

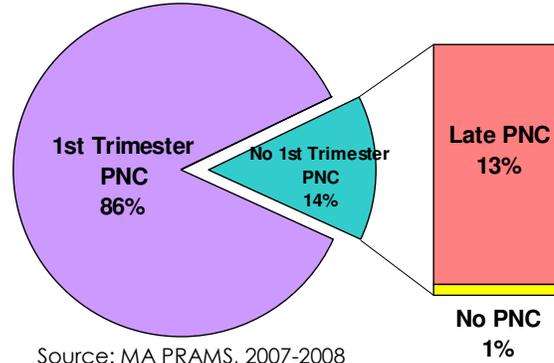
# Prenatal care entry among Massachusetts women, 2007-2008



## Prenatal Care

- Entry to prenatal care (PNC) in the first trimester of pregnancy is recommended because of its potential to improve the health of mothers and infants.
- Prenatal care includes four major components:
  - Risk assessment
  - Treatment for medical conditions and/or risk reduction
  - Education
  - Engagement of the mother and her family

**Figure 1. First trimester entry into prenatal care**



Source: MA PRAMS, 2007-2008

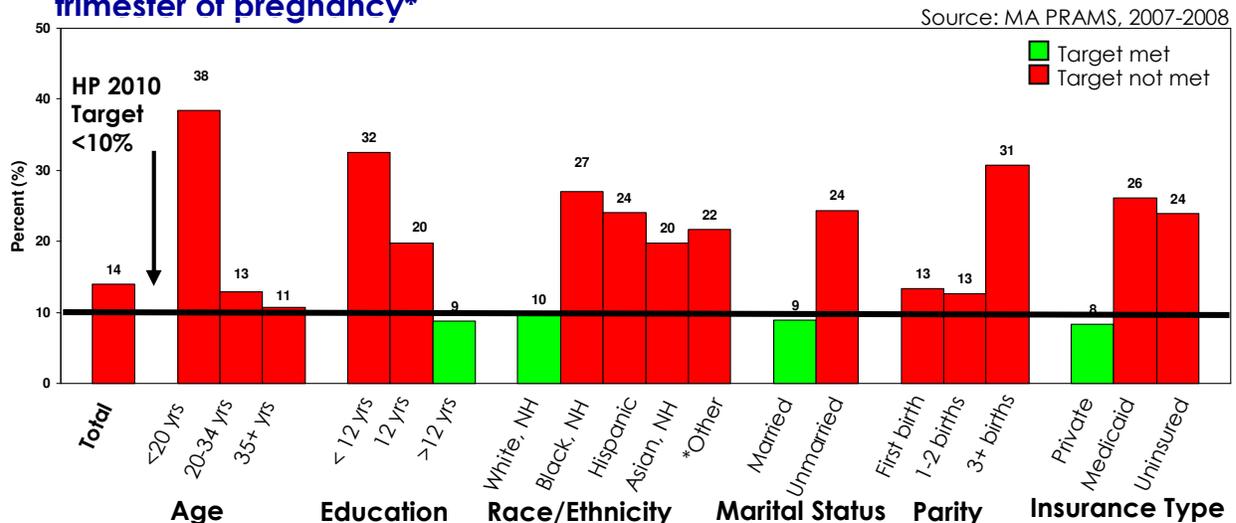
## Who is meeting the Healthy People 2010 target for PNC entry in the first trimester?

- The *Healthy People 2010* (HP 2010) target is that no more than 10% of women should receive PNC later than the first trimester of pregnancy.
- According to PRAMS data, 14% of MA residents who gave birth in 2007 & 2008 received late or no PNC (Figure 1).
- **Who is meeting the *Healthy People 2010* target?**
  - Women with more than 12 years of education;
  - White, non-Hispanic women;
  - Married women; and
  - Women with private insurance (Figure 2).

## Why is PNC important?

- PNC can contribute to reductions in perinatal illness, disability, and death by identifying and mitigating potential risks and helping women to address behavioral factors, such as smoking, alcohol use, and maternal depression that contribute to poor pregnancy and parenting.
- PNC is more likely to be effective if women begin receiving care early in pregnancy.
- Educating women about the need for early, continuous PNC is essential.

**Figure 2. Characteristics of women NOT receiving prenatal care in the first trimester of pregnancy\***



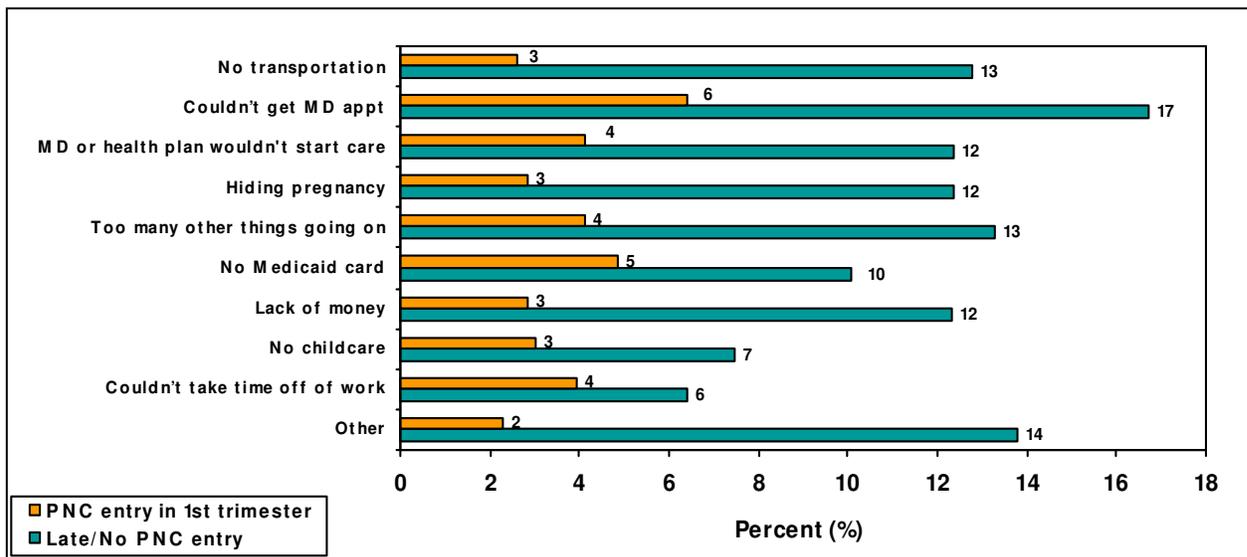
Source: MA PRAMS, 2007-2008

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

### Barriers to receiving prenatal care

- Overall, 1 out of 5 women in MA reported experiencing at least one barrier to receiving PNC during their pregnancy:
  - 17% of women who entered PNC during their first trimester reported having at least one barrier to receiving PNC vs. 45% of women receiving late or no PNC.
- The three barriers most frequently reported for not receiving timely PNC included 'not being able to get an appointment,' 'too many other things going on,' and 'lack of transportation to the clinic or doctor's office.'
- The likelihood of receiving timely PNC decreased by 23% with each additional barrier experienced by the mother.

Figure 3. Women experiencing barriers to obtaining prenatal care



Source: MA PRAMS, 2007-2008

### Which women were most likely to receive late or no PNC?

When adjusting for age, education, race/Hispanic ethnicity, marital status, number of previous births, insurance status, and barriers to receiving care, the following groups of women were more likely to have received late or no PNC:

- Women less than 20 years of age;
- Women of Asian or Black, non-Hispanic race/ethnicities;
- Women who had previously given 3 or more births;
- Women who were unmarried; or
- Women who were uninsured or on Medicaid (Table 1).

**Table 1. Comparing MA women who received late or no prenatal care**

	Adjusted <sup>†</sup> Ratio of Percents	95% Confidence Interval
<b>Compared to women between 20 and 34 years old</b>		
<20 years old	2.4*	1.7-3.4
35+ years old	1.0	0.7-1.3
<b>Compared to women with only a high school diploma</b>		
<12 years	1.2	0.9-1.6
>12 years	0.8	0.6-1.1
<b>Compared to White, non-Hispanic women</b>		
Black, non-Hispanic	1.8*	1.3-2.4
Hispanic	1.2	0.9-1.7
Asian, non-Hispanic	2.0*	1.5-2.7
Other**	1.0	0.6-1.7
<b>Compared to married women</b>		
Unmarried	1.5*	1.1-2.1
<b>Compared to women giving birth for the first time (parity=0)</b>		
1-2 previous births	1.3	1.0-1.7
3+ previous births	2.3*	1.5-3.4
<b>Compared to women with private health insurance before their pregnancy</b>		
Medicaid	1.4*	1.0-2.1
Uninsured	1.9*	1.3-2.8
<b>Compared to women who did not list issues with receiving PNC</b>		
Each additional barrier	1.2*	1.2-1.3

Source: MA PRAMS, 2007-2008

<sup>†</sup>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.

### 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 women who received late or no PNC, 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 late or no PNC 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.

### How do I interpret the adjusted ratio of percents?

**Example:** Compared to women between 20 and 34 years of age, women younger than 20 years of age were 2.4 times as likely to have received late or no PNC during their pregnancy while adjusting for age, education, race/ethnicity, marital status, number of previous births experienced, whether they had private health insurance before pregnancy, and barriers to PNC.

## Conclusions

- About 14% of women did not enter PNC in the first trimester of pregnancy. This percentage was higher for Black, non-Hispanic (27%), Hispanic (24%), Asian, non-Hispanic (20%), and 'Other' women (22%) compared to White, non-Hispanic women (10%).
- Massachusetts did not achieve the *Healthy People 2010* target that no more than 10% of women should receive PNC after the first trimester of pregnancy.
- Women who received late or no PNC reported experiencing more healthcare system related barriers than women who received timely PNC in the first trimester (Figure 3).

## Recommendations

- All women of reproductive age should develop a reproductive life plan with their health care provider. A reproductive life plan will include preconception care in addition to family planning, reducing unplanned pregnancies.
- Providers should readily be available to care for pregnant women during their first trimester of pregnancy.
- Health insurers should work with their providers to encourage women to come in during the first trimester of pregnancy instead of waiting until 10 weeks to begin PNC.
- Expand care to include group PNC such as "Centering Pregnancies" to deliver more effective and efficient PNC. Group PNC encourages the establishment of a relationship between mother and provider, and provides a support network for both the mother and her family.
- Increase visibility of existing services (e.g., community health centers and Healthy Start) for pregnant women without private health insurance to improve PNC utilization.
- Identify and implement culturally appropriate outreach and services to increase timely PNC utilization by minority groups.

## Resources

- 2009/2010 PNC Recommendations – the Letter to Clinicians, [http://www.mhqp.org/guidelines/perinatalPDF/MHQP\\_2009\\_Perinatal\\_Guidelines\\_Letter\\_To\\_Clinicians.pdf](http://www.mhqp.org/guidelines/perinatalPDF/MHQP_2009_Perinatal_Guidelines_Letter_To_Clinicians.pdf)
- MA Department of Public Health Family Planning Program: <http://www.mass.gov/dph/familyplanning>
- MA Healthy Start – Insurance program for uninsured low-income women: <http://www.massresources.org/pages.cfm?contentID=51&pageID=13&subpages=yes&dynamicID=700>
- More information on prenatal care through the federal government-sponsored women's resource site: <http://www.womenshealth.gov/faq/prenatal-care.cfm>
- More information on Centering Pregnancies found through: [www.centeringhealthcare.org](http://www.centeringhealthcare.org)

### Study Limitations

- 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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