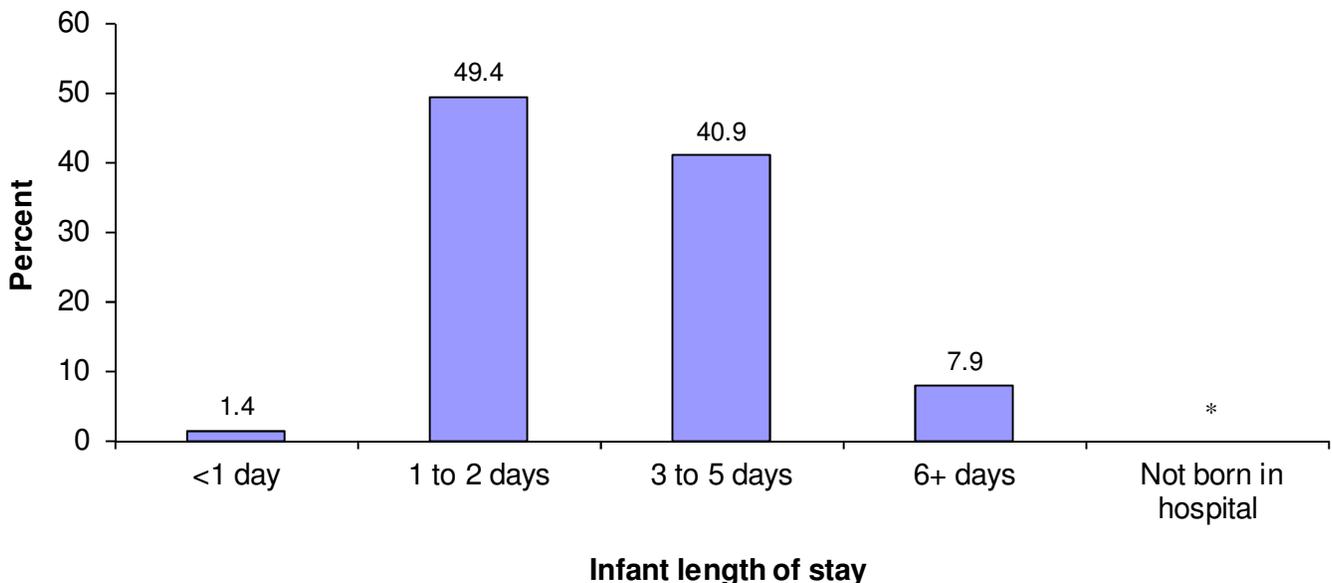
About 12% of mothers reported that their babies spent time in a neonatal intensive care unit (NICU) (Figure 37). The trend for infants staying in the NICU has remained stable during 2007 and 2011.

Figure 37. Proportion of infants staying in the neonatal intensive care unit, 2011 MA PRAMS



A stay of one to two days in the hospital was most frequently reported (49.4%) followed by 40.9% staying for three to five days. A reported 7.9% of infants stayed in the hospital for six or more days (Figure 38).

Figure 38. Infant length of hospital stay at birth, 2011 MA PRAMS



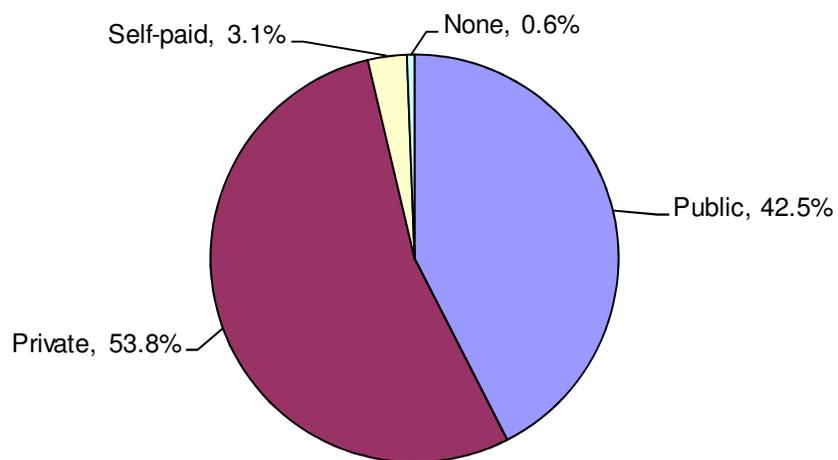
* Insufficient data to report: Less than 5 mothers.

PREGNANCY

Delivery payer source

The majority of births were paid for by private health insurance. However, about 43% were paid by a government sponsored insurance (Figure 39).

Figure 39. Prevalence of delivery payment sources, 2011 MA PRAMS

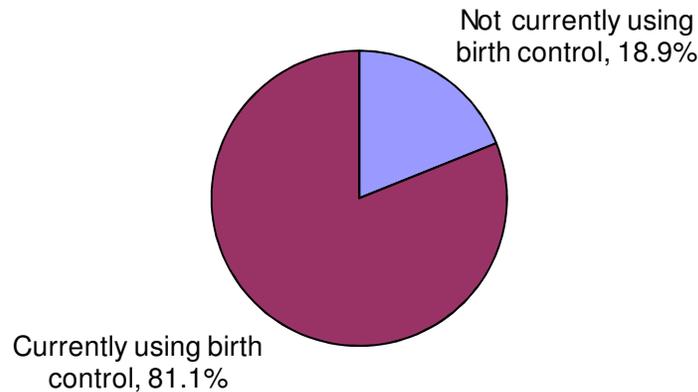


POSTPARTUM

Contraceptive use

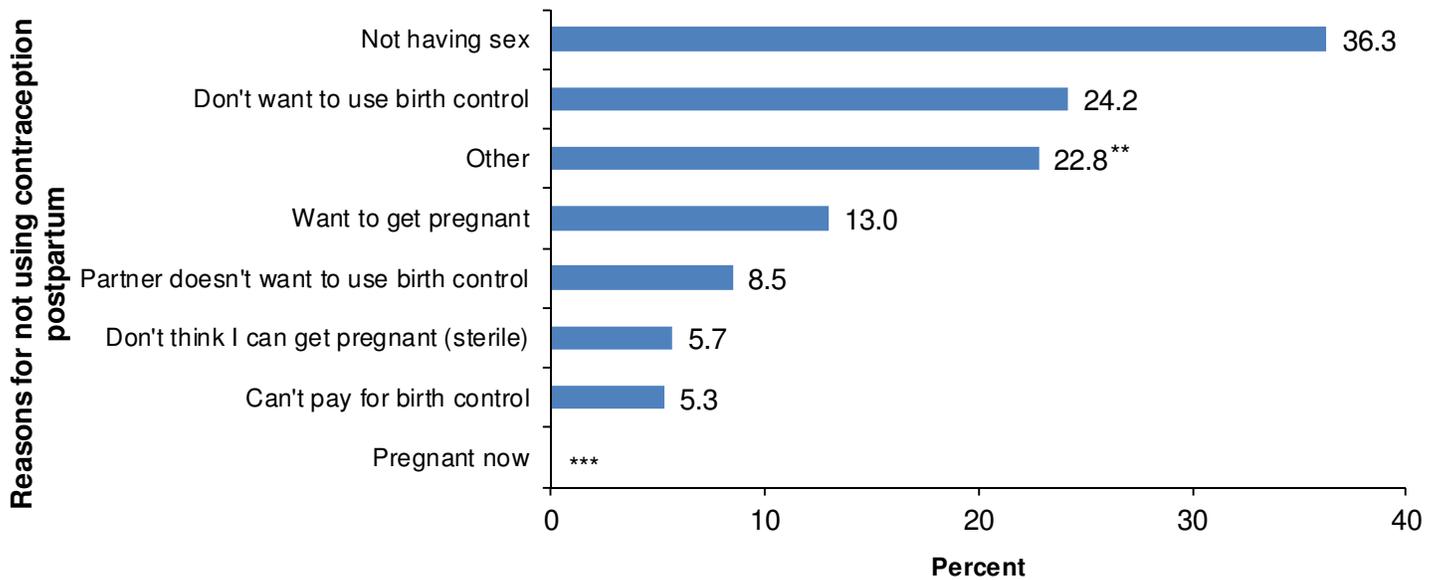
Adequate spacing of pregnancies is important for the health of both mothers and babies. Shorter inter-pregnancy intervals have been associated with adverse birth outcomes including preterm birth, low birth weight, small size for gestational age, and neonatal and infant mortality (Conde-Agudelo, 2006). About 81% of mothers reported using birth control postpartum (about three months after delivery) (Figure 40).

Figure 40. Proportion of mothers using contraception postpartum, 2011 MA PRAMS



Among those not using birth control, the most commonly named reasons for not doing so included not having sex (36.3%), not wanting to use birth control (24.2%), and wanting to become pregnant again (13.0%) (Figure 41).

Figure 41. Reasons for not using contraception postpartum (among those reporting no use)*, 2011 MA PRAMS



*Reasons for not using contraception postpartum are not mutually exclusive.

**Other: A variety of reasons were given such as religious beliefs, side effects from contraception, not yet getting to it, out of condoms at home, and partner absent.

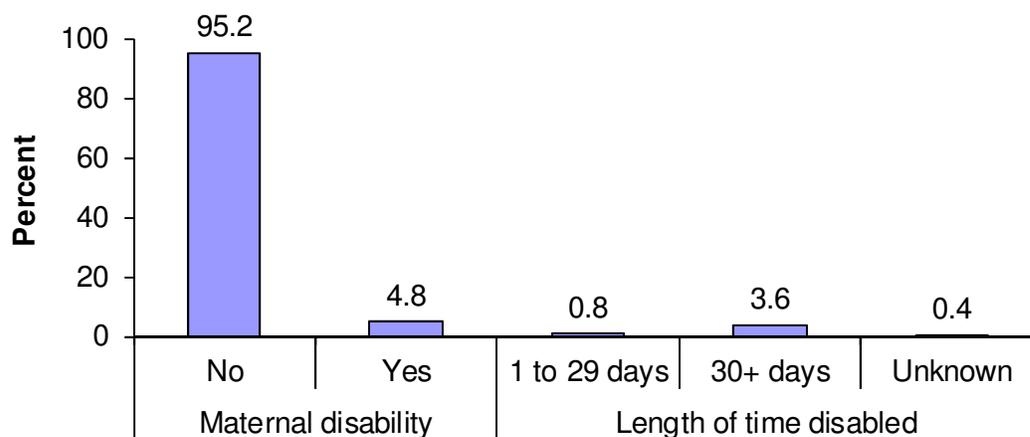
***Insufficient data to report: Less than 5 mothers.

POSTPARTUM

Maternal disability status

Women with disabilities are more likely to report poor health, chronic conditions, and unmet health care needs (Chevarley, 2006, Wisdom, 2010). About 5% of mothers reported having a disability. Almost all of them reported that they had the disability for more than 30 days (Figure 42).

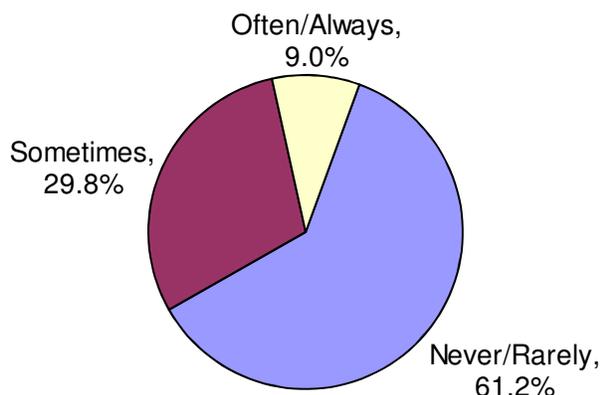
Figure 42. Prevalence of mothers with a disability and length of time disabled, 2011 MA PRAMS



POSTPARTUM

Postpartum depressive symptoms: Feeling down, Depressed or sad

Figure 43. Proportion of mothers often/always feeling down, depressed, or sad postpartum, 2011 MA PRAMS



Postpartum depression (PPD) can be a serious and debilitating condition for new mothers, affecting both maternal and infant health, and potentially interfering with infant development and mother-child bonding (Logsdon, 2006, Stone, 2015).

Overall, 9.0% reported “often” or “always” feeling down, depressed or sad, and about 30% reported “sometimes” having these feelings (Figure 43).

The occurrence of “often” or “always” feeling down, depressed or sad were most prevalent among mothers with a high school education (15.6%), Hispanic mothers (14.7%) or those living at or below 100% of the FPL (13.9%) (Table 15).

Table 15. Prevalence of “often” or “always” feeling down, depressed or sad postpartum, by socio-demographic characteristics, 2011 MA PRAMS

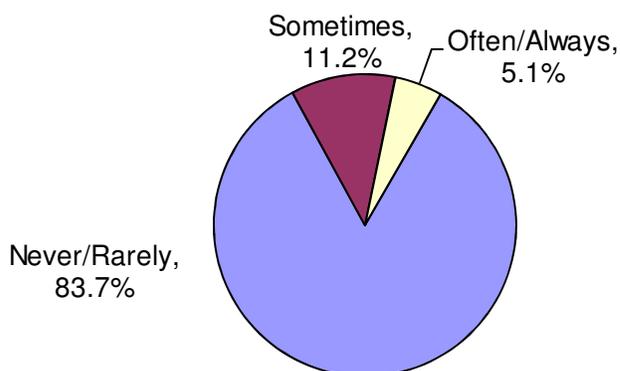
Characteristic	Weighted n	Weighted %	95% CL
Total	6045	9.0	7.3 - 11.1
Maternal race/ethnicity			
White, non-Hispanic	3156	7.4	5.2 - 10.5
Black, non-Hispanic	643	11.4	7.2 - 17.6
Hispanic	1671	14.7	11.1 - 19.1
Asian, non-Hispanic	409	8.9	5.3 - 14.7
Other, non-Hispanic	143	5.6	2.7 - 11.3
Maternal age (years)			
<20		<i>Insufficient data to report</i>	
20-29	2987	11.3	8.4 - 15.0
30-39	2538	7.3	5.2 - 10.2
40+	150	5.6	2.5 - 11.9
Maternal education			
<High school	799	12.9	7.2 - 22.2
High school diploma	2436	15.6	10.9 - 21.7
Some college	1271	8.4	5.7 - 12.4
College graduate	1347	4.6	3.0 - 7.0
Household poverty level			
≤100% FPL	2319	13.9	10.1 - 19.0
>100% FPL	3216	7.0	5.2 - 9.4
Maternal nativity			
Non-US-born	1950	10.1	7.5 - 13.4
US-born	4095	8.6	6.5 - 11.3

Insufficient data to report: Less than 5 mothers.

POSTPARTUM

Postpartum depressive symptoms: Feeling hopeless

Figure 44. Proportion of mothers often/always feeling hopeless postpartum, 2011 MA PRAMS



Measures of feeling hopeless are used in assessing the presence of depression (Whooley, 1997).

PRAMS asks how often mothers were feeling hopeless in the postpartum period. Overall, 5.1% of mothers reported that they were “often” or “always” feeling hopeless and 11.2% of mothers reported that they were “sometimes” feeling hopeless in the postpartum period (Figure 44).

The occurrence of “often” or “always” feeling hopeless was most prevalent among those living at or below 100% of the FPL (9.2%) (Table 16).

Table 16. Prevalence of “often” or “always” feeling hopeless, by socio-demographic characteristics, 2011 MA PRAMS

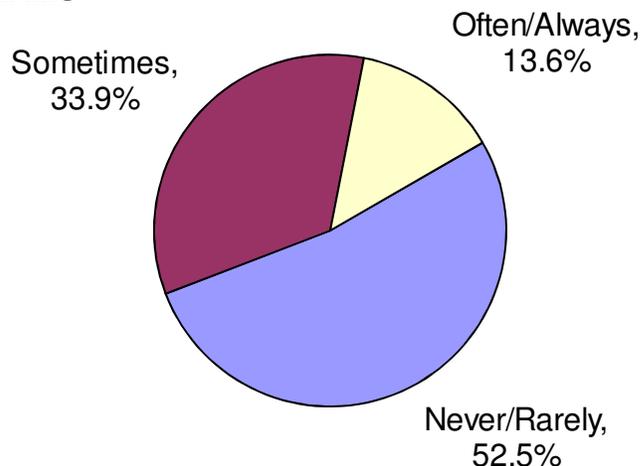
Characteristic	Weighted n	Weighted %	95% CL
Total	3368	5.1	3.7 - 6.9
Maternal race/ethnicity			
White, non-Hispanic	2082	4.9	3.1 - 7.8
Black, non-Hispanic	286	5.1	3.1 - 8.2
Hispanic	818	7.3	4.7 - 11.3
Asian, non-Hispanic	153	3.4	1.8 - 6.2
Other, non-Hispanic	<i>Insufficient data to report</i>		
Maternal age (years)			
<20	530	15.6	7.4 - 30.0
20-29	3147	12.0	9.0 - 15.8
30-39	3547	10.4	7.8 - 13.7
40+	<i>Insufficient data to report</i>		
Maternal education			
<High school	638	10.7	5.2 - 20.7
High school diploma	1595	10.2	6.3 - 16.2
Some college	599	4.0	2.3 - 6.9
College graduate	386	1.3	0.6 - 2.9
Household poverty level			
≤100% FPL	1521	9.2	5.8 - 14.5
>100% FPL	1422	3.1	1.9 - 5.0
Maternal nativity			
Non-US-born	2637	13.9	10.6 - 18.1
US-born	4834	10.2	7.9 - 13.0

Insufficient data to report: Less than 5 mothers.

POSTPARTUM

Postpartum depressive symptoms: Feeling slowed down

Figure 45. Proportion of mothers often/always feeling slowed down postpartum, 2011 MA PRAMS



PRAMS asks how often mothers were feeling slowed down in the postpartum period.

Overall, 13.6% of mothers reported that they were “often” or “always” feeling slowed down, and 33.9% reported “sometimes” feeling slowed down in the postpartum period (Figure 45).

No significant patterns were observed with regard to “often” or “always” feeling slowed down (Table 17). However, a much greater proportion of mothers reported “often” or “always” feeling slowed down (13.6%) than “often” or “always” feeling depressed (9.0%) and “often” or “always” feeling hopeless (5.1%) (Figures 43-45).

Table 17. Prevalence of “often” or “always” feeling slowed down, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Weighted n	Weighted %	95% CL
Total	9054	13.6	11.4 - 16.1
Maternal race/ethnicity			
White, non-Hispanic	5935	14.0	5.2 - 18.4
Black, non-Hispanic	788	13.9	10.4 - 18.4
Hispanic	1076	9.7	7.1 - 13.2
Asian, non-Hispanic	720	16.0	9.7 - 25.3
Other, non-Hispanic	535	21.2	10.9 - 37.3
Maternal age (years)			
<20	444	13.2	5.6 - 28.0
20-29	3590	13.7	10.3 - 18.0
30-39	4770	13.9	11.0 - 17.5
40+	250	9.2	4.1 - 19.3
Maternal education			
<High school	661	11.2	6.0 - 19.8
High school diploma	2222	14.3	9.8 - 20.3
Some college	1706	11.3	7.6 - 16.4
College graduate	4422	15.3	11.9 - 19.4
Household poverty level			
≤100% FPL	2035	12.3	8.6 - 17.2
>100% FPL	6593	14.5	11.7 - 17.7
Maternal nativity			
Non-US-born	2616	13.9	10.6 - 18.1
US-born	6437	13.5	10.8 - 16.7

POSTPARTUM

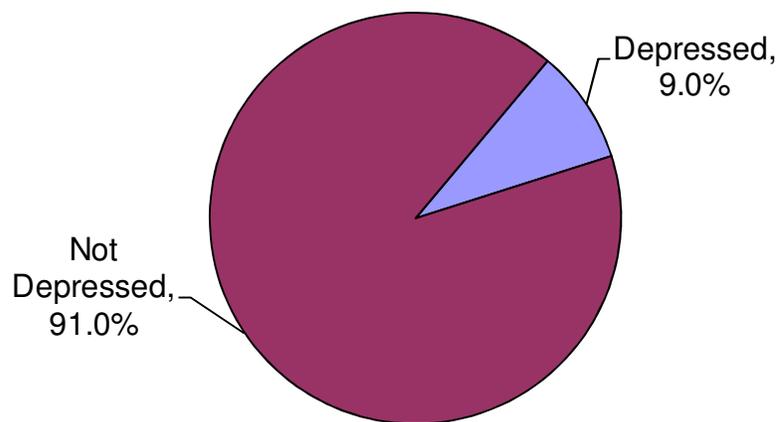
Postpartum depressive symptoms: Combined measure

CDC recommends summing parts a, b & c of the depression question together (depressed, hopeless and slowed down) and using a cut off of ≥ 10 as an indication of postpartum depressive symptoms (for each question, always=5, often=4, sometimes=3, rarely=2, never=1) (O'Hara, 2012).

Please note: Using this algorithm, the postpartum depressive symptoms estimates will likely differ from the estimates generated with the 2007-2008 data since the questions were different compared to the 2009-2011 questions. Therefore, we do not recommend comparing prevalence of postpartum depressive symptoms between 2007-2008 and 2009-2011. However, the questions stayed the same during 2009 and 2011, and therefore, it is fine to compare prevalence estimates of postpartum depressive symptoms during 2009 and 2011.

Overall, 9.0% of mothers reported that they experienced postpartum depressive symptoms (Figure 46).

Figure 46. Proportion of mothers with postpartum depression (a combined scoring of depressed, hopeless, and slowed down ≥ 10), 2011 MA PRAMS



Massachusetts mothers say...

“Two things that I thought were helpful for me was [that] I had my mother stayed with me for a month after my baby was born, so I basically had a close family relative who was in the home who helped me watch my child and helped me accommodate to being a new mother, helped me accommodate to the life change, and as a result I think that contributed to the fact that I didn't encounter stuff like postpartum depression issues. And the second thing that was helpful was that I joined a mother's [support] group as a new mother, they have several locations around Boston. I think that was a key factor that contributed to having a healthy attitude after the baby was born.”

POSTPARTUM

Postpartum depressive symptoms: Combined measure

About 17% of mothers with less than a high school education reported frequent experiences of depressive symptoms (≥ 10) compared to 5.4% among mothers with a college education. No other significant patterns in the prevalence of mothers reported frequent experiences of depressive symptoms when scores for depressed, hopeless and slowed down were combined (Table 18).

Table 18. Prevalence of mothers with postpartum depression (a combined scoring of depressed, hopeless, and slowed down ≥ 10), by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	% Postpartum Depression (Combined Measure ≥ 10)		
	Weighted n	Weighted %	95% CL
Total	6084	9.0	7.3 - 11.2
Maternal race/ethnicity			
White, non-Hispanic	3622	8.5	6.1 - 11.8
Black, non-Hispanic	588	10.2	7.3 - 14.1
Hispanic	1162	10.1	7.5 - 13.6
Asian, non-Hispanic	418	9.1	5.4 - 14.9
Other, non-Hispanic	294	11.6	4.6 - 26.4
Maternal age (years)			
<20			<i>Insufficient data to report</i>
20-29	2935	11.1	8.1 - 15.0
30-39	2555	7.3	5.3 - 10.2
40+			<i>Insufficient data to report</i>
Maternal education			
<High school	1048	16.9	9.8 - 27.5
High school diploma	1991	12.6	8.5 - 18.4
Some college	1268	8.4	5.4 - 12.9
College graduate	1585	5.4	3.7 - 8.0
Household poverty level			
$\leq 100\%$ FPL	2259	13.5	9.5 - 18.8
$> 100\%$ FPL	3475	7.6	5.6 - 10.1
Maternal nativity			
Non-US-born	1814	9.3	6.8 - 12.5
US-born	4270	8.9	6.7 - 11.8

Insufficient data to report: Less than 5 mothers.

POSTPARTUM

Postpartum depressive symptoms: Help-seeking

Among all mothers (regardless of reported frequency of feeling depressed or loss of interests), 11.0% sought help for depression in the time since their babies had been born (Figure 47).

Among mothers reporting frequent experiences of depressive symptoms (≥ 10 in the score of the combined measure of depressive symptoms), only about 46% reported that they had sought help for depression (Figure 48).

Figure 47. Proportion of mothers seeking help for postpartum depression (among all mothers regardless of frequency of depressive symptoms), 2011 MA PRAMS

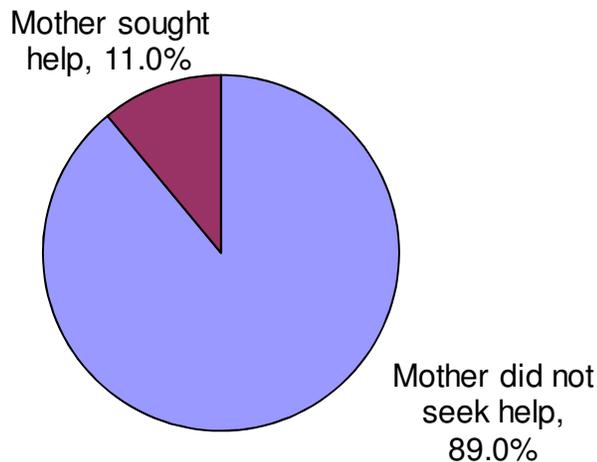
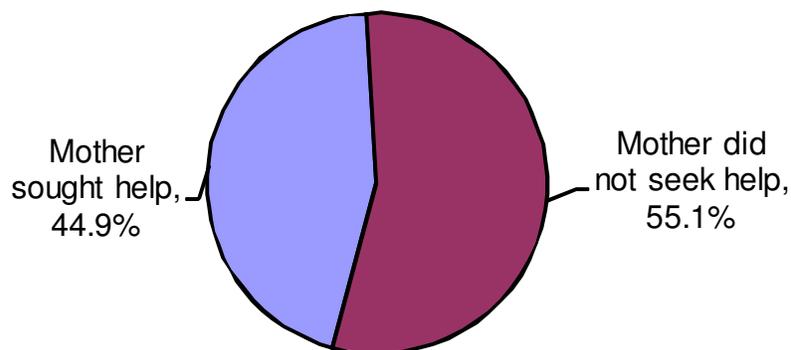


Figure 48. Proportion of mothers seeking help for postpartum depression (among those scoring ≥ 10 on the combined measure of depressive symptoms), 2011 MA PRAMS



Massachusetts mothers say...

"I think hospitals should mandate that all mothers take a quick course before leaving the hospital (after delivery) about caring for your baby, the difference between 'baby blues' and 'depression' and where to seek help if you are depressed, abused, etc."

POSTPARTUM

Postpartum health care

Most mothers, almost 94%, had received a postpartum checkup at the time of the survey (Figure 49). Most respondents returned the survey between 2 and 4 months postpartum.

However, the prevalence of postpartum care differed by insurance status. All mothers reported a source of health insurance postpartum. Among those insured by Medicaid, 90.2% had received a postpartum visit, compared with 95.8% of mothers who had a non-Medicaid source of insurance (Figure 50).

Figure 49. Proportion of mothers receiving a postpartum checkup by the time of survey, 2011 MA PRAMS

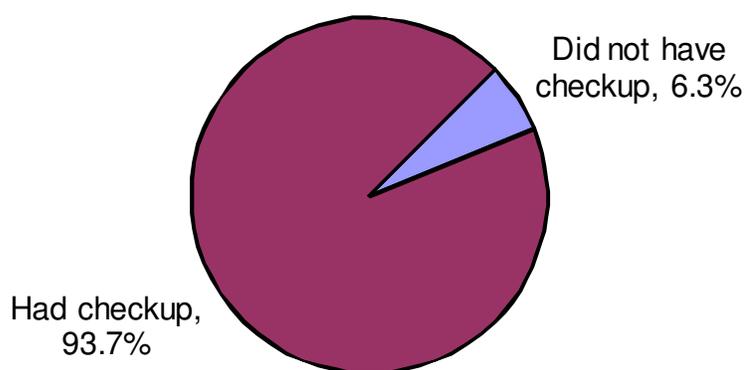
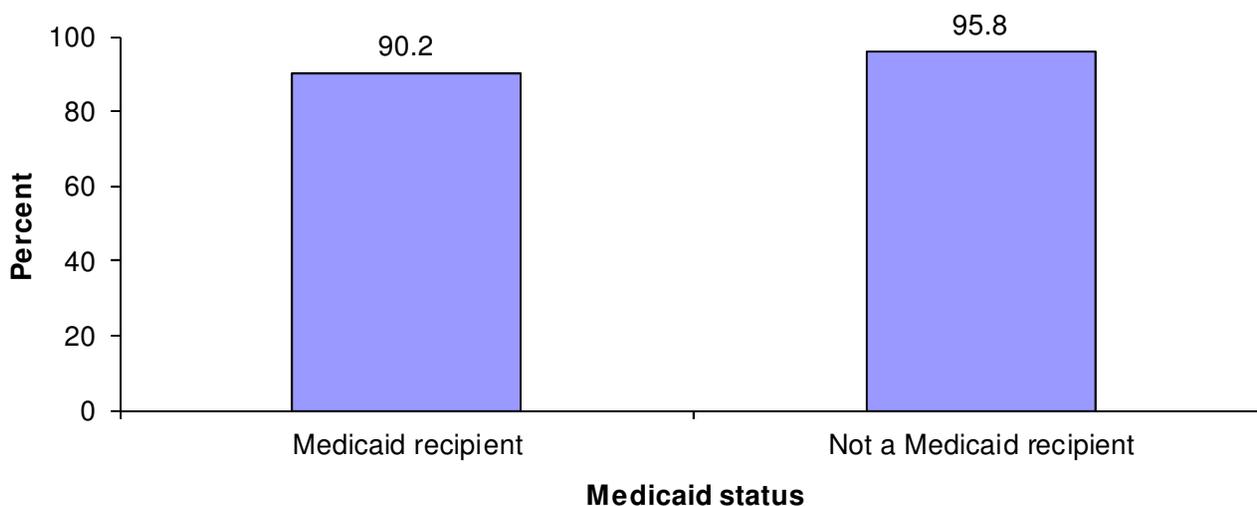


Figure 50. Proportion of mothers receiving a postpartum checkup, by insurance type, 2011 MA PRAMS



POSTPARTUM

Postpartum health care

Patterns of postpartum checkup varied across socio-demographic groups. Other, non-Hispanic mothers were the least likely to report receiving a postpartum checkup (80.8%). About 85% of mothers with less than a high school education received a postpartum checkup compared to 96.7% of mothers with a college education. Mothers living at or below 100% of the FPL (87.5%) were less likely to have received a postpartum checkup than their counterparts (Table 19).

Table 19. Prevalence of mothers who received a postpartum checkup, by socio-demographic characteristics, 2011 MA PRAMS

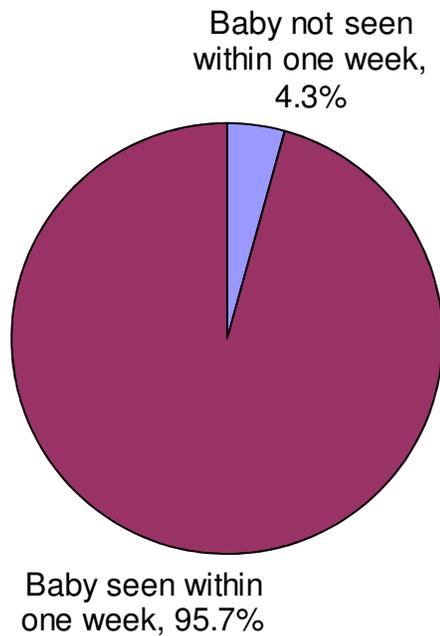
Characteristic	% Receiving a postpartum checkup		
	Weighted n	Weighted %	95% CL
Total	64191	93.7	91.9 - 95.1
Maternal race/ethnicity			
White, non-Hispanic	40817	95.6	93.0 - 97.2
Black, non-Hispanic	5502	89.3	83.6 - 93.2
Hispanic	10732	90.7	87.4 - 93.2
Asian, non-Hispanic	4722	96.6	93.9 - 98.1
Other, non-Hispanic	2057	80.8	60.8 - 92.0
Maternal age (years)			
<20	3135	92.3	79.6 - 97.4
20-29	24879	92.0	88.8 - 94.4
30-39	33665	95.5	93.2 - 97.1
40+	2512	88.9	73.2 - 95.9
Maternal education			
<High school	5794	85.2	76.9 - 90.9
High school diploma	14880	92.7	88.0 - 95.6
Some college	14169	93.6	90.1 - 95.9
College graduate	28506	96.7	94.2 - 98.1
Household poverty level			
≤100% FPL	15296	87.5	82.7 - 91.1
>100% FPL	44375	96.1	94.1 - 97.5
Maternal nativity			
Non-US-born	19053	92.8	89.9 - 94.8
US-born	45007	94.1	91.7 - 95.8
Postpartum insurance			
Non-Medicaid	40964	95.8	93.6 - 97.2
Medicaid	23112	90.2	86.8 - 92.8
WIC participation			
non-WIC	37978	95.0	92.6 - 96.7
WIC	25764	91.9	89.0 - 94.2

POSTPARTUM

Infant health care

The American Academy of Pediatrics (AAP) recommends routine well-baby visits for infants at 1 week of age (AAP, 2000). Most infants (95.7%) were reported to have been seen by a health care provider within one week of leaving the hospital (Figure 51).

Figure 51. Proportion of infants seen by health care provider within one week of leaving birth hospital, 2011 MA PRAMS

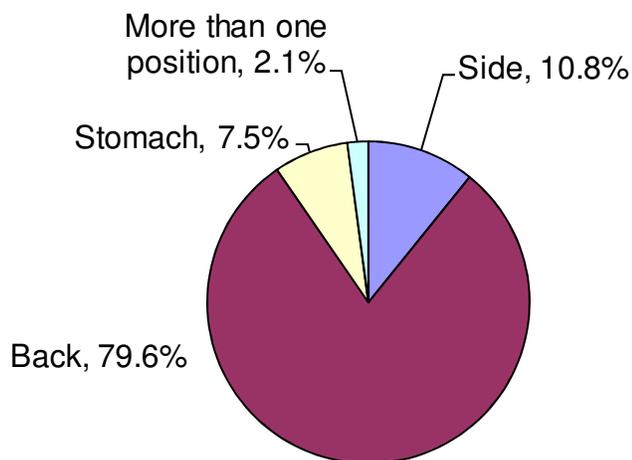


POSTPARTUM

Infant sleep position

Placing infants to sleep on their backs (supine position) has been associated with lowered risk of Sudden Infant Death Syndrome (SIDS), and the practice has been promoted widely to families (American Academy of Pediatrics, 1992).

Figure 52. Prevalence of infant sleep positions, 2011 MA PRAMS



The majority of PRAMS babies, 79.6%, were reported to be positioned most often on their backs for sleep (Figure 52). Mothers least likely to report placing their babies on their backs to sleep were Black, non-Hispanics (58.6%), those with a less than high school education (65.6%), living at or below 100% of the FPL (66.7%), under 20 years of age (69.5%), receiving WIC services (70.9%), or born outside of the US (72.4%) (Table 20).

Table 20. Prevalence of placing infant to sleep on back, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Weighted n	Weighted %	95% CL
Total	53515	79.6	76.9 - 82.0
Maternal race/ethnicity			
White, non-Hispanic	36342	86.4	82.6 - 89.4
Black, non-Hispanic	3489	58.6	51.1 - 65.8
Hispanic	7984	67.7	62.3 - 72.6
Asian, non-Hispanic	3664	79.0	68.3 - 86.8
Other, non-Hispanic	1734	72.1	55.4 - 84.3
Maternal age (years)			
<20	2209	69.5	53.2 - 82.0
20-29	20038	75.0	70.4 - 79.1
30-39	29048	83.8	80.2 - 86.9
40+	2220	82.4	69.7 - 90.5
Maternal education			
<High school	4290	65.6	55.6 - 74.4
High school diploma	11373	72.2	65.8 - 77.8
Some college	11642	78.4	72.6 - 83.2
College graduate	25539	87.4	83.6 - 90.4
Household poverty level			
≤100% FPL	11444	66.7	60.7 - 72.2
>100% FPL	38814	85.4	82.3 - 88.1
Maternal nativity			
Non-US-born	14562	72.4	67.8 - 76.6
US-born	38821	82.6	79.2 - 85.5
WIC participation			
non-WIC	33608	85.6	82.2 - 88.5
WIC	19478	70.9	66.4 - 75.1

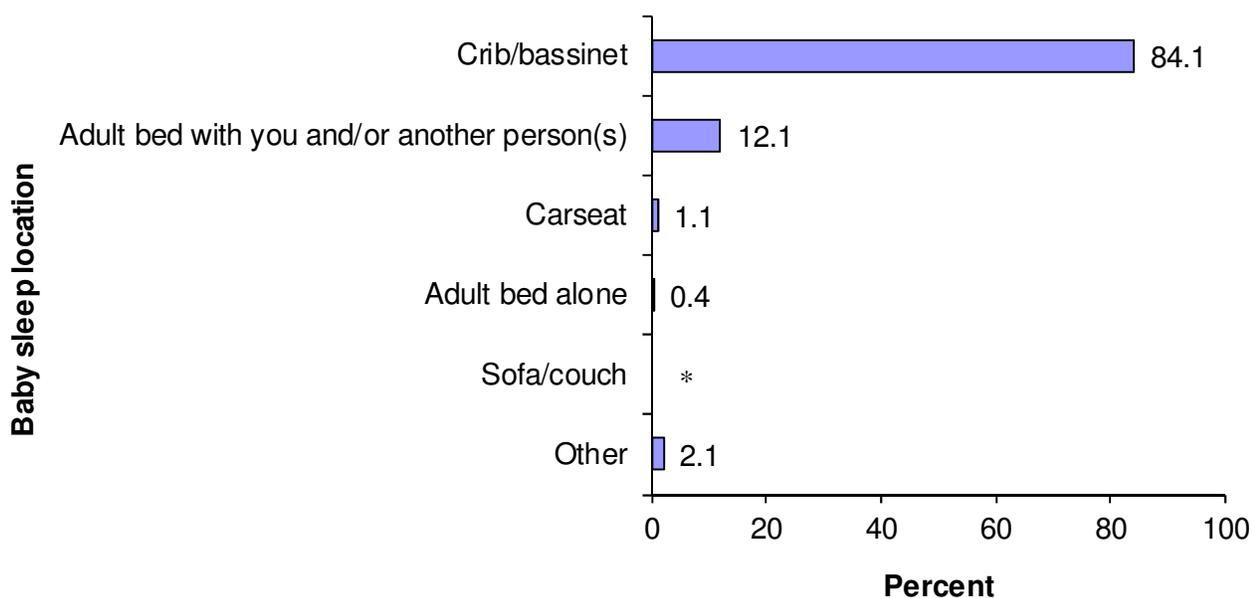
POSTPARTUM

Infant sleep location

The practice of “bed-sharing” or infants sharing a bed with someone else puts infants at increased risk of suffocation and strangulation and has been associated with some infant deaths (American Academy of Pediatrics, 1992; Vennemann, 2012).

About 84% of babies were reported to usually sleep in a crib or bassinet. About 12% shared an adult bed with at least one other person (Figure 53).

Figure 53. Prevalence of infant sleep locations, 2011 MA PRAMS



*Insufficient data to report: Less than 5 mothers.

POSTPARTUM

Infant sleep location

The practice of bed-sharing differed widely by race/ethnicity, and was more commonly reported by Asian, non-Hispanics (27.1%) and Black, non-Hispanics (23.4%) than by White, non-Hispanics (9.0%). There were no significant differences by other socio-demographic characteristics (Table 21).

Table 21. Prevalence of infant sleeping on an adult bed with other person(s), by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Weighted n	Weighted %	95% CL
Total	8035	12.1	10.1 - 14.4
Maternal race/ethnicity			
White, non-Hispanic	3777	9.0	6.6 - 12.2
Black, non-Hispanic	1332	23.4	17.0 - 31.2
Hispanic	1285	11.1	8.3 - 14.6
Asian, non-Hispanic	1283	27.1	19.0 - 37.1
Other, non-Hispanic	357	16.4	8.9 - 28.5
Maternal age (years)			
<20			<i>Insufficient data to report</i>
20-29	3909	14.7	11.4 - 18.8
30-39	3576	10.5	8.1 - 13.6
40+	281	10.1	4.5 - 21.3
Maternal education			
<High school	847	13.5	8.3 - 21.3
High school diploma	1449	9.2	6.0 - 13.9
Some college	2426	16.4	11.8 - 22.3
College graduate	3312	11.5	8.7 - 15.0
Household poverty level			
≤100% FPL	2108	12.5	9.2 - 16.8
>100% FPL	5615	12.4	10.0 - 15.4
Maternal nativity			
Non-US-born	3001	15.2	11.9 - 19.1
US-born	5033	10.8	8.5 - 13.7

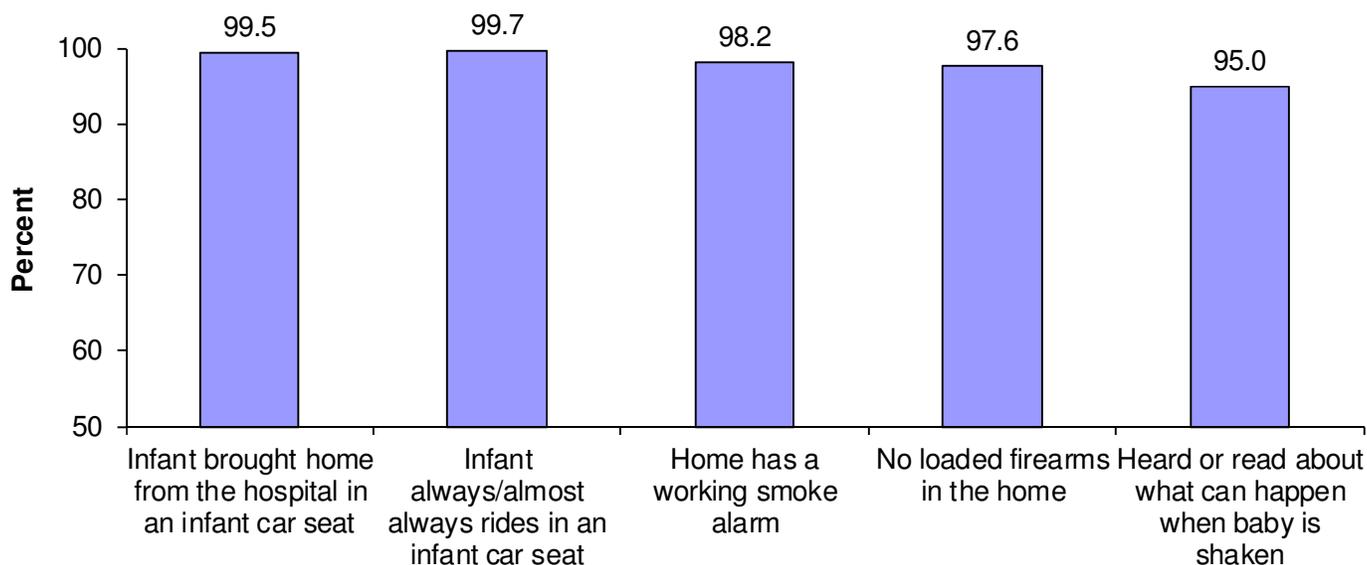
Insufficient data to report: Less than 5 mothers.

POSTPARTUM

Infant safety & knowledge of shaken baby syndrome

Almost all mothers reported that their infants were brought home from the hospital in an infant car seat (99.5%) and always or almost always rode in an infant car seat (99.7%), that they had a working smoke alarm in the home (98.2%), and that they did not keep loaded firearms in the home (97.6%). About 95% of mothers reported being aware of what can happen if a baby is shaken (Figure 54).

Figure 54. Prevalence of infant safety practices, 2011 MA PRAMS



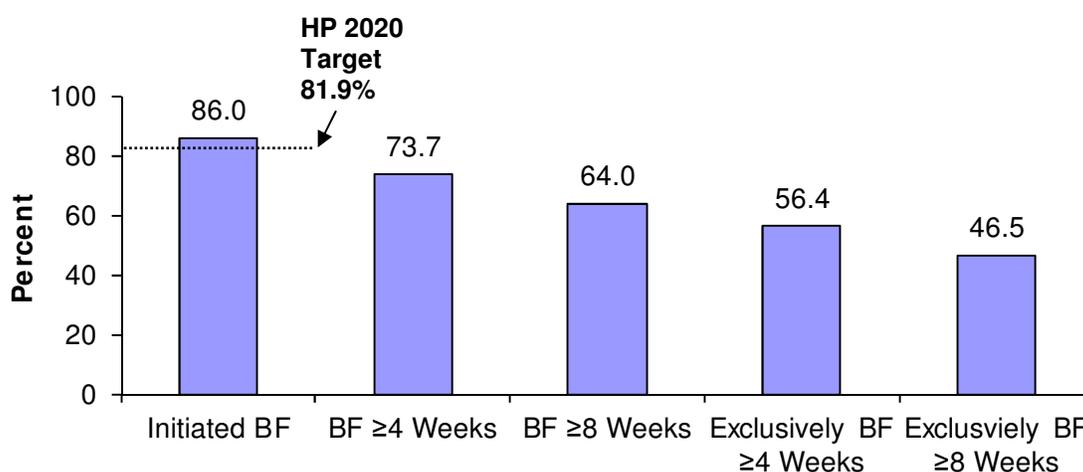
POSTPARTUM

Breastfeeding

Except when it is medically contraindicated, exclusive breastfeeding for the first six months of life is recognized as the best and most complete source of nourishment for most infants. It is associated with lowered risk of infections and certain chronic diseases, and has substantial benefits for many mothers as well (Gartner, 2005).

Overall, 86% of mothers reported initiating breastfeeding, a figure which exceeds the Healthy People 2020 goal of 81.9% in the early postpartum period (US-DHHS, 2010). About 74% reported any breastfeeding (exclusive, or with complementary foods) for at least four weeks, and 64.0% for at least eight weeks. Exclusive breastfeeding was less prevalent, with 56.4% of mothers reporting exclusive breastfeeding for at least four weeks, and 46.5% reporting exclusive breastfeeding for at least eight weeks (Figure 55).

Figure 55. Prevalence of breastfeeding (BF) initiation, duration, and exclusivity, all mothers, 2011 MA PRAMS



Massachusetts mothers say...

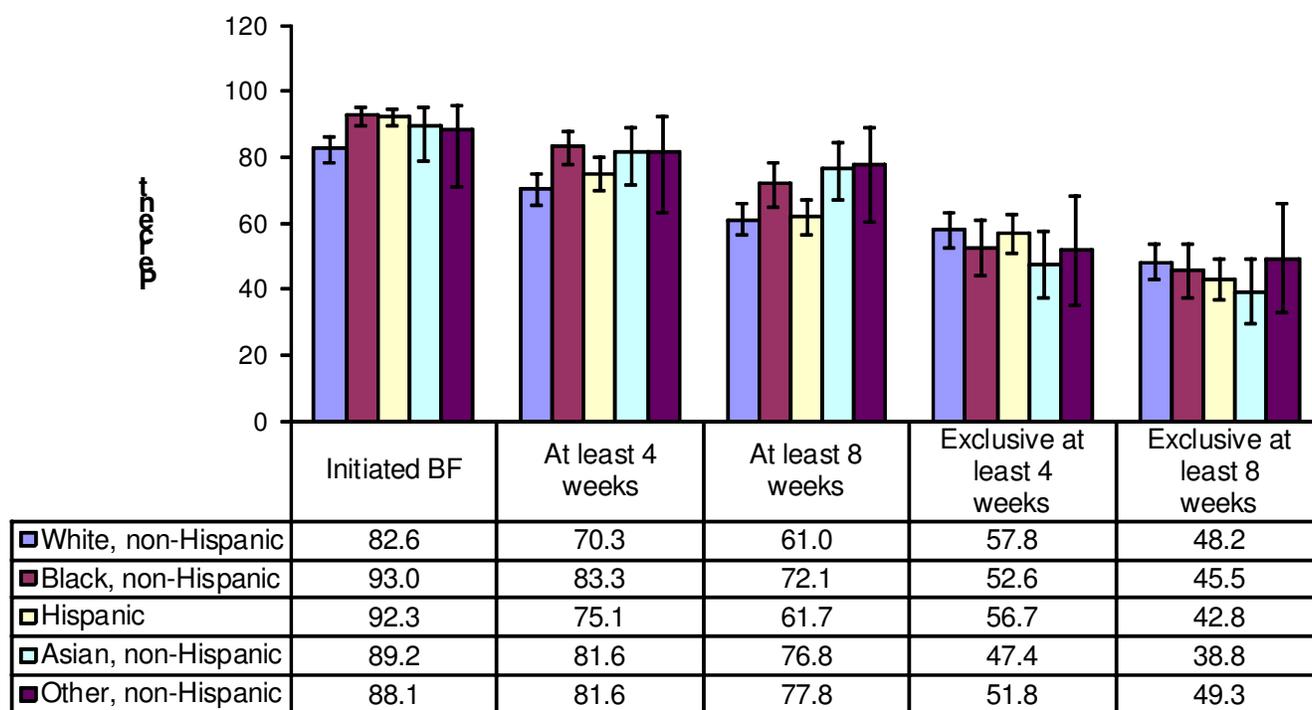
“Thanks for doing this study. I’m blessed with healthy children. If I could have 2 things they would be: 1. more generous maternity leave options. 2. more places to breastfeed that are clean, comfortable and private.”

POSTPARTUM

Breastfeeding: Differences by race/ethnicity

The prevalence of each of the breastfeeding measures (initiation, overall duration and duration of exclusive breastfeeding) varied by race/ethnicity. Lower rates of breastfeeding initiation and breastfeeding for at least four weeks were reported among White, non-Hispanic mothers (82.6%, 70.3%, respectively) compared to Black, non-Hispanic mothers (93.0%, 83.3%, respectively). The rate of breastfeeding initiation was lower among White, non-Hispanic mothers compared to Hispanic mothers (82.6%, 92.3%, respectively). However, no statistical difference was observed for exclusive breastfeeding (Figure 56).

Figure 56. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by maternal race/ethnicity, 2011 MA PRAMS

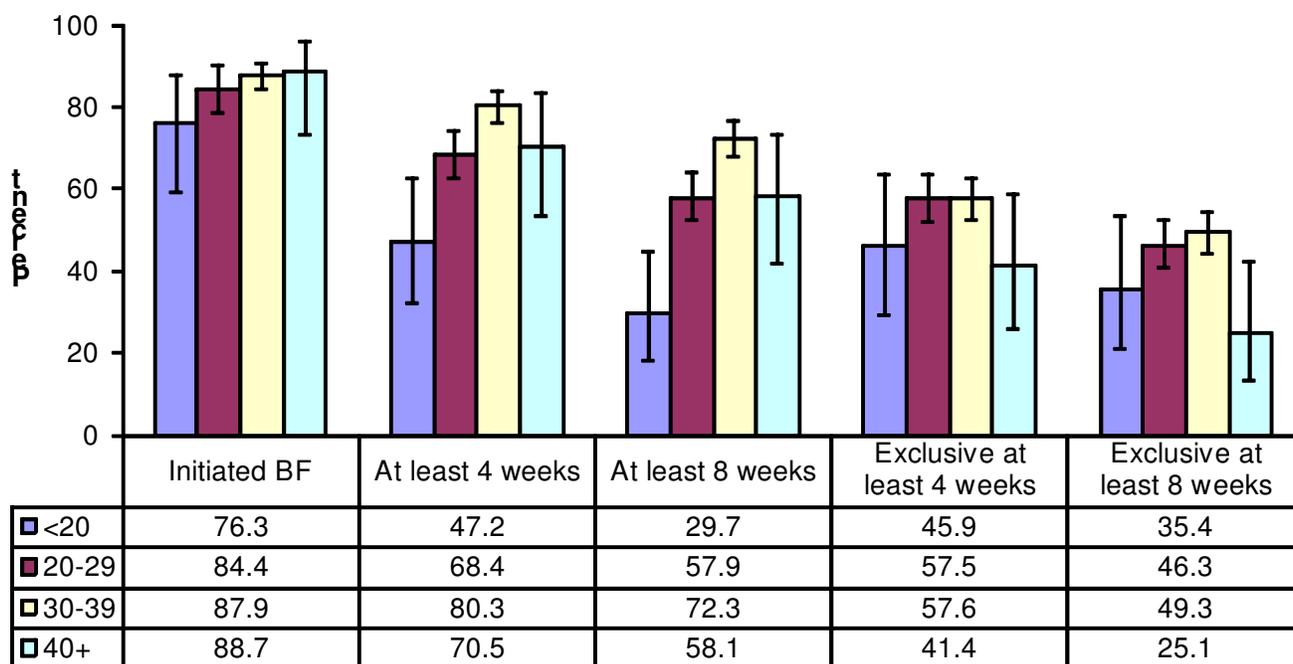


POSTPARTUM

Breastfeeding: Differences by age

Increasing maternal age was associated with greater initiation and duration of breastfeeding. Mothers aged 30-39 years or older reported breastfeeding duration to four and eight weeks more than younger age groups (Figure 57).

Figure 57. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by maternal age (years), 2011 MA PRAMS

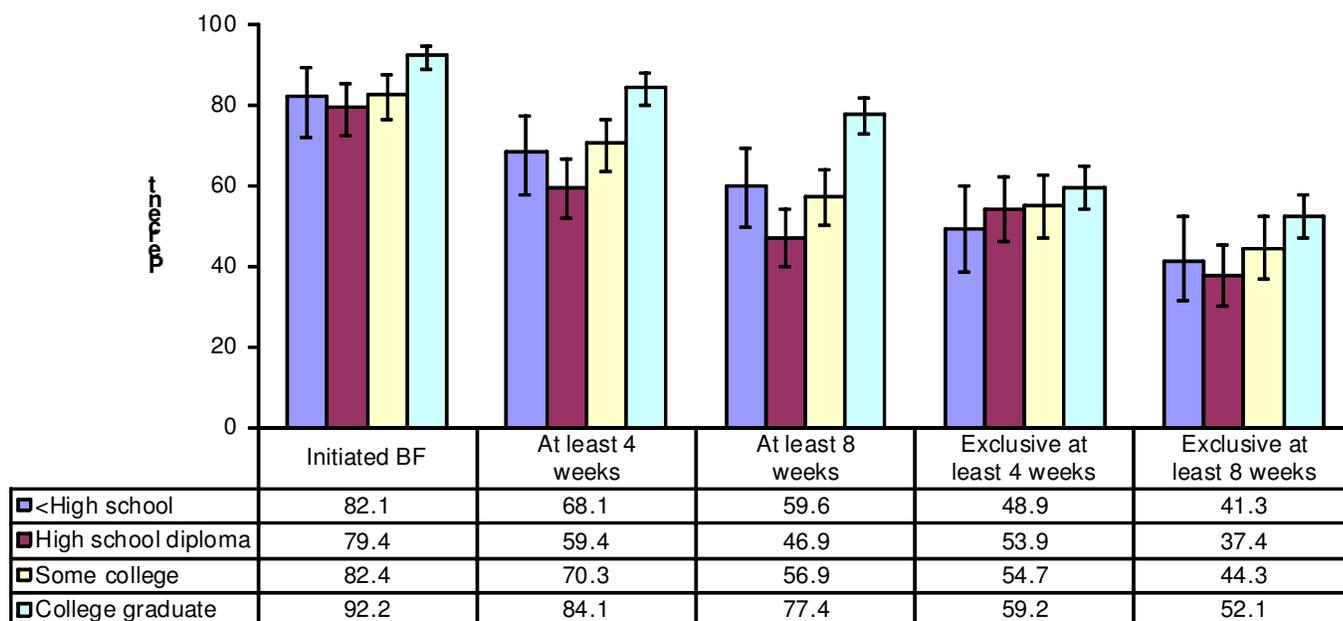


POSTPARTUM

Breastfeeding: Differences by education

Breastfeeding initiation and duration of any breastfeeding for at least four and eight weeks were higher among those with a college education than those with less than a high school education. However, no statistical difference was observed for exclusive breastfeeding (Figure 58).

Figure 58. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by maternal education, 2011 MA PRAMS

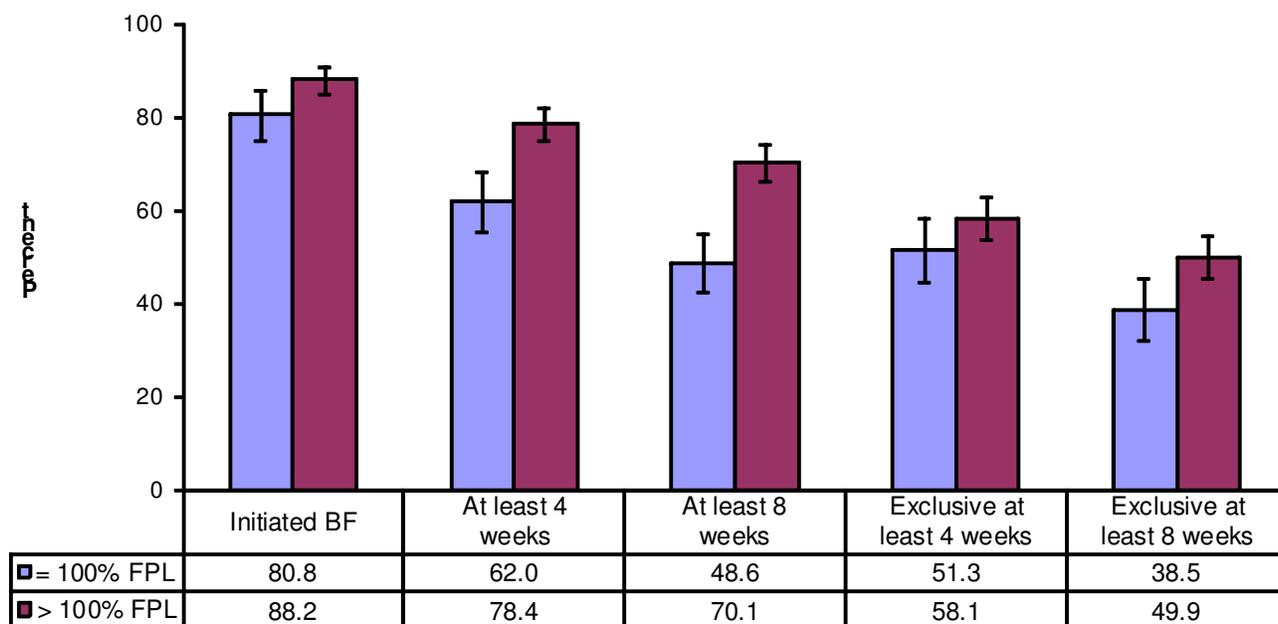


POSTPARTUM

Breastfeeding: Differences by FPL

Mothers with household income above 100% of the FPL had higher breastfeeding rates than mothers with household income at or below 100% of the FPL for breastfeeding at least four weeks, at least eight weeks, and exclusively at least eight weeks (Figure 59).

Figure 59. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by federal poverty level (FPL), 2011 MA PRAMS

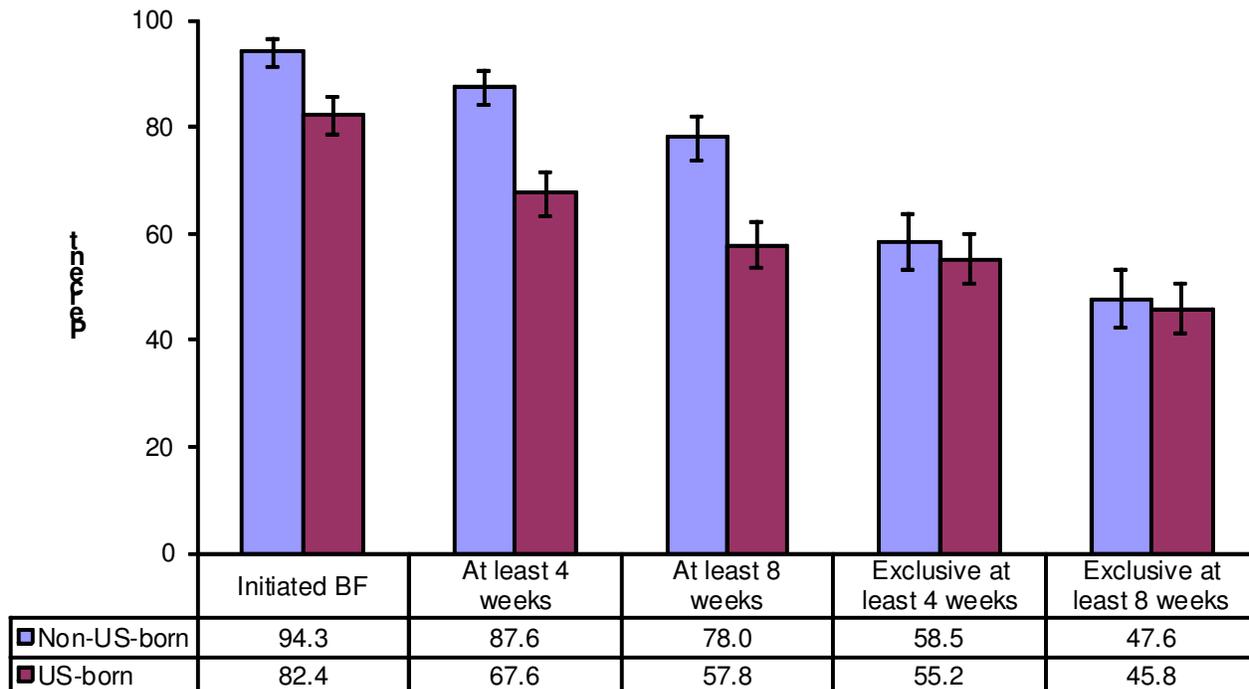


POSTPARTUM

Breastfeeding: Differences by maternal nativity

Breastfeeding initiation and duration of any breastfeeding for at least four and eight weeks were higher among mothers born outside of the United States than those born in the United States. However, there was no statistical difference in the prevalence of exclusive breastfeeding by maternal nativity (Figure 60).

Figure 60. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by maternal nativity, 2011 MA PRAMS

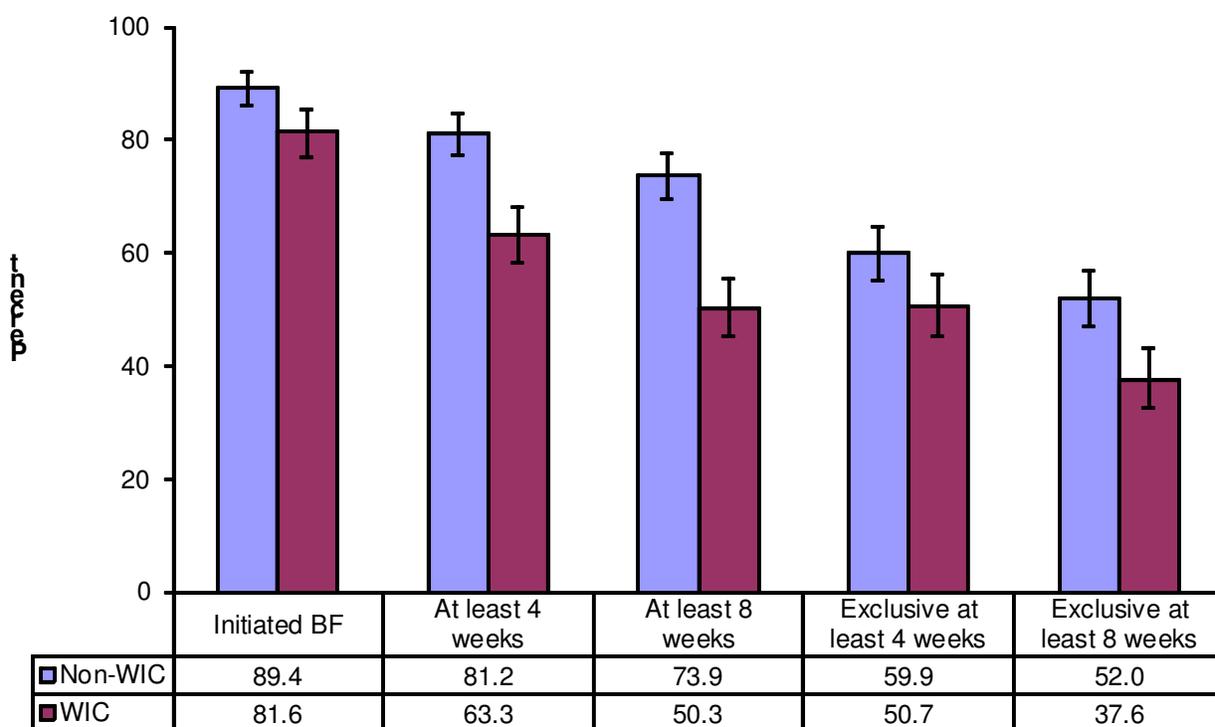


POSTPARTUM

Breastfeeding: Differences by WIC participation

The WIC Program serves primarily low-income pregnant women and mothers with children up to five years of age and because these women and their children are more prone to poor health, the WIC program provides an opportunity for intervention during a particularly vulnerable period. Mothers who participated in the WIC Program during pregnancy reported initiating breastfeeding less than those not participating in the WIC Program. Significant gaps were seen between the two groups with regard to breastfeeding initiation, breastfeeding duration for at least four and eight weeks, and exclusive breastfeeding for at least eight weeks (Figure 61).

Figure 61. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by WIC participation during pregnancy, 2011 MA PRAMS



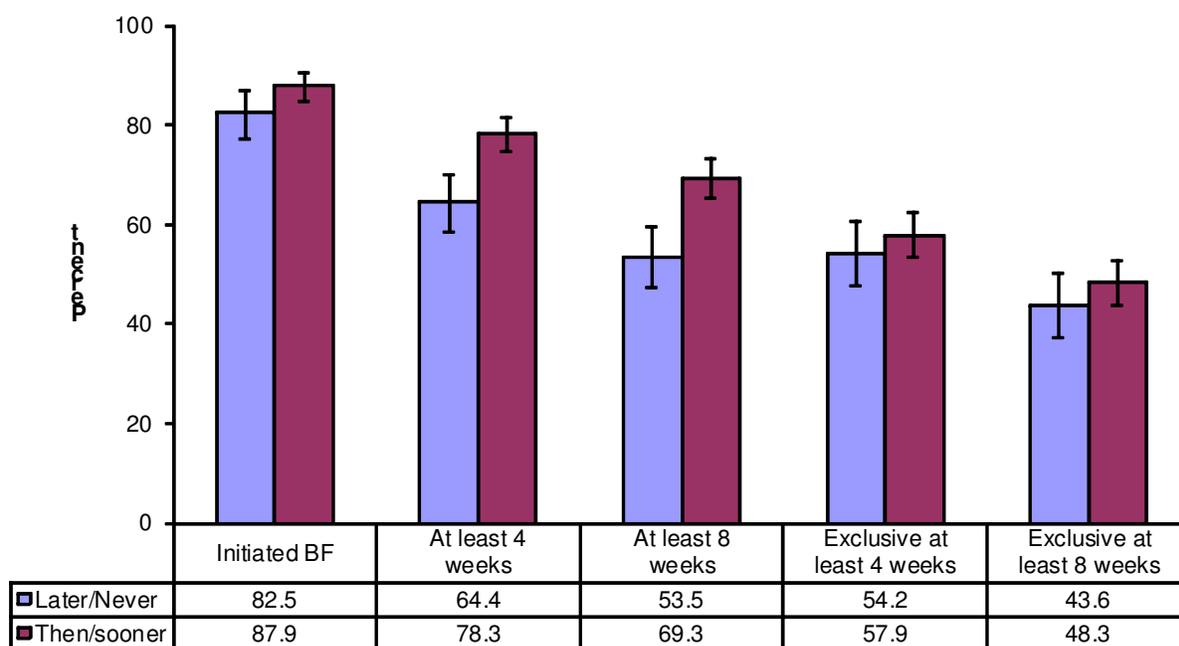
POSTPARTUM

Breastfeeding: Differences by pregnancy intention (feelings)

Breastfeeding was also examined in relation to pregnancy intention, or feelings about becoming pregnant right before the pregnancy occurred.

Those reporting that they had wanted the pregnancy “then” or “sooner” (intended) were more likely to have initiated breastfeeding and continued for a longer duration than those reporting that they had wanted the pregnancy “later” or “never” (unintended). Mothers who intended to be pregnant reported higher prevalence of any breastfeeding at four and eight weeks than those whose pregnancy was unintended (Figure 62).

Figure 62. Prevalence of breastfeeding initiation (BF), duration, and exclusivity, by feelings about this pregnancy, 2011 MA PRAMS



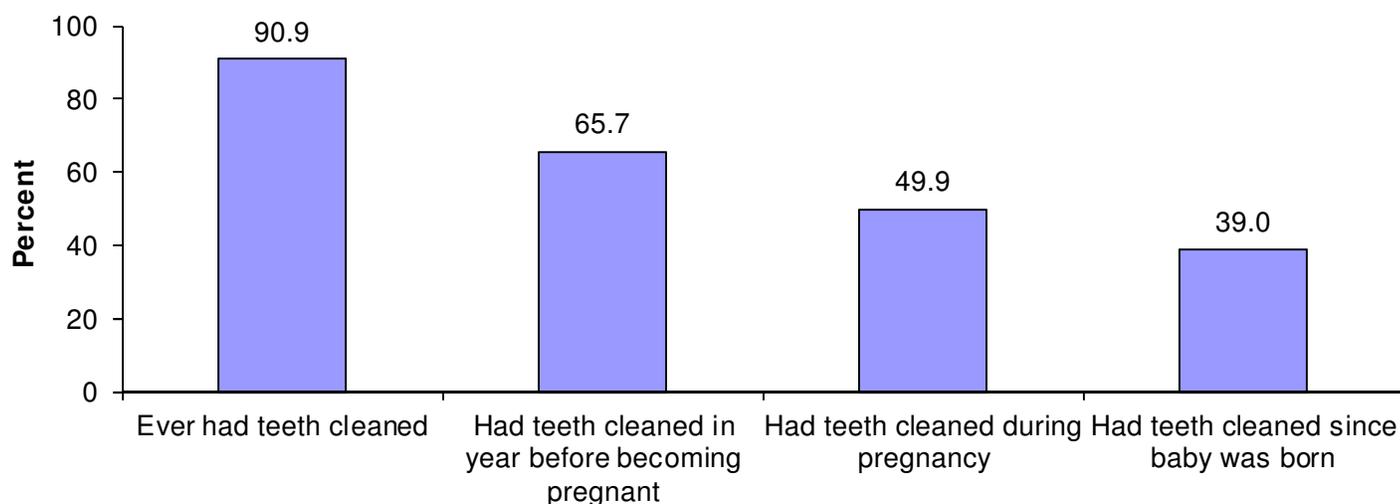
ORAL HEALTH

Oral health care

Maintaining good oral health during pregnancy is important to both mother and child. Hormonal changes during pregnancy can cause changes to the gums which may necessitate care. Untreated oral infections or periodontal disease may be associated with preterm delivery (Horton, 2012).

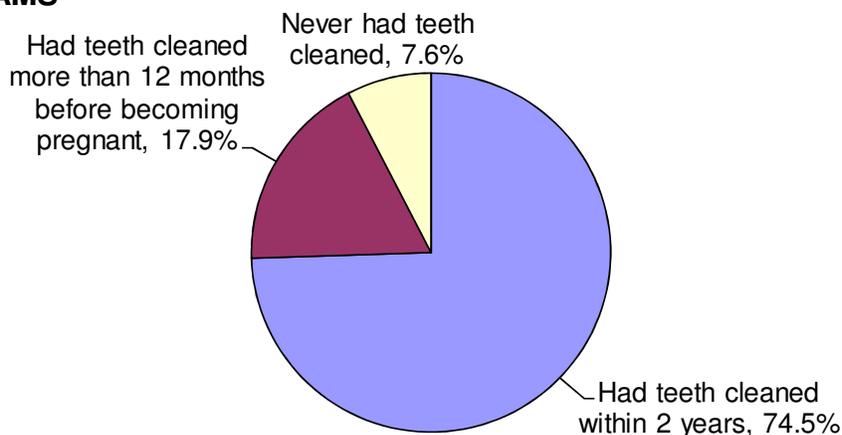
Most mothers (90.9%) reported that they had ever had their teeth cleaned. Another 65.7% had their teeth cleaned during the 12 months before becoming pregnant, 49.9% during their most recent pregnancy, and 39.0% since the baby was born (Figure 63).

Figure 63. Prevalence of teeth cleaning, ever, before, during, and after pregnancy, 2011 MA PRAMS



Nearly 75% of mothers reported that they had their teeth cleaned within the last two years. About 18% reported that their last cleaning visit had occurred more than two years ago (Figure 64).

Figure 64. Prevalence of teeth cleaning, never, ever but not recently, or recently, 2011 MA PRAMS



ORAL HEALTH

Oral health care

The prevalence of teeth cleaning (ever) varied by socio-demographic characteristics, with those living at or below 100% of the FPL (83.7%), or those born outside of the United States (77.9%) being the least likely to report ever having had a cleaning. Asian, non-Hispanic mothers (71.5%), Black, non-Hispanic mothers (81.7%), Hispanic mothers (85.1%), and other, non-Hispanic mothers (84.4%) had lower teeth cleaning rates than White, non-Hispanic mothers (Table 22).

Table 22. Prevalence of teeth cleaning (ever), by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Ever had teeth cleaned		
	Weighted n	Weighted %	95% CL
Total	61979	90.9	89.0 - 92.5
Maternal race/ethnicity			
White, non-Hispanic	41028	96.3	94.0 - 97.8
Black, non-Hispanic	4818	81.7	74.6 - 87.1
Hispanic	10102	85.1	80.3 - 88.8
Asian, non-Hispanic	3510	71.5	61.5 - 79.8
Other, non-Hispanic	2159	84.4	66.0 - 93.8
Maternal age (years)			
<20	3000	88.4	76.3 - 94.7
20-29	23422	86.9	83.1 - 89.9
30-39	33105	94.5	92.3 - 96.0
40+	2451	88.3	75.6 - 94.8
Maternal education			
<High school	5261	80.1	70.8 - 87.0
High school diploma	14400	89.3	85.0 - 92.4
Some college	13526	90.0	85.2 - 93.4
College graduate	27912	94.8	92.5 - 96.5
Household poverty level			
≤100% FPL	14579	83.7	78.5 - 87.9
>100% FPL	43824	95.1	93.3 - 96.4
Maternal nativity			
Non-US-born	15857	77.9	73.4 - 81.9
US-born	45990	96.4	94.4 - 97.7

ORAL HEALTH

Oral health care

The prevalence of teeth cleaning in the 12 months before pregnancy and during pregnancy varied by socio-demographic characteristics; those with less than a high school education (46.3%), living at or below 100% of the FPL (49.3%), Black, non-Hispanic (50.0%), aged 20-29 years (53.6%), or born outside of US (58.3%) being the least likely to report having teeth cleaned 12 months before pregnancy. Other, non-Hispanic mothers (31.6%), living at or below 100% of the FPL (36.1%), with less than a high school education (37.5%), or born outside of the US (41.5%) were the least likely to report having teeth cleaned during pregnancy (Table 23).

Table 23. Prevalence of teeth cleaning in the 12 months before pregnancy and during pregnancy, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Teeth cleaned 12 months before pregnancy			Teeth cleaned during pregnancy		
	Weighted n	Weighted %	95% CL	Weighted n	Weighted %	95% CL
Total	45734	65.7	62.5 - 68.8	33399	49.9	46.5 - 53.3
Maternal race/ethnicity						
White, non-Hispanic	30734	71.7	67.1 - 75.9	23382	55.8	50.9 - 60.7
Black, non-Hispanic	3208	50.0	42.9 - 57.0	2411	41.0	33.7 - 48.8
Hispanic	7310	59.0	53.7 - 64.2	5132	44.8	39.3 - 50.3
Asian, non-Hispanic	2849	57.4	47.6 - 66.5	1604	33.6	24.9 - 43.6
Other, non-Hispanic	1441	55.0	38.8 - 70.3	810	31.6	20.2 - 45.9
Maternal age (years)						
<20	2060	59.6	44.3 - 73.3	1291	38.3	24.4 - 54.3
20-29	14878	53.6	48.3 - 58.8	10431	39.3	34.1 - 44.6
30-39	26762	75.3	71.1 - 79.0	20224	59.1	54.3 - 63.7
40+	2034	71.6	56.3 - 83.1	1453	52.8	37.1 - 67.9
Maternal education						
<High school	3308	46.3	37.2 - 55.6	2493	37.5	28.7 - 47.2
High school diploma	8800	52.9	45.9 - 59.8	6209	38.9	32.1 - 46.1
Some college	9164	60.5	53.5 - 67.0	6322	43.4	36.5 - 50.6
College graduate	23833	80.4	76.3 - 83.9	18189	63.4	58.3 - 68.2
Household poverty level						
≤100% FPL	8658	49.3	43.1 - 55.6	6165	36.1	30.4 - 42.4
>100% FPL	33734	73.5	69.6 - 77.0	25688	56.8	52.5 - 60.9
Maternal nativity						
Non-US-born	12423	58.3	53.4 - 63.0	8260	41.5	36.6 - 46.6
US-born	33180	68.9	64.8 - 72.7	25139	53.6	49.2 - 58.0

SUBSTANCE USE

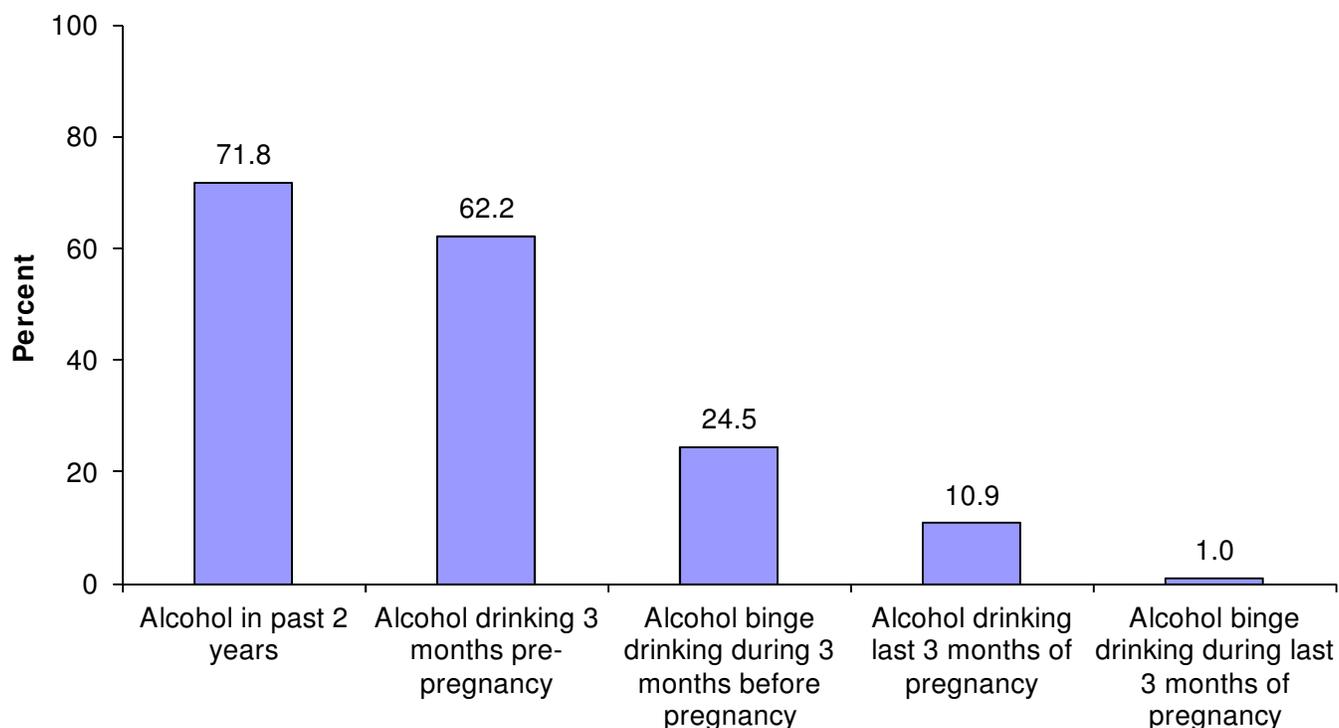
Alcohol consumption

The PRAMS survey presents a unique opportunity to collect information on substance use during pregnancy. The confidential nature of the data collection method may encourage more mothers to accurately report their substance use.

Excessive alcohol consumption during pregnancy can cause a variety of profound physical and mental disorders in the fetus, known as Fetal Alcohol Spectrum Disorders (FASD). While the hazards of heavy drinking during pregnancy are well known, no amount of alcohol during pregnancy has been established as safe for the fetus (Sokol, 2003).

Most mothers (71.8%) reported ever drinking alcohol in the past 2 years, 62.2% reported drinking alcohol in the three months prior to becoming pregnant and another 24.5% reported alcohol binge drinking (drinking more than 4 drinks in one sitting) in the three months before becoming pregnant. About 11% reported drinking any alcohol in the last three months of pregnancy, and one percent of mothers reported any alcohol binge drinking during the last three months of pregnancy (Figure 65).

Figure 65. Prevalence of maternal alcohol consumption prior to and during pregnancy, 2011 MA PRAMS



SUBSTANCE USE

Alcohol consumption

Higher prevalence of alcohol consumption during the last three months of pregnancy was observed among those living above 100% of the FPL (13.9%), White, non-Hispanic mothers (13.4%), or those born in the US (13.0%). Analysis by other socio-demographic characteristics was limited by small cell sizes.

Table 24. Prevalence of maternal alcohol consumption in the last three months of pregnancy, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Any drinking in last 3 months of pregnancy		
	Weighted n	Weighted %	95% CL
Total	7529	10.9	8.9 - 13.3
Maternal race/ethnicity			
White, non-Hispanic	5736	13.4	10.4 - 17.0
Black, non-Hispanic	329	5.2	3.3 - 8.0
Hispanic	745	6.2	3.9 - 9.8
Asian, non-Hispanic	387	7.9	4.6 - 13.3
Other, non-Hispanic	331	13.0	5.1 - 29.4
Maternal age (years)			
<20		<i>Insufficient data to report</i>	
20-29	2095	7.7	5.3 - 11.2
30-39	4996	14.0	10.9 - 17.8
40+	275	9.9	4.6 - 19.9
Maternal education			
<High school	476	6.9	3.1 - 14.8
High school diploma	626	3.8	1.8 - 7.8
Some college	1298	8.6	5.4 - 13.3
College graduate	4951	16.8	13.1 - 21.1
Household poverty level			
≤100% FPL	848	4.8	2.8 - 8.2
>100% FPL	6398	13.9	11.1 - 17.2
Maternal nativity			
Non-US-born	1293	6.2	4.2 - 8.9
US-born	6236	13.0	10.3 - 16.2

Insufficient data to report: Less than 5 mothers.

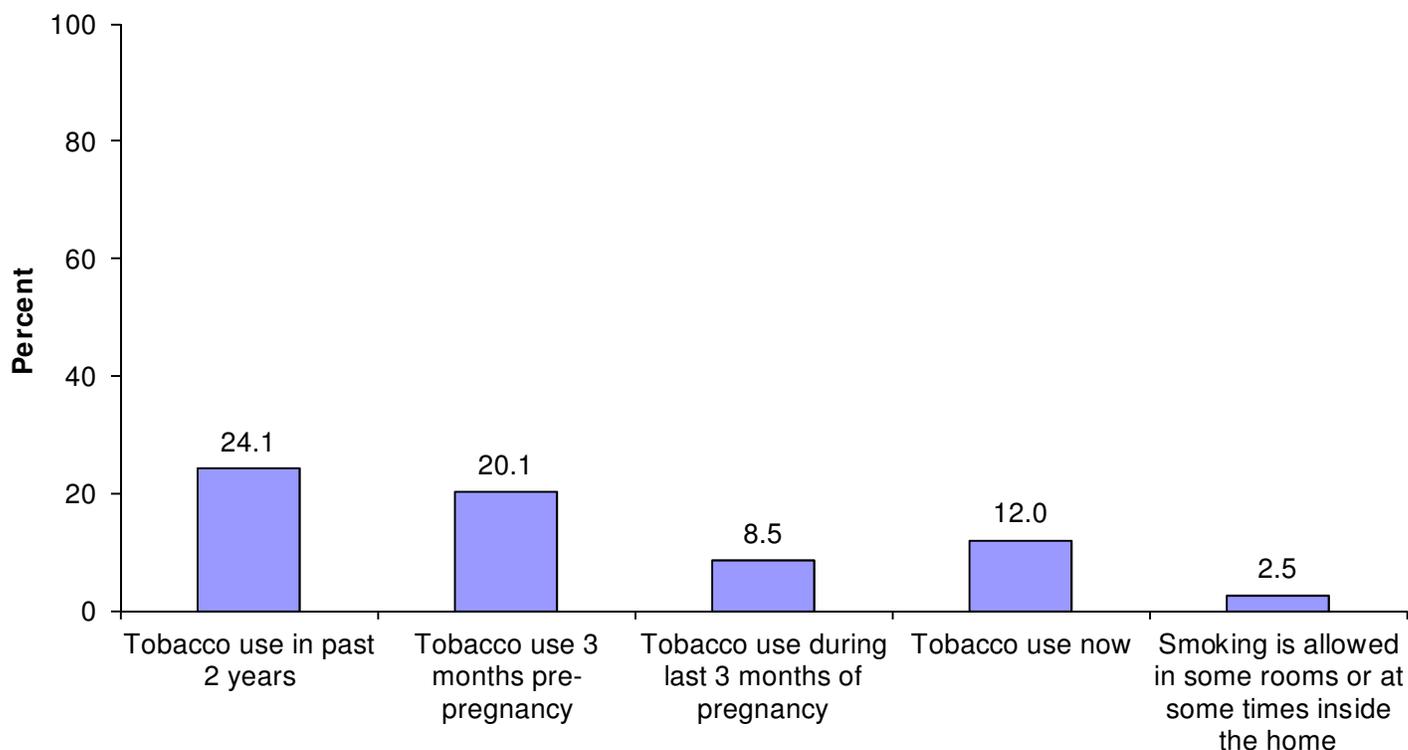
SUBSTANCE USE

Tobacco smoking & smoking rule inside the home

Smoking during pregnancy presents multiple hazards to the health of mothers and infants. Smoking has been associated with preterm birth, low birth weight, stillbirth and infant mortality. Smoking may also be associated with pregnancy complications including placenta previa and placental abruption (Andres, 2000; Hrubá, 2000).

About 24% of mothers reported smoking during the 2 years prior to becoming pregnant, 20.1% reported using tobacco in the three months before becoming pregnant, 8.5% reported some use during the last three months of pregnancy, 12.0% reported smoking in the postpartum period, and 2.5% of all mothers regardless of their smoking status reported that smoking is allowed in some rooms or at some times inside the home (Figure 66).

Figure 66. Prevalence of maternal tobacco use prior to, during, and after pregnancy, 2011 MA PRAMS



SUBSTANCE USE

Tobacco smoking

Smoking during the last three months of pregnancy was more prevalent among those living at or below 100% of the FPL (21.4%), those born in the US (11.1%), or White, non-Hispanics (9.6%) (Table 25). Analysis by other socio-demographic characteristics was limited by small cell sizes.

Table 25. Prevalence of maternal tobacco use during the last three months of pregnancy, by socio-demographic characteristics, 2011 MA PRAMS

Characteristic	Smoking in last 3 months of pregnancy		
	Weighted n	Weighted %	95% CL
Total	5877	8.5	6.6 - 10.8
Maternal race/ethnicity			
White, non-Hispanic	4138	9.6	7.0 - 13.1
Black, non-Hispanic	253	4.0	2.4 - 6.7
Hispanic	762	6.3	4.3 - 9.1
Asian, non-Hispanic	<i>Insufficient data to report</i>		
Other, non-Hispanic	533	20.8	9.4 - 40.1
Maternal age (years)			
<20	681	19.2	9.2 - 35.7
20-29	2941	10.8	7.7 - 15.0
30-39	2095	5.9	3.9 - 8.8
40+	<i>Insufficient data to report</i>		
Maternal education			
<High school	1008	14.8	8.3 - 24.9
High school diploma	3219	19.4	14.0 - 26.2
Some college	1270	8.4	5.0 - 13.6
College graduate	<i>Insufficient data to report</i>		
Household poverty level			
≤100% FPL	3751	21.4	16.2 - 27.8
>100% FPL	1762	3.8	2.4 - 6.0
Maternal nativity			
Non-US-born	563	2.7	1.3 - 5.6
US-born	5315	11.1	8.5 - 14.2

Insufficient data to report: Less than 5 mothers.

Appendix A.

Supplemental data tables*

**The following data tables reflect questions in the order that they appear in the Massachusetts PRAMS 2011 survey.*

APPENDIX A. Supplemental Data Tables

Table 1. Question 1, Prevalence of things done during the 12 months before pregnancy (preconception health indicators), 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Dieting to lose weight				
No	1129	48604	69.8	66.6 - 72.8
Yes	459	21075	30.2	27.2 - 33.4
Exercising 3 or more days a week				
No	914	38319	55.0	51.6 - 58.3
Yes	672	31413	45.0	41.7 - 48.4
Taking prescription medicines other than birth control				
No	1209	50483	72.4	69.2 - 75.3
Yes	378	19276	27.6	24.7 - 30.8
Visited a health care worker to be screened for diabetes				
No	1423	63963	91.8	89.9 - 93.3
Yes	162	5751	8.2	6.7 - 10.1
Visited a health care worker to be screened for high blood pressure				
No	1407	63506	91.0	89.1 - 92.6
Yes	180	6256	9.0	7.4 - 10.9
Visited health care worker to be screened for depression or anxiety				
No	1368	58662	84.1	81.4 - 86.5
Yes	218	11103	15.9	13.5 - 18.6
Talked to a health care worker about family medical history				
No	1025	43233	62.2	58.9 - 65.4
Yes	556	26228	37.8	34.6 - 41.1
Had my teeth cleaned by a dentist or dental hygienist				
No	595	23827	34.3	31.2 - 37.5
Yes	992	45734	65.7	62.5 - 68.8

APPENDIX A. Supplemental Data Tables

Table 2. Question 2, Prevalence of insurance types prior to pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Health insurance from your job or job of partner or parents	863	41836	59.5	56.4 - 62.6
Health insurance that you or someone else paid	100	3851	5.5	4.2 - 7.2
Medicaid or MassHealth	538	20853	29.7	26.9 - 32.6
TRICARE or other military healthcare	32	1210	1.7	1.1 - 2.7
Commonwealth Care	97	3882	5.6	4.2 - 7.3
None	112	3754	5.4	4.2 - 6.9
Pre-pregnancy insurance (collapsed into 4 categories)				
Public	615	23978	34.3	31.3 - 37.3
Private	795	39641	56.6	53.5 - 59.8
Self-paid	68	2593	3.7	2.7 - 5.1
None	112	3754	5.4	4.2 - 6.9

Table 3. Question 3, Prevalence of daily multivitamin use in the month prior to pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Prenatal vitamin use				
Never	758	32782	46.9	43.6 - 50.2
1-3 times per week	122	4258	6.1	4.8 - 7.7
4-6 times per week	125	5364	7.7	6.1 - 9.6
Every day	583	27520	39.4	36.2 - 42.7

Table 4. Questions 4-5, Maternal Body Mass Index (BMI) immediately prior to pregnancy (derived from maternal report of height and weight), 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Maternal BMI, pre-pregnancy				
Underweight (<18.5)	71	2614	3.9	2.8 - 5.4
Normal (18.5 - 24.9)	794	36335	53.8	50.4 - 57.2
Overweight (25.0 - 29.9)	380	16622	24.6	21.8 - 27.7
Obese (≥ 30)	266	11939	17.7	15.2 - 20.5

APPENDIX A. Supplemental Data Tables

Table 5. Question 7, Maternal self-rated health before pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Maternal self-rated health				
Excellent	433	18158	25.9	23.1 - 28.9
Very Good	656	31051	44.3	41.1 - 47.6
Good	419	17585	25.1	22.3 - 28.1
Fair/Poor	88	3257	4.7	3.5 - 6.2

Table 6. Question 8, Prevalence of Type 1 or Type 2 diabetes, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Told by a doctor before pregnancy that you had type 1 or 2 diabetes				
No	1547	68437	97.6	96.4 - 98.4
Yes	47	1655	2.4	1.6 - 3.6

Table 7. Questions 9-12, Prevalence of previous low birth weight, previous preterm births, and previous Cesarean deliveries among multiparous mothers, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Birth History				
Previous live births				
No	762	32860	47.1	43.7 - 50.4
Yes	820	36938	52.9	49.6 - 56.3
Previous normal birth weight				
No	86	3347	9.1	6.9 - 12.0
Yes	730	33392	90.9	88.0 - 93.1
Previous preterm birth (among multiparas)				
No	694	32374	88.5	85.5 - 90.9
Yes	121	4211	11.5	9.1 - 14.5
Previous Cesarean delivery				
No	570	25293	68.8	64.4 - 72.9
Yes	248	11468	31.2	27.1 - 35.6

APPENDIX A. Supplemental Data Tables

Table 8. Question 13, Feelings about becoming pregnant just prior to this pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL		
Pregnancy feelings						
Wanted sooner	357	15592	22.4	19.7	-	25.4
Wanted later	420	18126	26.1	23.2	-	29.2
Wanted then	681	31385	45.1	41.8	-	48.5
Wanted never	120	4415	6.4	5.0	-	8.0

Table 9. Question 14, Proportion of mothers trying to get pregnant, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL		
Trying to get pregnant						
No	680	28664	41.1	37.8	-	44.4
Yes	901	41145	58.9	55.6	-	62.2

Table 10. Question 15, Prevalence of pre-pregnancy contraceptive use among mothers who were not trying to get pregnant, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL		
Used birth control (among those not trying to get pregnant)						
No	373	16152	57.2	52.0	-	62.3
Yes	299	12068	42.8	37.7	-	48.0

Table 11. Question 16, Reasons for not using a contraceptive method prior to pregnancy among mothers not trying to get pregnant, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL		
Reasons for not using birth control						
Didn't mind getting pregnant	181	7750	45.4	38.8	-	52.2
Didn't think could become pregnant	125	4897	29.1	23.5	-	35.5
Partner didn't want to use	65	2995	17.6	12.9	-	23.4
Side effects from birth control	39	1730	10.1	6.6	-	15.2
Thought partner was sterile	25	1280	7.5	4.5	-	12.3
Problems acquiring birth control	16	755	4.4	2.3	-	8.4
Other	46	1992	11.7	8.0	-	16.8

APPENDIX A. Supplemental Data Tables

Table 12. Questions 17-18, Prevalence of fertility treatment use, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Had any help getting pregnant (among only those who were trying to get pregnant)				
No	785	35273	86.8	83.4 - 89.6
Yes	102	5380	13.2	10.4 - 16.6
Kinds of reproductive assistance (among those reporting any fertility treatment use)				
Drugs	52	2714	44.4	33.5 - 55.9
Artificial Insemination	15	769	12.5	6.6 - 22.5
Assisted reproductive technology (<i>e.g.</i> , in vitro fertilization [IVF])	54	3048	49.8	38.6 - 60.9
Other treatment	7	391	6.4	2.4 - 15.7
Was not using fertility treatments	15	719	11.7	6.3 - 20.8

Table 13. Question 19, Weeks pregnant when sure of pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Weeks pregnant when sure of pregnancy				
0 to 4 weeks	685	31750	47.8	44.4 - 51.3
5 to 8 weeks	647	27889	42.0	38.7 - 45.4
9 to 12 weeks	110	4335	6.5	5.1 - 8.3
13+ weeks	54	2406	3.6	2.5 - 5.2

Table 14. Question 20, Timing of entry to prenatal care (PNC), 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Timing of initiation of prenatal care				
Initiated within 1st trimester	1402	63279	91.8	90.0 - 93.4
Did not initiate within 1st trimester	148	5208	7.6	6.1 - 9.4
Did not have PNC	15	398	0.6	0.3 - 1.2

APPENDIX A. Supplemental Data Tables

Table 15. Question 21, Prevalence of mothers receiving prenatal care as early as wanted, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Received prenatal care as early as wanted				
No	171	6631	9.6	7.8 - 11.7
Yes	1395	62515	90.4	88.3 - 92.2

Table 16. Question 22, Reasons for not receiving prenatal care as early as wanted among those with late prenatal care entry, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Reasons for not getting prenatal care as early as wanted among those with late prenatal care entry				
Couldn't get an appointment	14	325	6.1	3.5 - 10.5
Didn't have enough money or insurance	22	718	13.5	7.7 - 22.7
No transportation/childcare/leave time	16	723	12.9	6.9 - 22.9
Doctor/health plan wouldn't start earlier	8	287	5.4	2.0 - 13.8
Too many other things going on	16	482	9.2	4.8 - 16.9
Didn't have MassHealth card	19	711	13.6	7.4 - 23.7
Didn't know I was pregnant	31	1286	23.9	15.3 - 35.3
Didn't want to disclose pregnancy	17	530	10.0	5.5 - 17.8
Didn't want prenatal care			<i>Insufficient data to report</i>	

Table 17. Question 23, Sources of payment for prenatal care, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Health Insurance from your job or the job of your husband, partner, or parents				
Health insurance that you or someone else paid for	827	40503	58.0	54.8 - 61.1
Medicaid or MassHealth	76	3050	4.4	3.2 - 5.9
TRICARE or other military health care	707	26818	38.4	35.5 - 41.5
Commonwealth care	27	1404	2.0	1.2 - 3.3
None	80	2719	3.9	2.9 - 5.3
None	9	164	0.2	0.1 - 0.4
Prenatal care insurance (collapsed into 4 categories)				
Public	762	28975	41.9	38.8 - 45.0
Private	752	37929	54.8	51.6 - 57.9
Self-paid	42	2138	3.1	2.1 - 4.6
None	9	164	0.2	0.1 - 0.4

Insufficient data to report: Less than 5 mothers.

APPENDIX A. Supplemental Data Tables

Table 18. Question 24, Topics discussed by health care providers during prenatal care visits, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Topics discussed during prenatal care visits				
Smoking	1130	49070	71.4	68.2 - 74.3
Breastfeeding	1320	58501	84.7	82.1 - 86.9
Alcohol	1197	52645	76.1	73.1 - 78.9
Seat belt use	937	40709	59.0	55.6 - 62.3
Safe medications during pregnancy	1371	61666	89.2	87.0 - 91.1
Illegal drugs	1057	46415	67.5	64.2 - 70.6
Birth defects screening	1406	62994	91.1	89.1 - 92.8
Signs of preterm labor	1267	55898	81.4	78.6 - 83.9
What to do if labor starts early	1316	57899	84.5	81.9 - 86.8
HIV testing	1289	55185	80.7	77.8 - 83.3
What to do if feeling depressed	1221	53847	78.4	75.5 - 81.1
Physical abuse by partners	990	42162	61.4	58.1 - 64.7

Table 19. Question 25, Prenatal care satisfaction, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Satisfaction with prenatal care				
Waiting time	1295	58005	84.1	81.5 - 86.4
Time spent with doctor	1398	61971	90.0	87.8 - 91.9
Advice received	1442	64645	94.0	92.2 - 95.4
Understanding and respect from staff	1500	66226	96.1	94.5 - 97.2

Table 20. Questions 26-29, Prevalence of HIV testing, offer and refusal during pregnancy, and reasons for declining HIV testing, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Tested for HIV				
Not tested	351	17700	25.2	22.4 - 28.2
Tested	1111	46474	66.1	62.9 - 69.2
Don't know	141	6128	8.7	7.0 - 10.8
Offered an HIV test (population estimate)				
Not offered	255	12820	18.2	15.7 - 21.0
Offered	1273	53776	76.5	73.5 - 79.2
Don't know	75	3706	5.3	3.9 - 7.0
Refused HIV test (population estimate)				
Did not refuse	1163	48279	89.8	87.1 - 91.9
Refused	106	5348	9.9	7.8 - 12.6
Don't know			<i>Insufficient data to report</i>	
Reasons for declining HIV test (among those declining)				
Didn't think at risk	67	3560	66.0	53.4 - 76.6
Didn't want people to think at risk			<i>Insufficient data to report</i>	
Afraid of getting result	0	0	0.0	
Previously tested	62	3124	57.9	45.2 - 69.6
Other	5	150	2.8	0.8 - 8.9

Insufficient data to report: Less than 5 mothers.

APPENDIX A. Supplemental Data Tables

Table 21. Question 30, Prevalence of WIC participation during pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
WIC during pregnancy				
Did not use WIC	804	40159	58.1	55.0 - 61.2
Used WIC	765	28940	41.9	38.8 - 45.0

Table 22. Questions 31-32, Prevalence of gestational diabetes and follow-up care received during pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Gestational Diabetes				
No	1397	62187	89.9	87.7 - 91.7
Yes	171	6994	10.1	8.3 - 12.3
Among those with Gestational Diabetes				
Refer you to a nutritionist	149	5958	85.4	76.9 - 91.2
Talk to you about the importance of exercise	149	5960	87.2	79.0 - 92.6
Talk to you about getting to a healthy weight	135	5148	75.3	65.2 - 83.3
Suggest that you breastfeed your new baby	131	4874	71.4	60.8 - 80.1
Talk about risk of Type 2 diabetes	142	5504	81.2	71.2 - 88.4

Table 23. Question 33, Prevalence of maternal health complications during pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Health complications during pregnancy				
Vaginal bleeding	269	10981	15.9	13.6 - 18.4
Kidney/bladder infection	206	9457	13.8	11.6 - 16.3
Severe nausea/vomiting/dehydration	431	17603	25.5	22.7 - 28.5
Incompetent cervix	33	1291	1.9	1.2 - 3.0
Hypertension or preeclampsia or toxemia	181	7513	10.9	9.0 - 13.1
Placental problems	95	4172	6.1	4.6 - 7.9
Preterm labor	235	10208	14.8	12.6 - 17.4
PROM*	70	2720	3.9	2.8 - 5.4
Blood transfusion	25	862	1.3	0.7 - 2.1
Car accident	29	1052	1.5	0.9 - 2.5

*PROM = premature rupture of membranes

APPENDIX A. Supplemental Data Tables

Table 24. Questions 34-38, Prevalence of maternal tobacco use prior to, during and after pregnancy, change in smoking status, and smoking rules inside the home, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Tobacco use in past 2 years				
No	1280	52523	75.9	72.8 - 78.8
Yes	285	16653	24.1	21.2 - 27.2
Tobacco use 3 months pre-pregnancy				
No	1326	55320	79.9	76.9 - 82.6
Yes	241	13897	20.1	17.4 - 23.1
Tobacco use during last 3 months of pregnancy				
No	1469	63315	91.5	89.2 - 93.4
Yes	97	5877	8.5	6.6 - 10.8
Tobacco use now				
No	1427	60880	88.0	85.4 - 90.2
Yes	139	8312	12.0	9.8 - 14.6
Changes in tobacco use during pregnancy				
Non-smoker	1325	55303	80.0	76.9 - 82.7
Smoker quit	144	8012	11.6	9.5 - 14.1
Smoker reduced	71	4623	6.7	5.0 - 8.8
Smoker same/more	25	1234	1.8	1.1 - 3.0
Smoking inside home				
No smoking in home	1504	66863	97.3	96.1 - 98.2
Smoking in some rooms	46	1698	2.5	1.6 - 3.7
Smoking anywhere in house			<i>Insufficient data to report</i>	

Insufficient data to report: Less than 5 mothers.

APPENDIX A. Supplemental Data Tables

Table 25. Questions 39-41, Prevalence of maternal alcohol consumption and bingeing prior to and during pregnancy, and changes in alcohol drinking during pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL		
Alcohol drinking in past 2 years						
No	591	19530	28.2	25.6	-	31.0
Yes	976	49661	71.8	69.0	-	74.4
Alcohol drinking 3 months pre-pregnancy						
No	758	26100	37.8	34.8	-	40.9
Yes	809	42964	62.2	59.1	-	65.2
Alcohol binge drinking during 3 months before pregnancy						
No	1260	52083	75.5	72.4	-	78.4
Yes	305	16882	24.5	21.6	-	27.6
Alcohol drinking last 3 months of pregnancy						
No	1412	61570	89.1	86.7	-	91.1
Yes	151	7529	10.9	8.9	-	13.3
Alcohol binge drinking during last 3 months of pregnancy						
No	1545	68386	99.0	98.2	-	99.5
Yes	20	665	1.0	0.5	-	1.8
Changes in alcohol drinking during pregnancy						
Non-drinker	750	25862	37.6	34.6	-	40.6
Drinker quit	658	35505	51.6	48.3	-	54.8
Drinker reduced	75	4360	6.3	4.8	-	8.3
Drinker same/more	68	2916	4.2	3.1	-	5.8
Non-drinker resumed	7	225	0.3	0.1	-	0.9

Insufficient data to report: Less than 5 mothers.

APPENDIX A. Supplemental Data Tables

Table 26. Question 42, Prevalence of stressful life events during pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Maternal stressors in 12 months before baby was born				
Family member sick	323	16355	23.7	20.9 - 26.8
Separated and divorced	119	4337	6.3	4.9 - 8.0
Moved to new address	499	19901	28.9	26.0 - 32.0
Homeless	74	2721	4.0	2.9 - 5.4
Partner lost job	193	7591	11.1	9.2 - 13.3
Mother lost job	200	6791	9.9	8.2 - 11.9
Argued with partner more than usual	335	13770	20.1	17.5 - 22.9
Partner said didn't want pregnancy	116	4215	6.1	4.8 - 7.8
Couldn't pay bills	328	13481	19.7	17.2 - 22.4
I was in a physical fight	50	1751	2.6	1.7 - 3.8
Partner or I went to jail	44	2314	3.4	2.3 - 5.0
Someone close to me had an alcohol drinking or drug problem	128	7899	11.5	9.3 - 14.1
Someone close to me died	245	13064	19.0	16.4 - 21.9
At least 1 family-related stressor	523	22320	31.7	28.7 - 34.9
At least 1 financial stressor	799	32944	46.9	43.6 - 50.2
At least 1 illness/death-related stressor	432	21426	30.5	27.4 - 33.7
Number of stressors (grouped)				
None	490	21749	31.4	28.4 - 34.6
1 to 2	683	29902	43.2	39.9 - 46.6
3 to 5	321	14371	20.8	18.1 - 23.7
6 to 18	77	3154	4.6	3.4 - 6.1

Family-related stressors: Separation/divorce, physical fight, partner said didn't want pregnancy, argued with partner more than usual, someone close had a problem with drinking/drugs, or partner went to jail; Financial stressors: Moving to a new address, being homeless, mom lost job, partner lost job, or had bills couldn't pay; Illness/death-related stressors: Family member sick/had to go to hospital, or someone close died.

Table 27. Questions 43-44, Prevalence of physical abuse prior to and during pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Physical abuse before pregnancy				
No	1522	67058	98.0	96.8 - 98.8
Yes	32	1351	2.0	1.2 - 3.2
Physical abuse during pregnancy				
No	1544	68073	98.5	97.5 - 99.1
Yes	26	1018	1.5	0.9 - 2.5
Physical abuse (before or during pregnancy)				
No	1534	67741	97.8	96.6 - 98.6
Yes	39	1504	2.2	1.4 - 3.4

APPENDIX A. Supplemental Data Tables

Table 28. Questions 12 & 48-49, Prevalence of prior Cesarean delivery, mode of delivery for current birth, and source of Cesarean request, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Previous Cesarean (among multiparas)				
No	570	25293	68.8	64.4 - 72.9
Yes	248	11468	31.2	27.1 - 35.6
Delivery				
Vaginal	1055	47168	68.6	65.5 - 71.7
Cesarean	512	21548	31.4	28.3 - 34.5
Whose idea for having a Cesarean delivery				
Health care provider before labor	222	9945	47.4	41.4 - 53.5
Health care provider during labor	186	7304	34.8	29.4 - 40.7
Mother before labor	57	2930	14.0	10.1 - 18.9
Mother during labor	22	802	3.8	2.2 - 6.6

Table 29. Question 51, Prevalence of delivery payment sources, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Health insurance from your job or job of partner or parents				
Health insurance that you or someone else paid	790	38777	56.0	52.8 - 59.2
Medicaid	65	2570	3.7	2.7 - 5.2
TRICARE or other military healthcare	731	27744	40.2	37.1 - 43.3
Commonwealth Care	20	927	1.3	0.7 - 2.4
None	60	1862	2.7	1.9 - 3.8
None	7	509	0.6	0.3 - 1.8
Delivery payment insurance (collapsed into 4 categories)				
Public	765	29154	42.5	39.4 - 45.6
Private	745	36925	53.8	50.6 - 57.0
Self-paid	48	2125	3.1	2.1 - 4.6
None	7	509	0.6	0.3 - 1.8

APPENDIX A. Supplemental Data Tables

Table 30. Questions 52-53, Infant stay in the neonatal intensive unit (NICU) and length of infant hospital stay at birth, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Baby ever in NICU				
No	1336	60142	88.4	86.1 - 90.3
Yes	215	7920	11.6	9.7 - 13.9
Baby length of stay in hospital				
<1 day	29	955	1.4	0.9 - 2.3
1 to 2 days	749	33534	49.4	46.1 - 52.8
3 to 5 days	631	27731	40.9	37.6 - 44.3
6+ days	128	5335	7.9	6.2 - 9.9
Not born in hospital			<i>Insufficient data to report</i>	

Table 31. Questions 54-55, Infant alive now and infant living with mother, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Infant alive now	1527	66702	99.6	98.7 - 99.8
Infant living with mother now	1517	66309	99.6	98.9 - 99.9

Table 32. Questions 56-59, Prevalence of ever breastfeeding, any breastfeeding at 4-week and 8-week postpartum, and exclusivity at 4-week and 8-week postpartum, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Breastfeeding (Ever)				
No	171	9541	14.0	11.7 - 16.7
Yes	1374	58522	86.0	83.3 - 88.3
Duration of breastfeeding (to at least 4 weeks)				
No	343	17813	26.3	23.4 - 29.5
Yes	1189	49816	73.7	70.5 - 76.6
Duration of breastfeeding (to at least 8 weeks)				
No	494	24356	36.0	32.8 - 39.4
Yes	1038	43274	64.0	60.6 - 67.2
Exclusive breastfeeding (to at least 4 weeks)				
No	586	24585	43.6	40.0 - 47.3
Yes	718	31794	56.4	52.7 - 60.0
Exclusive breastfeeding (to at least 8 weeks)				
No	718	30143	53.5	49.8 - 57.1
Yes	586	26236	46.5	42.9 - 50.2

Insufficient data to report: Less than 5 mothers.

APPENDIX A. Supplemental Data Tables

Table 33. Question 60, Prevalence of infant sleep position, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Baby sleep position				
Side	188	7234	10.8	8.9 - 13.0
Back	1151	53515	79.6	76.9 - 82.0
Stomach	141	5047	7.5	6.0 - 9.3
More than one position	46	1442	2.1	1.5 - 3.1

Table 34. Question 61, Proportion of infants seen by a health care provider (HCP) within a week after leaving hospital, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Baby seen by HCP within week after leaving hospital				
No	52	2903	4.3	3.0 - 6.0
Yes	1488	64876	95.7	94.0 - 97.0

Table 35. Questions 62-63, Prevalence of contraceptive use postpartum and reasons for not using a contraceptive method, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Current birth control use				
No	286	12914	18.9	16.4 - 21.7
Yes	1262	55370	81.1	78.3 - 83.6
Reasons for not using birth control				
Not having sex	112	4836	36.3	29.4 - 43.9
Want to get pregnant	36	1726	13.0	8.5 - 19.2
Don't want to use birth control	76	3220	24.2	18.2 - 31.4
Partner doesn't want to use birth control	24	1129	8.5	4.9 - 14.4
Don't think I can get pregnant (sterile)	15	758	5.7	2.9 - 11.0
Can't pay for birth control	14	701	5.3	2.6 - 10.4
Pregnant now		<i>Insufficient data to report</i>		
Other	64	3033	22.8	17.0 - 29.9

Insufficient data to report: Less than 5 mothers.

APPENDIX A. Supplemental Data Tables

Table 36. Question 64, Prevalence of maternal postpartum checkup, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Mother had postpartum checkup				
No	110	4308	6.3	4.9 - 8.1
Yes	1442	64191	93.7	91.9 - 95.1

Table 37. Question 65, Prevalence of maternal postpartum depressive symptoms, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Postpartum depressive symptoms				
Feeling down, depressed, or sad				
Never/Rarely	889	41048	61.2	57.8 - 64.4
Sometimes	462	20031	29.8	26.8 - 33.1
Often/Always	156	6045	9.0	7.3 - 11.1
Hopeless				
Never/Rarely	1227	55719	83.7	81.0 - 86.1
Sometimes	191	7471	11.2	9.3 - 13.5
Often/Always	73	3368	5.1	3.7 - 6.9
Slowed down				
Never/Rarely	788	34901	52.5	49.0 - 55.9
Sometimes	485	22580	33.9	30.7 - 37.3
Often/Always	215	9054	13.6	11.4 - 16.1
Combined all 3 questions				
Never/Rarely	588	26335	39.1	35.8 - 42.5
Sometimes	625	28342	42.1	38.7 - 45.5
Often/Always	305	12673	18.8	16.3 - 21.6
Depression defined by CDC (≥ 10)				
No	1367	61266	91.0	88.8 - 92.7
Yes	151	6084	9.0	7.3 - 11.2

Table 38. Question 66, Prevalence of reactions to racism during the 12 months before delivery, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Things that happened in 12 months before baby was born				
Stress due to race or ethnicity	64	1854	2.7	1.9 - 3.8
Upset due to treatment based on race or ethnicity	66	1956	2.9	2.0 - 4.0
Physical symptoms due to treatment based on race or ethnicity	66	2144	3.1	2.3 - 4.3

APPENDIX A. Supplemental Data Tables

Table 39. Questions 67-68, Frequency of physical activity and servings of fruits/vegetables intake per day in the last three months of pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL	
Exercise, last 3 months of pregnancy					
<1 days/wk	494	21037	31.1	28.1	34.4
1 to 2 days/wk	431	20404	30.2	27.1	33.5
3 to 4 days/wk	336	14307	21.2	18.6	24.0
5+ days/wk	171	8120	12.0	9.9	14.5
Told not to exercise	88	3688	5.5	4.1	7.2
Fruits and vegetables servings/day, last 3 months of pregnancy					
< 1 serving/day	88	3567	5.2	3.9	6.9
1 to 2 servings/day	693	28413	41.7	38.5	45.1
3 to 4 servings/day	616	29891	43.9	40.5	47.3
5+ servings/day	148	6240	9.2	7.4	11.3

Table 40. Question 69, Infant sleep location and bed sharing, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL	
Where did your baby usually sleep in the last month?					
Crib/bassinet	1221	55870	84.1	81.5	86.3
Adult bed with you and/or another person(s)	225	8035	12.1	10.1	14.4
Adult bed alone	12	235	0.4	0.2	0.6
Sofa/couch		<i>Insufficient data to report</i>			
Carseat	12	753	1.1	0.6	2.2
Other	32	1364	2.1	1.3	3.3

Table 41. Question 70, Awareness of shaken baby syndrome, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL	
Heard or read about what can happen when baby is shaken					
No	107	3344	5.0	3.8	6.4
Yes	1418	63984	95.0	93.6	96.2

Insufficient data to report: Less than 5 mothers.

APPENDIX A. Supplemental Data Tables

Table 42. Question 71, Prevalence of infant safety practices, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL	
Safety practices					
Infant brought home from the hospital in an infant car seat					
No	10	346	0.5	0.2	- 1.2
Yes	1521	67136	99.5	98.8	- 99.8
Infant always/almost always rides in an infant car seat					
No	12	210	0.3	0.2	- 0.6
Yes	1514	67181	99.7	99.4	- 99.8
Home has a working smoke alarm					
No	45	1238	1.8	1.2	- 2.8
Yes	1475	66005	98.2	97.2	- 98.8
Loaded firearms in the home					
No	1483	65662	97.6	96.4	- 98.4
Yes	36	1594	2.4	1.6	- 3.6

Table 43. Question 72, Prevalence of seeking professional help for postpartum depression, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL	
Mother sought help for depression (among all)					
Mother did not seek help	1352	60600	89.0	86.7	- 90.9
Mother sought help	188	7506	11.0	9.1	- 13.3
Mother sought help for depression (among those defined as having depression using CDC's definition of ≥ 10)					
	61	2640	44.9	33.9	- 56.4
Mother sought help for depression (among those reported "often" or "always" feeling down, depressed, sad, hopeless, or slowed down)					
	86	3548	28.5	21.9	- 36.2

APPENDIX A. Supplemental Data Tables

Table 44. Question 73, Prevalence of intimate partner violence postpartum, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Things that have happened since baby was born				
Husband or partner threatened you	25	1170	1.7	1.0 - 3.0
Frightened for safety of you or your family	25	842	1.2	0.7 - 2.2
Husband or partner tried to control your daily activities	47	2342	3.4	2.3 - 5.0
Husband or partner forced you into sexual activity	5	116	0.2	0.1 - 0.4

Table 45. Question 74, Prevalence of maternal health insurance types postpartum, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Mother insurance (current)				
Health insurance from job	781	38293	55.7	52.5 - 58.9
Health insurance you or someone paid for	61	2303	3.4	2.4 - 4.7
MassHealth	658	25831	37.6	34.5 - 40.8
TRICARE or other military healthcare	26	1084	1.6	0.9 - 2.6
Commonwealth care	58	2380	3.5	2.5 - 4.8
None	37	1162	1.7	1.1 - 2.6
Current health insurance (collapsed into 4 categories)				
Public	712	28440	41.9	38.8 - 45.2
Private	741	36623	54.0	50.7 - 57.2
Self-paid	49	1611	2.4	1.6 - 3.5
None	37	1162	1.7	1.1 - 2.7

Table 46. Questions 75-76, Prevalence of maternal disability status and length of disability, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Maternal disability				
No	1475	64848	95.2	93.4 - 96.5
Yes	65	3259	4.8	3.5 - 6.6
Days disabled				
Non-disabled	1475	64848	95.6	93.8 - 96.8
1 to 29 days	12	533	0.8	0.4 - 1.7
30+ days	47	2464	3.6	2.5 - 5.2

APPENDIX A. Supplemental Data Tables

Table 47. Questions 77-78, Prevalence of maternal teeth cleaning prior to, during, and after pregnancy, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Teeth cleaning				
Ever had teeth cleaned	1357	61979	90.9	89.0 - 92.5
Had teeth cleaned during pregnancy	714	33399	49.9	46.5 - 53.3
Had teeth cleaned since baby was born	564	25369	39.0	35.6 - 42.4

Table 48. Questions 77-78, Prevalence of maternal teeth cleaning, never, ever but not recently, or recently, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
How recently were the teeth cleaned?				
Had teeth cleaned within 2 years	1113	50473	74.5	71.4 - 77.4
Had teeth cleaned more than 12 months before becoming pregnant	256	12109	17.9	15.3 - 20.7
Never had teeth cleaned	163	5156	7.6	6.2 - 9.4

Table 49. Question 79, Total household income during the 12 months before your new baby was born, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Yearly total household income				
Less than 10,000	282	10872	16.7	14.4 - 19.3
10,000-14,999	100	3861	5.9	4.6 - 7.7
15,000-19,999	85	2978	4.6	3.5 - 6.1
20,000-24,999	100	4365	6.7	5.1 - 8.7
25,000-34,999	132	4419	6.8	5.4 - 8.6
35,000-49,000	110	5638	8.7	6.8 - 11.0
50,000-64,999	107	5769	8.9	7.0 - 11.2
65,000-79,999	81	4082	6.3	4.8 - 8.3
80,000 or more	450	22958	35.4	32.1 - 38.7

Table 50. Question 80, Total number of people including yourself in the household during the 12 months before your new baby was born, 2011 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Household size before this new baby was born				
1	145	5451	8.3	6.7 - 10.2
2	575	26620	40.3	36.9 - 43.7
3	456	21288	32.2	29.1 - 35.5
4	206	8981	13.6	11.4 - 16.1
5	64	2683	4.1	2.9 - 5.7
6+	35	1045	1.6	1.0 - 2.4

APPENDIX A. Supplemental Data Tables

Technical notes

Confidence limits and statistical significance:

For the 2011 PRAMS report, we calculated 95% confidence limits around population estimates, using the point estimates and their standard errors. When comparing prevalence estimates across different socio-demographic subgroups, estimates with non-, or minimally-overlapping confidence limits were considered statistically significantly different. Differences in estimates between subgroups were presented as such when they were statistically significant, but in some cases were noted when the differences were not statistically significant but worth noting due to the potential public health impact.

Weighted n:

Most data tables in this report present a “weighted n” which represents an estimate of the actual number of people affected by a behavior, condition or outcome in the Massachusetts population. PRAMS samples a small fraction of new mothers in the state, and as a result, our data are weighted to make estimates which represent the sampling frame from which our sample was drawn.

Calculation of household FPL:

Because we wished to examine differences in health by household income level, each respondent’s household FPL was approximated using self-reported income (as a range) and the number of dependent household members, comparing these to the 2011 Department of Health and Human Services Federal Poverty guidelines (DHHS, 2011). Because exact dollar amounts were not reported by respondents, we used the mid-point of each income range to approximate household income. Thus, our estimated household poverty level should be viewed as approximate, and may misclassify some households.

Appendix B.
Massachusetts PRAMS Survey,
2011

Please mark your answers. Follow the directions included with the questions. If no directions are presented, check the box next to your answer or fill in the blanks. Because not all questions will apply to everyone, you may be asked to skip certain questions.

BEFORE PREGNANCY

First, we would like to ask a few questions about you and the time *before* you got pregnant with your new baby.

1. At any time during the 12 months before you got pregnant with your new baby, did you do any of the following things? For each item, circle Y (Yes) if you did it or circle N (No) if you did not.

	No	Yes
a. I was dieting (changing my eating habits) to lose weight	N	Y
b. I was exercising 3 or more days of the week	N	Y
c. I was regularly taking prescription medicines other than birth control . . .	N	Y
d. I visited a health care worker to be checked or treated for diabetes. . . .	N	Y
e. I visited a health care worker to be checked or treated for high blood pressure.	N	Y
f. I visited a health care worker to be checked or treated for depression or anxiety	N	Y
g. I talked to a health care worker about my family medical history	N	Y
h. I had my teeth cleaned by a dentist or dental hygienist.	N	Y

2. During the month before you got pregnant with your new baby, were you covered by any of these health insurance plans?

Check all that apply

- Health insurance from your job or the job of your husband, partner, or parents
- Health insurance that you or someone else paid for (not from a job)
- Medicaid or MassHealth
- TRICARE or other military health care
- Commonwealth Care
- Other source(s) —————> Please tell us:

- I did not have any health insurance before I got pregnant

3. During the month before you got pregnant with your new baby, how many times a week did you take a multivitamin, a prenatal vitamin, or a folic acid vitamin?

- I didn't take a multivitamin, prenatal vitamin, or folic acid vitamin at all
- 1 to 3 times a week
- 4 to 6 times a week
- Every day of the week

4. Just before you got pregnant with your new baby, how much did you weigh?

_____ Pounds **OR** _____ Kilos

5. How tall are you without shoes?

Feet Inches

OR Meters

6. What is your date of birth?

/ / 19
Month Day Year

7. Would you say that, in general, your health is—

- Excellent
 Very good
 Good
 Fair
 Poor

8. Before you got pregnant with your new baby, were you ever told by a doctor, nurse, or other health care worker that you had Type 1 or Type 2 diabetes? This is not the same as gestational diabetes or diabetes that starts during pregnancy.

- No
 Yes

9. Before you got pregnant with your new baby, did you ever have any other babies who were born alive?

- No → **Go to Question 13**
 Yes

10. Did the baby born *just before* your new one weigh *more* than 5 pounds, 8 ounces (2.5 kilos) at birth?

- No
 Yes

11. Was the baby *just before* your new one born *more* than 3 weeks before his or her due date?

- No
 Yes

12. Before you had your new baby, did you ever have a baby by cesarean delivery or c-section (when a doctor cuts through the mother's belly to bring out the baby)?

- No
 Yes

The next questions are about the time when you got pregnant with your *new* baby.

13. Thinking back to *just before* you got pregnant with your *new* baby, how did you feel about becoming pregnant?

Check one answer

- I wanted to be pregnant sooner
 I wanted to be pregnant later
 I wanted to be pregnant then
 I didn't want to be pregnant then or at any time in the future

14. When you got pregnant with your new baby, were you trying to get pregnant?

- No
 Yes → **Go to Question 17**

Go to Question 15

15. When you got pregnant with your new baby, were you or your husband or partner doing anything to keep from getting pregnant? (Some things people do to keep from getting pregnant include not having sex at certain times [natural family planning or rhythm] or withdrawal, and using birth control methods such as the pill, condoms, vaginal ring, IUD, having their tubes tied, or their partner having a vasectomy.)

- No
 Yes → **Go to Page 4, Question 19**

16. What were your reasons or your husband's or partner's reasons for not doing anything to keep from getting pregnant?

Check all that apply

- I didn't mind if I got pregnant
 I thought I could not get pregnant at that time
 I had side effects from the birth control method I was using
 I had problems getting birth control when I needed it
 I thought my husband or partner or I was sterile (could not get pregnant at all)
 My husband or partner didn't want to use anything
 Other → Please tell us:

If you were not trying to get pregnant when you got pregnant with your new baby, go to Page 4, Question 19.

17. Did you take any fertility drugs or receive any medical procedures from a doctor, nurse, or other health care worker to help you get pregnant with your *new* baby? (This may include infertility treatments such as fertility-enhancing drugs or assisted reproductive technology.)

- No → **Go to Page 4, Question 19**
 Yes

18. Did you use any of the following fertility treatments *during the month you got pregnant with your new baby*?

Check all that apply

- Fertility-enhancing drugs prescribed by a doctor (fertility drugs include Clomid[®], Serophene[®], Pergonal[®], or other drugs that stimulate ovulation)
 Artificial insemination or intrauterine insemination (treatments in which sperm, but NOT eggs, were collected and medically placed into a woman's body)
 Assisted reproductive technology (treatments in which BOTH a woman's eggs and a man's sperm were handled in the laboratory, such as in vitro fertilization [IVF], gamete intrafallopian transfer [GIFT], zygote intrafallopian transfer [ZIFT], intracytoplasmic sperm injection [ICSI], frozen embryo transfer, or donor embryo transfer)
 Other medical treatment → Please tell us:

- I wasn't using fertility treatments during the month that I got pregnant with my new baby

DURING PREGNANCY

The next questions are about the prenatal care you received during your most recent pregnancy. Prenatal care includes visits to a doctor, nurse, or other health care worker before your baby was born to get checkups and advice about pregnancy. (It may help to look at the calendar when you answer these questions.)

19. How many weeks or months pregnant were you when you were *sure* you were pregnant? (For example, you had a pregnancy test or a doctor or nurse said you were pregnant.)

Weeks **OR** Months
 I don't remember

20. How many weeks or months pregnant were you when you had your first visit for prenatal care? Do not count a visit that was only for a pregnancy test or only for WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children).

{ Weeks **OR** Months
 I didn't go for prenatal care → **Go to Question 22**
Go to Question 21

21. Did you get prenatal care as early in your pregnancy as you wanted?

No
 Yes → **Go to Question 23**

22. Did any of these things keep you from getting prenatal care at all or as early as you wanted? For each item, circle **T** (True) if it was a reason that you didn't get prenatal care when you wanted or circle **F** (False) if it was not a reason for you or if something does not apply to you.

	True	False
a. I couldn't get an appointment when I wanted one	T	F
b. I didn't have enough money or insurance to pay for my visits	T	F
c. I had no transportation to get to the clinic or doctor's office	T	F
d. The doctor or my health plan would not start care as early as I wanted	T	F
e. I had too many other things going on	T	F
f. I couldn't take time off from work or school	T	F
g. I didn't have my Medicaid or MassHealth card	T	F
h. I had no one to take care of my children	T	F
i. I didn't know that I was pregnant	T	F
j. I didn't want anyone else to know I was pregnant	T	F
k. I didn't want prenatal care	T	F

If you did not go for prenatal care, go to Page 6, Question 26.

23. Did any of these health insurance plans help you pay for your prenatal care?

Check all that apply

- Health insurance from your job or the job of your husband, partner, or parents
- Health insurance that you or someone else paid for (not from a job)
- Medicaid or MassHealth
- TRICARE or other military health care
- Commonwealth Care
- Other source(s) —————> Please tell us:
- I did not have health insurance to help pay for my prenatal care

24. During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the things listed below? Please count only discussions, not reading materials or videos. For each item, circle Y (Yes) if someone talked with you about it or circle N (No) if no one talked with you about it.

	No	Yes
a. How smoking during pregnancy could affect my baby.	N	Y
b. Breastfeeding my baby.	N	Y
c. How drinking alcohol during pregnancy could affect my baby.	N	Y
d. Using a seat belt during my pregnancy	N	Y
e. Medicines that are safe to take during my pregnancy	N	Y
f. How using illegal drugs could affect my baby.	N	Y
g. Doing tests to screen for birth defects or diseases that run in my family	N	Y
h. The signs and symptoms of preterm labor (labor more than 3 weeks before the baby is due).	N	Y
i. What to do if my labor starts early	N	Y
j. Getting tested for HIV (the virus that causes AIDS)	N	Y
k. What to do if I feel depressed during my pregnancy or after my baby is born	N	Y
l. Physical abuse to women by their husbands or partners	N	Y

25. We would like to know how you felt about the prenatal care you got during your most recent pregnancy. If you went to more than one place for prenatal care, answer for the place where you got *most* of your care. For each item, circle **Y** (Yes) if you were satisfied or circle **N** (No) if you were not satisfied.

Were you satisfied with—

	No	Yes
a. The amount of time you had to wait after you arrived for your visits	N	Y
b. The amount of time the doctor, nurse, or midwife spent with you during your visits	N	Y
c. The advice you got on how to take care of yourself	N	Y
d. The understanding and respect that the staff showed toward you as a person	N	Y

26. At any time during your most recent pregnancy or delivery, did you have a test for HIV (the virus that causes AIDS)?

No
 Yes → **Go to Question 30**
 I don't know

27. Were you offered an HIV test during your most recent pregnancy or delivery?

No → **Go to Question 30**
 Yes

28. Did you turn down the HIV test?

No → **Go to Question 30**
 Yes
Go to Question 29

29. Why did you turn down the HIV test?

Check all that apply

- I did not think I was at risk for HIV
- I did not want people to think I was at risk for HIV
- I was afraid of getting the result
- I was tested before this pregnancy, and did not think I needed to be tested again
- Other _____ → Please tell us:

30. During your most recent pregnancy, were you on WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children)?

- No
- Yes

31. During your most recent pregnancy, were you told by a doctor, nurse, or other health care worker that you had gestational diabetes (diabetes that started during this pregnancy)?

No → **Go to Question 33**
 Yes

Go to Question 32

32. During your most recent pregnancy, when you were told that you had gestational diabetes, did a doctor, nurse, or other health care worker do any of the things listed below? For each item, circle **Y** (Yes) if it was done or circle **N** (No) if it was not done.

- | | No | Yes |
|--|----|-----|
| a. Refer you to a nutritionist | N | Y |
| b. Talk to you about the importance of exercise | N | Y |
| c. Talk to you about getting to and staying at a healthy weight after delivery | N | Y |
| d. Suggest that you breastfeed your new baby | N | Y |
| e. Talk to you about your risk for Type 2 diabetes | N | Y |

33. Did you have any of the following problems during your most recent pregnancy? For each item, circle **Y** (Yes) if you had the problem or circle **N** (No) if you did not.

- | | No | Yes |
|---|----|-----|
| a. Vaginal bleeding | N | Y |
| b. Kidney or bladder (urinary tract) infection | N | Y |
| c. <i>Severe</i> nausea, vomiting, or dehydration | N | Y |
| d. Cervix had to be sewn shut (cerclage for incompetent cervix) | N | Y |
| e. High blood pressure, hypertension (including pregnancy-induced hypertension [PIH]), preeclampsia, or toxemia | N | Y |
| f. Problems with the placenta (such as abruptio placentae or placenta previa) | N | Y |
| g. Labor pains more than 3 weeks before my baby was due (preterm or early labor) | N | Y |
| h. Water broke more than 3 weeks before my baby was due (premature rupture of membranes [PROM]) | N | Y |
| i. I had to have a blood transfusion | N | Y |
| j. I was hurt in a car accident | N | Y |

The next questions are about smoking cigarettes around the time of pregnancy (before, during, and after).

34. Have you smoked any cigarettes in the past 2 years?

- No —→ **Go to Page 8, Question 38**

Yes

35. In the 3 months before you got pregnant, how many cigarettes did you smoke on an average day? (A pack has 20 cigarettes.)

- 41 cigarettes or more
- 21 to 40 cigarettes
- 11 to 20 cigarettes
- 6 to 10 cigarettes
- 1 to 5 cigarettes
- Less than 1 cigarette
- I didn't smoke then

36. In the last 3 months of your pregnancy, how many cigarettes did you smoke on an average day? (A pack has 20 cigarettes.)

- 41 cigarettes or more
- 21 to 40 cigarettes
- 11 to 20 cigarettes
- 6 to 10 cigarettes
- 1 to 5 cigarettes
- Less than 1 cigarette
- I didn't smoke then

37. How many cigarettes do you smoke on an average day now? (A pack has 20 cigarettes.)

- 41 cigarettes or more
- 21 to 40 cigarettes
- 11 to 20 cigarettes
- 6 to 10 cigarettes
- 1 to 5 cigarettes
- Less than 1 cigarette
- I don't smoke now

38. Which of the following statements best describes the rules about smoking *inside* your home *now*?

Check one answer

- No one is allowed to smoke anywhere inside my home
- Smoking is allowed in some rooms or at some times
- Smoking is permitted anywhere inside my home

The next questions are about drinking alcohol around the time of pregnancy (before, during, and after).

39. Have you had any alcoholic drinks in the *past 2 years*? A drink is 1 glass of wine, wine cooler, can or bottle of beer, shot of liquor, or mixed drink.

- No → **Go to Question 42**
- Yes

40a. During the *3 months before* you got pregnant, how many alcoholic drinks did you have in an average week?

- 14 drinks or more a week
- 7 to 13 drinks a week
- 4 to 6 drinks a week
- 1 to 3 drinks a week
- Less than 1 drink a week
- I didn't drink then → **Go to Question 41a**

40b. During the *3 months before* you got pregnant, how many times did you drink 4 alcoholic drinks or more in one sitting? A sitting is a two hour time span.

- 6 or more times
- 4 to 5 times
- 2 to 3 times
- 1 time
- I didn't have 4 drinks or more in 1 sitting

41a. During the *last 3 months* of your pregnancy, how many alcoholic drinks did you have in an average week?

- 14 drinks or more a week
- 7 to 13 drinks a week
- 4 to 6 drinks a week
- 1 to 3 drinks a week
- Less than 1 drink a week
- I didn't drink then → **Go to Question 42**

41b. During the *last 3 months* of your pregnancy, how many times did you drink 4 alcoholic drinks or more in one sitting? A sitting is a two hour time span.

- 6 or more times
- 4 to 5 times
- 2 to 3 times
- 1 time
- I didn't have 4 drinks or more in 1 sitting

Pregnancy can be a difficult time for some women. The next questions are about things that may have happened *before* and *during* your most recent pregnancy.

42. This question is about things that may have happened during the 12 months before your new baby was born. For each item, circle Y (Yes) if it happened to you or circle N (No) if it did not. (It may help to look at the calendar when you answer these questions.)

- | | No | Yes |
|--|----|-----|
| a. A close family member was very sick and had to go into the hospital | N | Y |
| b. I got separated or divorced from my husband or partner | N | Y |
| c. I moved to a new address | N | Y |
| d. I was homeless | N | Y |
| e. My husband or partner lost his job . . . | N | Y |
| f. I lost my job even though I wanted to go on working | N | Y |
| g. I argued with my husband or partner more than usual | N | Y |
| h. My husband or partner said he didn't want me to be pregnant | N | Y |
| i. I had a lot of bills I couldn't pay | N | Y |
| j. I was in a physical fight | N | Y |
| k. My husband or partner or I went to jail | N | Y |
| l. Someone very close to me had a problem with drinking or drugs | N | Y |
| m. Someone very close to me died | N | Y |

43. During the 12 months before you got pregnant with your new baby, did your husband or partner push, hit, slap, kick, choke, or physically hurt you in any other way?

- No
 Yes

44. During your most recent pregnancy, did your husband or partner push, hit, slap, kick, choke, or physically hurt you in any other way?

- No
 Yes

The next questions are about your labor and delivery. (It may help to look at the calendar when you answer these questions.)

45. When was your baby due?

/ / 20
 Month Day Year

46. When did you go into the hospital to have your baby?

/ / 20
 Month Day Year

- I didn't have my baby in a hospital

47. When was your baby born?

/ / 20
 Month Day Year

48. How was your *new* baby delivered?

- Vaginally
 Cesarean delivery (c-section)

Go to Page 10, Question 50

Go to Page 10, Question 49

49. Which statement *best* describes whose idea was it for you to have a cesarean delivery (c-section)?

Check one answer

- My health care provider recommended a cesarean delivery *before* I went into labor
- My health care provider recommended a cesarean delivery while I was in labor
- I asked for the cesarean delivery *before* I went into labor
- I asked for the cesarean delivery while I was in labor

50. When were you discharged from the hospital after your baby was born?

/ / 20
 Month Day Year

- I didn't have my baby in a hospital

51. Did any of these health insurance plans help you pay for the *delivery* of your new baby?

Check all that apply

- Health insurance from your job or the job of your husband, partner, or parents
- Health insurance that you or someone else paid for (not from a job)
- Medicaid or MassHealth
- TRICARE or other military health care
- Commonwealth Care
- Other source(s) → Please tell us:
- I did not have health insurance to help pay for my delivery

AFTER PREGNANCY

The next questions are about the time since your new baby was born.

52. After your baby was born, was he or she put in an intensive care unit?

- No
- Yes
- I don't know

53. After your baby was born, how long did he or she stay in the hospital?

- Less than 24 hours (less than 1 day)
- 24 to 48 hours (1 to 2 days)
- 3 to 5 days
- 6 to 14 days
- More than 14 days
- My baby was not born in a hospital
- My baby is still in the hospital → **Go to Question 56**

54. Is your baby alive now?

- No → **Go to Question 62**
- Yes

55. Is your baby living with you now?

- No → **Go to Question 62**
- Yes

56. Did you ever breastfeed or pump breast milk to feed your new baby after delivery, even for a short period of time?

- No → **Go to Question 59b**
- Yes

Go to Question 57

57. Are you currently breastfeeding or feeding pumped milk to your new baby?

- No
 Yes → **Go to Question 59a**

58. How many weeks or months did you breastfeed or pump milk to feed your baby?

- ____ Weeks OR ____ Months
 Less than 1 week

59a. How old was your new baby the first time he or she drank liquids other than breast milk (such as formula, water, juice, tea, or cow's milk)?

- ____ Weeks OR ____ Months
 My baby was less than 1 week old
 My baby has not had any liquids other than breast milk

59b. How old was your new baby the first time he or she ate food (such as baby cereal, baby food, or any other food)?

- ____ Weeks OR ____ Months
 My baby was less than 1 week old
 My baby has not eaten any foods

If your baby is still in the hospital, go to Question 62.

60. In which *one* position do you *most often* lay your baby down to sleep now?

Check one answer

- On his or her side
 On his or her back
 On his or her stomach

61. Was your new baby seen by a doctor, nurse, or other health care worker for a *one week* check-up after he or she was born?

- No
 Yes

62. Are you or your husband or partner doing anything *now* to keep from getting pregnant? (Some things people do to keep from getting pregnant include not having sex at certain times [natural family planning or rhythm] or withdrawal, and using birth control methods such as the pill, condoms, vaginal ring, IUD, having their tubes tied, or their partner having a vasectomy.)

- No
 Yes → **Go to Question 64**

63. What are your reasons or your husband's or partner's reasons for not doing anything to keep from getting pregnant *now*?

Check all that apply

- I am not having sex
 I want to get pregnant
 I don't want to use birth control
 My husband or partner doesn't want to use anything
 I don't think I can get pregnant (sterile)
 I can't pay for birth control
 I am pregnant now
 Other → Please tell us:

64. *Since your new baby was born, have you had a postpartum checkup for yourself?* (A postpartum checkup is the regular checkup a woman has about 6 weeks after she gives birth.)

- No
 Yes

65. Below is a list of feelings and experiences that women sometimes have after childbirth. Read each item to determine how well it describes your feelings and experiences. Then, write on the line the number of the choice that best describes how often you have felt or experienced things this way since your new baby was born. Use the scale when answering:

1 2 3 4 5
Never Rarely Sometimes Often Always

- a. I felt down, depressed, or sad.
- b. I felt hopeless.
- c. I felt slowed down

OTHER EXPERIENCES

The next questions are on a variety of topics.

66. This question is about things that may have happened during the 12 months before your new baby was born. For each item, circle **Y** (Yes) if it happened to you or circle **N** (No) if it didn't. It may help to use a calendar.

- | | No | Yes |
|--|----|-----|
| a. I felt that my race or ethnic background contributed to the stress in my life. | N | Y |
| b. I felt emotionally upset (for example, angry, sad, or frustrated) as a result of how I was treated based on my race or ethnic background. | N | Y |
| c. I experienced physical symptoms (for example, a headache, an upset stomach, tensing of my muscles, or a pounding heart) that I felt were related to how I was treated based on my race or ethnic background | N | Y |

67. During the last 3 months of your most recent pregnancy, how often did you participate in any physical activities or exercise for 30 minutes or more? (For example, walking for exercise, swimming, cycling, dancing, or gardening.)

- Less than 1 day per week
- 1 to 2 days per week
- 3 to 4 days per week
- 5 or more days per week
- I was told by a doctor, nurse, or other health care worker not to exercise

68. During the last 3 months of your most recent pregnancy, about how many servings of fruits or vegetables did you have in a day?

Check one answer

- Less than 1 serving per day
- 1 or 2 servings per day
- 3 or 4 servings per day
- 5 or more servings per day

If your baby is not alive or is not living with you now, go to Question 72.

69. In the last month, where did your new baby usually sleep?

Check one answer

- In a crib, cradle, or bassinet
- On an adult bed or mattress with me and/or another person(s)
- On an adult bed or mattress alone
- On a sofa or couch
- In a car seat or infant seat
- Someplace else —————> Please tell us:

70. Have you ever heard or read about what can happen if a baby is shaken?

- No
- Yes

71. Listed below are some statements about safety. For each one, circle **Y** (Yes) if it applies to you or circle **N** (No) if it does not.

	No	Yes
a. My baby was brought home from the hospital in an infant car seat	N	Y
b. My baby always or almost always rides in an infant car seat	N	Y
c. My home has a working smoke alarm	N	Y
d. There are loaded guns, rifles, or other firearms in my home	N	Y

72. Since your new baby was born, have you asked for help for depression from a doctor, nurse, or other health care worker?

- No
- Yes

73. This question is about things that may have happened since your new baby was born.

For each thing, circle **Y** (Yes) if it happened to you or circle **N** (No) if it did not.

Since your new baby was born—

	No	Yes
a. Your husband or partner threatened you or made you feel unsafe in some way	N	Y
b. You were frightened for the safety of yourself or your family because of the anger or threats of your husband or partner.	N	Y
c. Your husband or partner tried to control your daily activities, for example, controlling who you could talk to or where you could go.	N	Y
d. Your husband or partner forced you to take part in touching or any sexual activity when you did not want to.	N	Y

74. What type of health insurance are you covered by right now?

Check all that apply

- Health insurance from your job or the job of your husband, partner, or parents
- Health insurance that you or someone else paid for (not from a job)
- Medicaid or MassHealth
- TRICARE or other military health care
- Commonwealth Care
- Other source(s) —————> Please tell us:

- I do not have any health insurance

75. Are you limited in any way in any activities because of physical, mental, or emotional problems?

- No → **Go to Question 77**
 Yes

76. For how long have your activities been limited because of physical, mental, or emotional problems?

Number of Days

OR

Number of Weeks

OR

Number of Months

OR

Number of Years

77. Have you ever had your teeth cleaned by a dentist or dental hygienist?

- No → **Go to Question 79**
 Yes

78. Did you have your teeth cleaned by a dentist or dental hygienist during the time periods listed below? For each time period, circle Y (Yes) if you had your teeth cleaned then or circle N (No) if you did not have your teeth cleaned then.

- | | No | Yes |
|--|----|-----|
| a. During my most recent pregnancy . . . | N | Y |
| b. After my most recent pregnancy. . . . | N | Y |

The last questions are about the time during the 12 months before your new baby was born.

79. During the 12 months before your new baby was born, what was your yearly total household income before taxes? Include your income, your husband's or partner's income, and any other income you may have received. (All information will be kept private and will not affect any services you are now getting.)

- Less than \$10,000
- \$10,000 to \$14,999
- \$15,000 to \$19,999
- \$20,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$64,999
- \$65,000 to \$79,999
- \$80,000 or more

80. During the 12 months before your new baby was born, how many people, including yourself, depended on this income?

People

81. What is today's date?

/ / 20
 Month Day Year

**Please use this space for any additional comments you would like to make
about the health of mothers and babies in Massachusetts.**

Thanks for answering our questions!

*Your answers will help us work to make Massachusetts
mothers and babies healthier.*

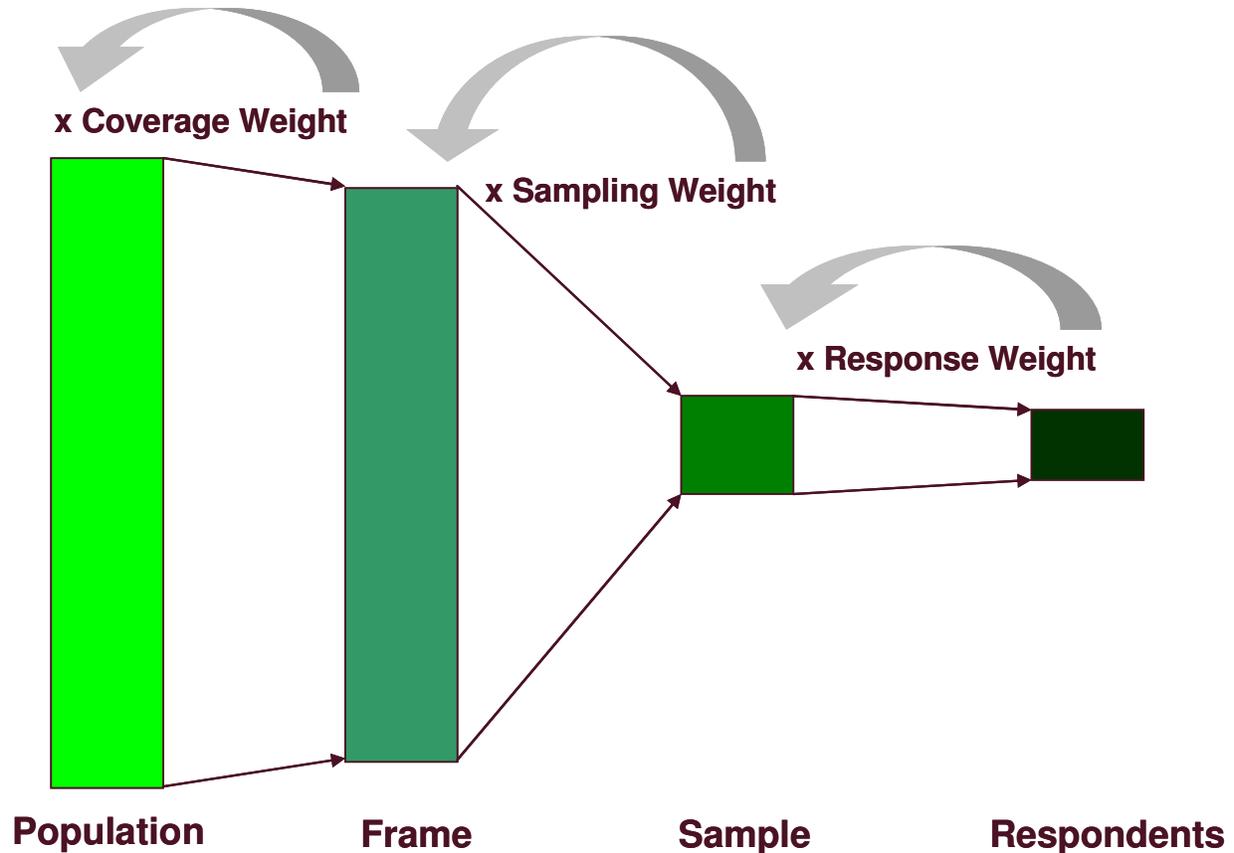
December 8, 2008

Appendix C.

PRAMS weighting system

APPENDIX C. PRAMS weighting system

Figure 67. PRAMS Data Weighting Illustration*



Population: Total births to Massachusetts resident women

Frame: Massachusetts resident women who recently gave birth to a live infant. Women with twins or triplets are only included in the frame once. Women with quadruplets and higher order births are excluded from the frame.

Sample: Women selected from the frame to participate in PRAMS

Respondents: Women who completed a PRAMS survey by mail or telephone

Final Weight = Response Weight * Sampling Weight * Coverage Weight
= Population

*Figure adapted from CDC PRAMS protocol.

Appendix D.
Adequacy of prenatal care
utilization index

APPENDIX D: Adequacy of Prenatal Care Utilization Index

The Adequacy of Prenatal Care Utilization (APNCU) Index, (Kotelchuck, 1994) developed by Dr. Milton Kotelchuck, is the measure used in Healthy People 2020 and by the majority of states.

The Index characterizes prenatal care (PNC) utilization by measuring two distinct components of prenatal care — adequacy of initiation and adequacy of received services (visits). Each is measured as an independent index, and the APNCU Index is a composite of these two component indices. The APNCU Index characterizes care using five categories: “adequate intensive,” “adequate basic,” “intermediate,” “inadequate,” and “unknown.” The Index does not assess quality of the prenatal care delivered, only utilization.

Adequacy of Prenatal Care Utilization (APNCU) Index: Definition of Categories

Category	Month Prenatal Care Began	% of Expected ¹ Prenatal Care Visits
Adequate Intensive	1, 2, 3, or 4	110% or more
Adequate Basic	1, 2, 3, or 4	80 – 109%
Intermediate	1, 2, 3, or 4	50 – 79%
Inadequate	Month 5 or later	Less than 50%
Unknown	Prenatal care information not recorded	

¹ The number of “expected” visits is determined based on standards set by the American College of Obstetricians and Gynecologists (ACOG).

Appendix E.

List of references

APPENDIX E: List of References

- Alexander, G. R., & Kotelchuck, M. (2001). Assessing the role and effectiveness of prenatal care: History, challenges, and directions for future research. *Public Health Reports*, 116, 306–316.
- Altfeld S., Handler A., Burton D., & Berman L. (1997). Wantedness of pregnancy and prenatal health behaviors. *Women Health*, 26, 29-43.
- Andres, R. L. & Day, M. C. (2000). Perinatal complications associated with maternal tobacco use. *Semin. Neonatol.*, 5, 231-41.
- American Academy of Pediatrics (1992). American Academy of Pediatrics (AAP) Task Force on Infant Positioning and SIDS: Positioning and SIDS. *Pediatrics*, 89, 1120-1126.
- American Academy of Pediatrics (2000). American Academy of Pediatrics Committee on Practice and Ambulatory Medicine. Recommendations for preventative pediatric health care. *Pediatrics*, 105, 645–646.
- American College of Obstetricians and Gynecologists (2003). Exercise During Pregnancy (Pamphlet). http://www.acog.org/publications/patient_education/bp119.cfm [On-line].
- American College of Obstetricians and Gynecologists (2008). Nutrition During Pregnancy (Pamphlet). http://www.acog.org/publications/patient_education/bp001.cfm [On-line].
- Bacchus, L., Mezey, G., & Bewley, S. (2002). Women's perceptions and experiences of routine screening for domestic violence in a maternity service. *Br. J. Obstet. Gynaecol.*, 109, 9-16.
- Bengiamin, M. I., Capitman, J. A., & Ruwe, M. B. (2010). Disparities in initiation and adherence to prenatal care: impact of insurance, race-ethnicity and nativity. *Matern. Child Health J.*, 14, 618-24.
- Branson, B. M., Handsfield, H. H., Lampe, M. A., Janssen, R. S., Taylor, A. W., Lyss, S. B. et al. (2006). Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Recomm. Rep.*, 55, 1-17.
- Callaghan, W. M., Creanga, A. A., & Kuklina, E. V. (2012). Severe maternal morbidity among delivery and postpartum hospitalizations in the United States. *Obstet. Gynecol.*, 120, 1029-36.
- Chandra A., Copen, C. E., & Stephen, E. H. Infertility and impaired fecundity in the United States, 1982-2010: Data from the National Survey of Family Growth. National health statistics reports; no 67. Hyattsville, MD: National Center for Health Statistics, 2013.
- Chang, J., Berg, C. J., Saltzman, L. E., & Herndon, J. (2005). Homicide: a leading cause of injury deaths among pregnant and post-partum women in the United States, 1991-1999. *Am. J. Public Health*, 95, 471-477.
- Chevarley F.M., Thierry, J.M., Gill, C.J., Ryerson, A.B., & Nosek, M.A. (2006). Health, preventive health care, and health care access among women with disabilities in the 1994-1995 National Health Interview Survey, Supplement on Disability. *Women's Health Issues*, 16, 297-312.
- Conde-Agudelo, A., Rosas-Bermudez, A., & Kafury-Goeta, A. C. (2006). Birth spacing and risk of adverse perinatal outcomes: a meta-analysis. *JAMA*, 295, 1809-1823.
- Department of Health and Human Services Federal Poverty Guidelines. (2011). 2011 HHS Poverty Guidelines [online]. Cited 2014 Dec. 29. Available from: <http://aspe.hhs.gov/POVERTY/11poverty.shtml>.
- Gartner, L. M., Morton, J., Lawrence, R. A., Naylor, A. J., O'Hare, D., Schanler, R. J. et al. (2005). Breastfeeding and the use of human milk. *Pediatrics*, 115, 496-506.

APPENDIX E: List of References

- Hanson, L. A., Jalil, F., Ashraf, R., Bernini, S., Carlsson, B., Cruz, J. R. et al. (1991). Characteristics of human milk antibodies and their effect in relation to the epidemiology of breastfeeding and infections in a developing country. *Adv.Exp.Med.Biol.*, 310, 1-15.
- Horton, A. L. & Boggess, K.A. (2012). Periodontal disease and preterm birth. *Obstet. Gynecol. Clin. North Am.*, 39, 17-23.
- Hrubá D. & Kachlík, P. (2000). Influence of maternal active and passive smoking during pregnancy on birthweight in newborns. *Cent. Eur. J. Public Health.*, 8, 249-52.
- Institute of Medicine. (1995). The best intentions: unintended pregnancy and the well-being of children and families. Brown SS, Eisenberg L, eds. Washington, DC: National Academy Press.
- Institute of Medicine (US) Committee on Understanding Premature Birth and Assuring Healthy Outcomes; Behrman RE, Butler AS, editors. (2007). Preterm Birth: Causes, Consequences, and Prevention. Washington (DC): National Academies Press.
- Janssen, P. A., Holt, V. L., Sugg, N. K., Emanuel, I., Critchlow, C. M., & Henderson, A. D. (2003). Intimate partner violence and adverse pregnancy outcomes: a population-based study. *Am. J. Obstet.Gynecol.*, 188, 1341-1347.
- Jasinski, J. L. (2004). Pregnancy and domestic violence: a review of the literature. *Trauma Violence Abuse*, 5, 47-64.
- Kjos, S. L. & Buchanan, T. A. (1999). Gestational diabetes mellitus. *N.Engl.J.Med.*, 341, 1749-1756.
- Kotelchuck M (1994). Overview of Adequacy of Prenatal Care Utilization Index. http://mchlibrary.info/databases/HSNRCPDFs/Overview_APCUIndex.pdf [On-line].
- Kristensen, J., Vestergaard, M., Wisborg, K., Kesmodel, U., & Secher, N. J. (2005). Pre-pregnancy weight and the risk of stillbirth and neonatal death. *BJOG*, 112, 403-408.
- Logsdon, M. C., Wisner, K. L., & Pinto-Foltz, M. D. (2006). The impact of post-partum depression on mothering. *J. Obstet. Gynecol. Neonatal Nurs.*, 35, 652-658.
- Massachusetts Department of Public Health. Health of Massachusetts. Boston, MA; April 2010.
- Massachusetts Births 2011 and 2012. Boston, MA: Office of Data Management and Outcomes Assessment, Massachusetts Department of Public Health. May 2014.
- McKenna J, McDade, T. (2005). Why babies should never sleep alone: A review of the co-sleeping controversy in relation to SIDS, bedsharing and breast feeding. *Paediatric Respiratory Reviews*, 6, 134-152.
- Metzger, B. E., Buchanan, T. A., Coustan, D. R., de, L. A., Dunger, D. B., Hadden, D. R. et al. (2007). Summary and recommendations of the Fifth International Workshop-Conference on Gestational Diabetes Mellitus. *Diabetes Care*, 30 Suppl 2, S251-S260.
- Milunsky, A., Jick, H., Jick, S. S., Bruell, C. L., MacLaughlin, D. S., Rothman, K. J. et al. (1989). Multivitamin/folic acid supplementation in early pregnancy reduces the prevalence of neural tube defects. *JAMA*, 262, 2847-2852.
- Misra, D. P., & Guyer, B. (1998). Benefits and limitations of prenatal care. *Journal of the American Medical Association*, 280, 2073.
- National Birth Defects Prevention Network (NBDPN) (2012). Birth defects state profile – Massachusetts,

APPENDIX E: List of References

February 2012. http://www.nbdpn.org/docs/MA_BDprofile_2012.pdf [On-line].

Nuru-Jeter, A. Dominguez, T. P., Hammond, W. P., Leu, J., Skaff, M., Egerter, S., Jones, C. P. & Braveman, P. (2009). "It's the skin you're in": African-American women talk about their experiences of racism. An exploratory study to develop measures of racism for birth outcome studies. *Matern. Child Health J*, 13, 29-39.

Ogden, C.L., Carroll, M.D., Kit, B.K., & Flegal, K.M.(2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA*, 311, 806-814.

O'Hara, M. W., Stuart, S., Watson, D., Dietz, P. M., Farr, S. L., & D'Angelo, D. (2012). Brief scales to detect postpartum depression and anxiety symptoms. *J Women's Health*, 21, 1237-43.

Papachatzi, E., Dimitriou, G., Dimitropoulos, K., & Vantarakis, A. (2013). Pre-pregnancy obesity: maternal, neonatal and childhood outcomes. *J. Neonatal. Perinatal. Med.*, 6, 203-216.

Sarkar, N. N. (2008). The impact of intimate partner violence on women's reproductive health and pregnancy outcome. *J. Obstet. Gynaecol.*, 8, 266-71.

Singh-Manoux, A., Martikainen, P., Ferrie, J., Zins, M., Marmot, M., & Goldberg, M. (2006). What does self rated health measure? Results from the British Whitehall II and French Gazel cohort studies. *J. Epidemiol. Community Health*, 60, 364-372.

Sokol, R. J., Aney-Black, V., & Nordstrom, B. (2003). Fetal alcohol spectrum disorder. *JAMA*, 290, 2996-2999.

Stephen, E. H. & Chandra, A. (2006). Declining estimates of infertility in the United States: 1982-2002. *Fertil. Steril.*, 86, 516-523.

Stone, S. L., Diop, H., Declercq, E., Cabral, H. J., Fox, M. P., & Wise, L. A. (2015). Stressful Events During Pregnancy and Postpartum Depressive Symptoms. *J Women's Health*, Mar 9. [Epub ahead of print].

Tjaden, P. & Thoennes, N. (2000). *Full report of the prevalence, incidence, and consequences of violence against women: findings from the National Violence Against Women Survey* (Rep. No. NCJ 183781).

Washington, DC: United States Department of Justice, National Institute of Justice.

U.S. Department of Health and Human Services (US-DHHS) (2010). *Healthy People 2020: Understanding and Improving Health* Washington, DC: U.S. Government Printing Office.

U.S. Department of Health and Human Services (2011). The 2011 HHS Poverty Guidelines. <http://aspe.hhs.gov/POVERTY/11poverty.shtml> [On-line].

Vennemann, M. M., Hense, H.W., Bajanowski, T., Blair, P. S., Complojer, C., Moon, R. Y., & Kiechl-Kohlendorfer, U. (2012). Bed sharing and the risk of sudden infant death syndrome: can we resolve the debate? *J Pediatr*, 160, 44-8.e2.

Whooley, M. A., Avins, A. L., Miranda, J., & Browner, W. S. (1997). Case-finding instruments for depression. Two questions are as good as many. *J. Gen. Intern. Med.*, 12, 439-445.

Wisdom, J. P., McGee, M. G., Horner-Johnson, W., Michael, Y. L., Adams, E., & Berlin, M. (2010). Health disparities between women with and without disabilities: a review of the research. *Soc. Work Public Health*, 25, 368-86.

Appendix F.
Alphabetical List of PRAMS Advisory
Committee Members

APPENDIX F: Alphabetical List of PRAMS Advisory Committee Members

Name	Organization
Sarah Ball	Abt Associates
Candice Belanoff	Boston University School of Public Health
Meg Blanchet	Massachusetts Department of Public Health
Sandra Broughton	Massachusetts Department of Public Health
Paula Callahan	Massachusetts Department of Children and Families
Jill Clark	Massachusetts Department of Public Health
Jennifer Cochran	Massachusetts Department of Public Health
Rachel Colchamiro	Massachusetts Department of Public Health
Eugene Declercq	Boston University School of Public Health
Karin Downs	Massachusetts Department of Public Health
Justine Egan	Massachusetts Department of Public Health
Holly Hackman	Massachusetts Department of Public Health
Lauren Hanley	MassGeneral Hospital
Sunah Hwang	South Shore Hospital & Boston Children's Hospital
Milton Kotelchuck	MassGeneral Hospital for Children
Thomas Land	Massachusetts Department of Public Health
Susan Lett	Massachusetts Department of Public Health
Ta-wei Lin	Massachusetts Department of Public Health
Lisa McCarthy-Licorish	Massachusetts Department of Public Health
Monika Mitra	UMass Medical School
Vera Mouradian	Massachusetts Department of Public Health
Alice Mroszczyk	Massachusetts Department of Public Health
Beth Nagy	Massachusetts Department of Public Health
Paul Oppedisano	Massachusetts Department of Public Health
Georgia Simpson May	Massachusetts Department of Public Health
Vincent Smith	Beth Israel Deaconess Medical Center
Ellen Tolan	Massachusetts Department of Public Health
Alexis Travis	March of Dimes Massachusetts Chapter
Rossana Valencia-Hoang	MassHealth Quality Office

APPENDIX F: Alphabetical List of PRAMS Advisory Committee Members

Name	Organization
Maria Vu	Massachusetts Department of Public Health
Megan Young	Boston Public Health Commission