Smoking: before, during and after pregnancy

Smoking before pregnancy is associated with reduced fertility and conception.[i] Smoking during pregnancy is a well-established risk factor for pregnancy complications, including placenta previa, placental abruption, premature rupture of membranes, low birth-weight, premature delivery and stillbirth.[ii] Smoking after pregnancy has been associated with sudden infant death syndrome (SIDS), increased asthma severity, bronchitis, pneumonia and ear infections.[iii]

Given the effects of tobacco exposure before, during, and after pregnancy, it is important to promote tobacco control education and intervention. Data from the California Maternal and Infant Health Assessment Survey from 2012-2013 show:

Before Pregnancy:

(Smoked any cigarettes during the three months before pregnancy)

- Declined slightly, from 13.6% in 2008 to 11.6% in 2012-2013.
- Is higher among uninsured women (25.4%) and women with Medi-Cal coverage (14.5%) than women with private insurance (7.6%).
- Is higher among African American (19.8%) and White (17.3%) women compared to Hispanic (8.8%) and Asian/Pacific Islander (6.5%) women.

During Pregnancy:

(Smoked any cigarettes during the last three months of pregnancy)

Medi-Cal Enrollees:

- Are four times (3.9%) more likely to smoke during pregnancy than women with private insurance (0.8%).
- Have a lower smoking prevalence than uninsured women (10.1%).
- Account for 76.0% of all women who smoke during pregnancy; about half of the birthing population in California.

Disparities:

- African American (7.3%) and White (4.4%) women are three times more likely to smoke than Hispanic (1.3%) and Asian/Pacific Islander (1.1%) women.
- White women with Medi-Cal are over ten times more likely to smoke (11.5%) than White women with private insurance (1.1%).

Since 1999, the percentage of women that smoke declined for all race/ethnic and insurance groups. In 2007, the smoking prevalence during pregnancy reached a historical low (2.6%), but has not decreased substantially since then. With a smoking prevalence of 2.5% in 2013, California has not met the *Healthy People 2020* objective of 1.4% for smoking during pregnancy.

After Pregnancy:

(Smoked any cigarettes at the time of the survey)

- 5.7% of women smoked after pregnancy.
- Nearly 80% of women quit smoking by the third trimester. Among the quitters, about 1/3 relapse in the postpartum period.
- Uninsured women (10.4%) and Medi-Cal enrollees (8.1%) are more likely to smoke than women with private insurance (2.7%).
- African-American (13.4%) and White (9.1%) women are more likely to smoke compared to Hispanic (3.3%) and Asian/PI (3.0%) women.

Health Expenditures Related to Smoking & Pregnancy:

- Helping pregnant women quit smoking is one of the best cost-saving preventive services available:
    - $3 saved per $1 invested in a prenatal tobacco cessation program.[iv]

Promote Tobacco Cessation

- Health care professionals can double smoking cessation rates by using the "Ask, Advise and Refer" approach – it takes 3 minutes or less![v]
    - 40% of women of reproductive age (18-44 years) have not been advised to quit smoking by their health care provider.[vi]
- The California Smokers' Helpline at 1-800-NO BUTTS offers free telephone counseling in six languages to help quit smoking, as well as free nicotine patches to eligible callers.[vii]
- California's Text4baby Project delivers free health-related text messages to expectant and new parents of infants under age one, including information on tobacco cessation services available in California and to Medi-Cal members. Pregnant Medi-Cal Text4baby users who smoke will also be offered enrollment into a free complementary interactive text-based program – Quit4baby.
- Effective October 2010, section 4107 of the Affordable Care Act required state Medicaid programs to cover tobacco cessation counseling and pharmacotherapy for pregnant women with no cost-sharing.[viii]
- Effective January 2014, section 2502 of the Affordable Care Act barred state Medicaid programs from excluding FDA-approved cessation medications from coverage.[viii]

References:

i http://www.cdc.gov/prams/tobaccoandprams.htm

ii USDHHS, 2004; Little et al., 2004; Mathews & MacDorman, 2012

iii http://www.cdc.gov/prams/tobaccoandprams.htm

iv Ruger JP, Emmons KM. Economic evaluations of smoking cessation and relapse prevention programs for pregnan women: A systematic review. Value in health 2008;1(2):180-190.

v Fiore MC, Jaén CR, Baker TB, et al. *Treating Tobacco Use and Dependence: 2008 Update*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008.

vi Behavioral Risk Factor Surveillance System - California Adult Tobacco Survey, 2013

vii http://www.nobutts.org/miqs/

viii Jennifer Singleterry, MA, Zach Jump, MA, Elizabeth Lancet, MPH, Stephen Babb, MPH, Allison MacNeil, MPH, Lei Zhang, PhD. (2014). State Medicaid Coverage for Tobacco Cessation Treatments and Barriers to Coverage — United States, 2008–2014. MMWR., 63, 12.

Smoking before, during and after pregnancy
Maternal and Infant Health Assessment Survey, 2012-2013

	Smoking before pregnancy			Smoking during pregnancy			Smoking after pregnancy		
	%	95% CI	Annual Population Estimate	%	95% CI	Annual Population Estimate	%	95% CI	Annual Population Estimate
All women	**11.6**	10.6 - 12.6	56,800	**2.5**	2.1 - 3.0	12,400	**5.7**	5.0 - 6.4	27,700
By Prenatal Health Insurance									
Medical	**14.5**	13.0 - 16.1	35,100	**3.9**	3.0 - 4.8	9,400	**8.1**	6.9 - 9.3	19,600
Private	**7.6**	6.4 - 8.8	16,200	**0.8**	0.5 - 1.0	1,700	**2.7**	1.9 - 3.4	5,700
Uninsured	**25.4**	14.1 - 36.7	2,100	**10.1** *	3.5 - 16.7	800	**10.4** *	3.8 - 17.0	900
By Race/Ethnicity									
Black	**19.8**	13.5 - 26.0	5,500	**7.3** *	1.8 - 12.8	2,000	**13.4**	7.6 - 19.1	3,700
White	**17.3**	15.3 - 19.2	24,000	**4.4**	3.6 - 5.2	6,100	**9.1**	7.8 - 10.5	12,700
Hispanic	**8.8**	7.4 - 10.1	20,800	**1.3**	0.7 - 1.8	3,000	**3.3**	2.4 - 4.2	7,900
Asian/PI	**6.5**	4.4 - 8.5	4,600	**1.1** *	0.2 - 2.0	800	**3.0**	1.5 - 4.6	2,200

* Estimate should be interpreted with caution due to low statistical reliability (RSE is between 30% and 50%).

Notes: MIHA is an annual population-based survey of California resident women with a live birth. Data from MIHA 2012 and 2013 were combined, resulting in a statewide sample size of 13,821. Percent (%), 95% confidence interval (95% CI), and annual population estimates (rounded to the nearest hundred) are weighted to represent all live births in California. Population estimates are a two-year average (2012-2013). See the Technical Document at www.cdph.ca.gov/MIHA for information on weighting, comparability to prior years and technical definitions.