Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS)

Unintended pregnancies among Massachusetts mothers, 2007-2008

What is an 'unintended' pregnancy?

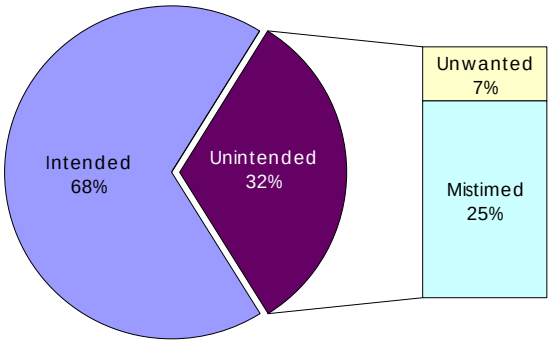
Whether a pregnancy was intended or not depends on how the woman felt right before she got pregnant.

- **Intended Pregnancy:** The pregnancy was wanted at the time of conception.
- **Unintended Pregnancy:** The pregnancy was unwanted or mistimed.
  - **Unwanted Pregnancy:** The woman did not want to be pregnant at conception or at any time in the future.
  - **Mistimed Pregnancy:** The woman wanted to become pregnant at a later time.

Why is unintended pregnancy important?

- Unintended pregnancy is important because it could be associated with certain maternal behaviors that can negatively affect the health of both the mother and the infant.[1]
- Studies have found that infants born to mothers who experience an unintended pregnancy are at higher risk for poor birth outcomes such as low birth weight, pre-term delivery, or small size for gestational age compared to infants born to mothers with an intended pregnancy.[2]
- Compared to mothers with intended pregnancies, mothers with unintended pregnancies were more likely to engage in unhealthy behaviors such as smoking, drinking alcohol, consuming inadequate quantities of folic acid, and delaying prenatal care.[3]
- Addressing gaps in knowledge and/or access to health care and/or contraceptive use will help prioritize prevention efforts aimed at reducing unintended pregnancies.

Figure 1. Pregnancy intention among MA mothers



Source: MA PRAMS 2007-2008

How common are unintended pregnancies?

- The *Healthy People 2010* (*HP 2010*) objective for pregnancy intention is that 70% of all pregnancies will be intended.[4] In 1995, 51% of pregnancies in the U.S. were reported as intended. This figure was used as the national baseline from which the *HP 2010* objective was established.[5]
- Massachusetts (MA) is close to meeting this goal with 68% intended pregnancies (Figure 1).
- In MA, among the unintended pregnancies, 78% were mistimed and 22% were unwanted, representing 25% and 7% of all MA pregnancies, respectively (Figure 1).
- Who is meeting the *Healthy People 2010* target?
  - Women over 34 years of age;
  - Women with more than 12 years of education;
  - White, non-Hispanic women;
  - Women of Asian, non-Hispanic race/ethnicity;
  - Married women; and
  - Women with private health insurance (Figure 2).

Figure 2. Proportion of women who reported an unintended pregnancy

Source: MA PRAMS 2007-2008

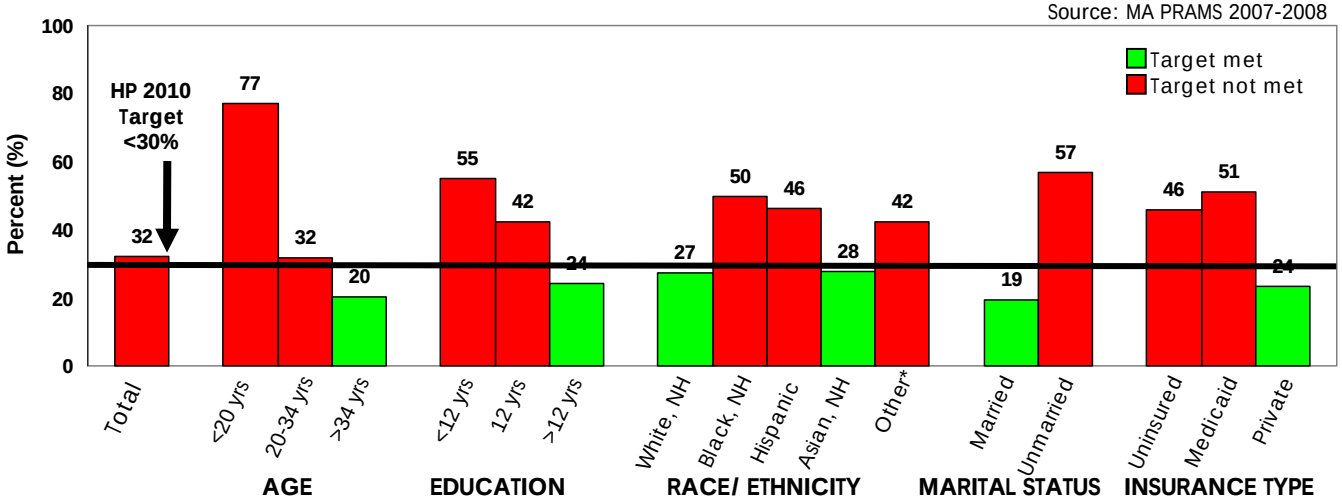


Table 1. Comparing MA women with unintended pregnancies across various factors*

Source: MA PRAMS 2007-2008

	Adjusted Ratio of Percents†	95% Confidence Interval
Compared to women 20 - 34 years of age		
<20 yrs	1.7*	1.4 - 2.0
>34 yrs	0.8	0.6 -1.0
Compared to women with 12 yrs of education		
<12 yrs	1.0	0.9 - 1.2
>12 yrs	1.1	0.9 - 1.3
Compared to White, non-Hispanic women		
Black, non-Hispanic	1.2*	1.1 - 1.6
Hispanic	1.0	0.9 - 1.2
Asian, non-Hispanic	1.1	0.9 - 1.3
Other**	1.0	0.8 - 1.4
Compared to married women		
Unmarried	2.3*	1.9 - 2.8
Compared to women giving birth for the first time (parity=0)		
1-2 previous births	1.0	0.9 - 1.2
3+ previous births	1.7*	1.4 - 2.2
Compared to women privately insured before pregnancy		
Medicaid	1.2	1.0 - 1.4
Uninsured	1.4*	1.1 - 1.7

What does adjusted mean?

When calculating the difference that might exist within two groups for a specific factor, other factors such as age, education, and race are taken into consideration. Adjusted means that these other factors are kept the same for both groups so that the main factor of interest can be observed. For example, when calculating whether there is a difference between age groups in the percentage of unintended pregnancies, other factors, such as education, race/ethnicity, and marriage status, are all kept constant in the calculation.

What is the ratio of percents?

The ratio of percents describes how likely one group of women is to have an unintended pregnancy compared to a different group of women after adjusting for other factors. The comparison group is the group of women indicated in the gray boxes in Table 1. A ratio greater than one indicates a higher risk than the comparison group. A ratio less than one indicates a lower risk than the comparison group. Statistically significant differences between groups are marked with an asterisk (*); otherwise, the two groups are similar.

† These ratios are "adjusted" since we look at the effects of all other factors at the same time. Binomial regression was used to hold all factors included constant.

* Statistically different from the comparison group (alpha=0.05)

** Includes Portuguese-speaking, Native American, Middle Eastern, African, West Indian, and Caribbean ethnic groups.

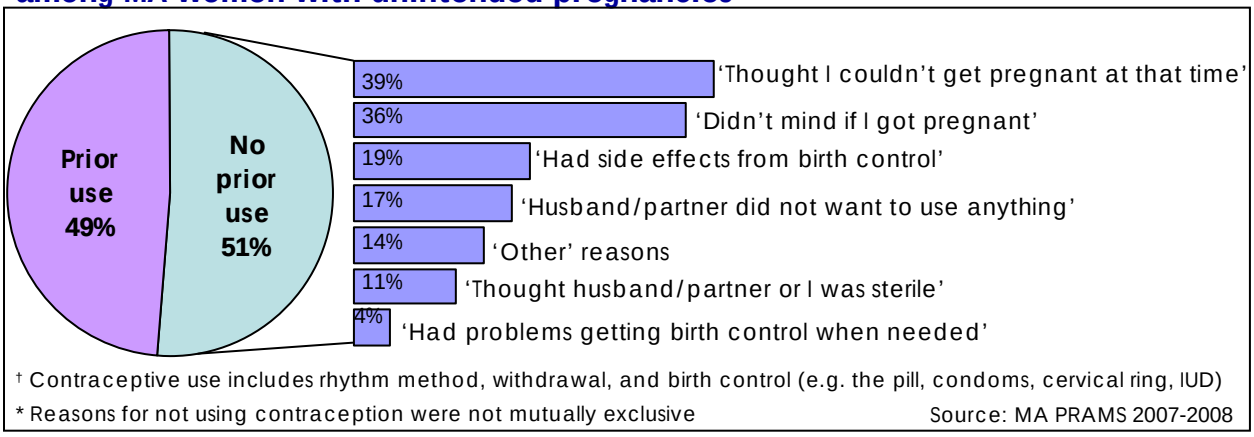
How do I interpret the adjusted ratio of percents?

Example: Holding constant factors including age, education, race, marital status, number of previous births experienced, and the type of insurance, Black, non-Hispanic women were 1.2 times or 20% more likely to have an unintended pregnancy than White, non-Hispanic women (Table 1).

What is contraception's role in unintended pregnancy?

- Recent research notes that the overall rate of unintended pregnancy could be decreased by half if women were to use effective contraception.[6] Understanding the reasons why contraception was not used in the sample of women reporting unintended pregnancies can help identify effective strategies that will help increase contraceptive use.
- 2007-2008 data shows that of the women who reported an unintended pregnancy, 51% reported not using contraception prior to this pregnancy (Figure 3).
- Women who did not intend to become pregnant and did not use contraception were asked about their reasons for not using any contraception. The three most frequently cited reasons for not using contraception were 1) 'Thought I could not get pregnant at that time', 2)'Did not mind if I got pregnant,' and 3) 'Had side effects from birth control' (Figure 3).

Figure 3. Contraceptive use† at initiation of pregnancy and reasons not used* among MA women with unintended pregnancies



† Contraceptive use includes rhythm method, withdrawal, and birth control (e.g. the pill, condoms, cervical ring, IUD)

* Reasons for not using contraception were not mutually exclusive

Source: MA PRAMS 2007-2008

Conclusions

- Based on the 2007-2008 PRAMS data, about 32% of all live births in Massachusetts were unintended.
- Disparities among women experiencing unintended pregnancies exist with women less than 20 years of age, Black, non-Hispanic women, unmarried women, and uninsured women are affected at higher rates than their counterparts.
- Of the women who reported that their pregnancy was unintended, about half reported not using contraceptives. Of this group, the two most cited reasons for not using birth control reflected women's perceptions about becoming pregnant rather than physical barriers.
- These findings highlight the complexity of women's feelings about pregnancy and contraceptive use. Her feelings about the timing of pregnancy may not be consistent with actions taken for pregnancy prevention.

Recommendations

- Offer reproductive life planning to all women and men of childbearing age.
- Conduct focus groups with women to improve understanding of the factors associated with lack of contraceptive use.
- Conduct focus groups with men to improve understanding of their behaviors and perceptions of family planning.
- Increase access to family planning services which include clinic-based services offering a range of contraceptive methods (e.g., the pill, IUD, condoms, cervical ring, and vasectomy).
- Offer more community education and outreach targeting adolescents to provide information and educate teenagers on the types of contraceptives available and help them in making choices that fit their lifestyles.
- Consider providing family planning services in non-clinic settings such as schools, home-visits, and community health vans.
- Encourage clinical providers to initiate conversation about family planning with both men and women of reproductive age.
- Family planning services must be an integral part of health plans' provider networks and should be reimbursed to facilitate access.

Resources

- Centers of Disease Control and Prevention (CDC) Website: http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/index.htm.
- MA Department of Public Health-sponsored information site for teens on sex health: www.mariatalks.com.
- MA Department of Public Health Family Planning Program: http://www.mass.gov/dph/familyplanning
- Federally-sponsored website for all things related to women's health: www.womenshealth.gov
- More information on reproductive life planning: http://everywomancalifornia.org/content.cfm?categoriesID=33

References

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Study Limitations

- Information on unintended pregnancies only include women with live births and does not include the intent of pregnancies that result in abortions or miscarriages.
- PRAMS is a self-report survey and some mothers may recall experiences more or less accurately than others.
- While PRAMS is weighted to reflect the population of MA as a whole, 30% of women did not respond to this survey and we have no way of knowing how they might have answered the questions.
- PRAMS is only available in English and Spanish in MA, and may not be accessible to mothers who speak other languages.

ABOUT MASSACHUSETTS PRAMS

The Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) is a collaborative surveillance project between CDC and Massachusetts Department of Public Health. PRAMS collects state-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. The goal of the PRAMS project is to improve the health of mothers and infants by reducing adverse outcomes such as low birth weight, infant mortality and morbidity, and maternal morbidity.

The PRAMS survey is distributed throughout the year, by mail or phone, to MA residents who delivered a live infant in Massachusetts. Annually, approximately 2,400 women are randomly selected to participate from a frame of eligible birth certificates. Minority women are oversampled to ensure adequate representation. Final results are weighted to represent the entire cohort of MA resident women who delivered a live infant during the previous calendar year.

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