



# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

## OVERVIEW

The California Women's Health Survey (CWHS) was established by public health professionals and policymakers to collect, analyze, interpret, and disseminate information to guide decision-making about women's health. The *Data Points* series is a CWHS publication that is prepared by the CWHS collaborating programs and coordinated by the Office of Women's Health. *Data Points: Results From the 2006-2007 California Women's Health Surveys*, is the most recent in the series that focus on specific women's health findings based on the 2006-2007 CWHS results.

The CWHS is a collaborative effort of the California Department of Health Care Services (DHCS), California Department of Public Health (CDPH), California Department of Social Services, California Department of Alcohol and Drug Programs, and Public Health Institute's Survey Research Group. The Office of Women's Health and the Survey Research Group coordinate and facilitate the project, with collaborators working together to develop the survey instrument, analyze data, and distribute findings. Funding for the data collection is provided by the collaborators, and the survey is administered by the Survey Research Group. Data are collected annually through a computer-assisted telephone survey of approximately 4000 randomly selected California women. The women are interviewed anonymously in either English or Spanish. Responses are weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

The following is the list of collaborators for the *CWHS 2006-2007 Data Points*:

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Office of Women's and Perinatal Services

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For additional copies of *CWHS 2006-2007 Data Points*, please contact the Office of Women's Health at:

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## LIST OF THE CWHS DATA POINTS 2006-2007

### METHODOLOGY

1. **The California Women's Health Survey Methodology.** Patricia Lee, Ph.D. and Terri Thorfinnson, J.D., Department of Health Care Services, California Department of Public Health, Office of Women's Health, (916) 440-7633, Patricia.Lee@dhcs.ca.gov

### REPRODUCTIVE AND SEXUAL HEALTH

2. **Awareness of Emergency Contraception Among California Women, 2006-2007.** Marina J. Chabot, M.Sc.; Carrie Lewis, M.P.H.; and Heike Thiel de Bocanegra, Ph.D., M.P.H., California Department of Public Health, Office of Family Planning, (916) 650-0467, Marina.Chabot@cdph.ca.gov
3. **Demographic Differences in the Timing of First Sexual Intercourse Among California Women, 2006-2007.** Marina J. Chabot, M.Sc.; Carrie Lewis, M.P.H.; and Heike Thiel de Bocanegra, Ph.D., M.P.H., California Department of Public Health, Office of Family Planning, (916) 650-0467, Marina.Chabot@cdph.ca.gov
4. **Contraceptive Prevalence and Reasons Among Contraceptive Non-use Among California Women, 2006-2007.** Marina J. Chabot, M.Sc.; Carrie Lewis, M.P.H.; and Heike Thiel de Bocanegra, Ph.D., M.P.H., California Department of Public Health, Office of Family Planning, (916) 650-0467, Marina.Chabot@cdph.ca.gov
5. **Knowledge and Use of Menstrual Cycle Pill Among California Women, 2007.** Patricia Lee, Ph.D. and Terri Thorfinnson, J.D., Department of Health Care Services, California Department of Public Health, Office of Women's Health, (916) 440-7633, Patricia.Lee@dhcs.ca.gov
6. **California Women's Interest in Using Microbicides, 2007.** Patricia Lee, Ph.D. and Terri Thorfinnson, J.D., Department of Health Care Services, California Department of Public Health, Office of Women's Health, (916) 440-7633, Patricia.Lee@dhcs.ca.gov
7. **Age at Menarche (or First Menses) Among California Women, 2007, by Demographic Characteristics and Compared with 1997.** Gayle Windham, M.S.P.H., Ph.D. and Cathyn Fan, M.P.H., California Department of Public Health, Division of Environmental and Occupational Disease Control, (510) 620-3638, Gayle.Windham@cdph.ca.gov
8. **Difficulty Getting Pregnant and History of Infertility Diagnosis in California Women, 2007, and Trends Over the Last Decade.** Gayle Windham, M.S.P.H., Ph.D. and Cathyn Fan, M.P.H., California Department of Public Health, Division of Environmental and Occupational Disease Control, (510) 620-3638, Gayle.Windham@cdph.ca.gov

## PRENATAL/PERINATAL HEALTH

- 9. Knowledge of Fetal Alcohol Spectrum Disorder and Beliefs About Drinking During Pregnancy Among California Women, 2006-2007.** Laurie Drabble, Ph.D., M.S.W, M.P.H., California Department of Alcohol and Drug Programs and San Jose State University, School of Social Work, (408) 924-5836, ldrabble@sjsu.edu; and Joan Epstein, M.S., California Department of Public Health, California Cancer Registry, (916) 779-2663, jepstein@ccr.ca.gov

## FOOD INSECURITY

- 10. California Hispanic Women's Fruit and Vegetable Consumption by Years in the United States, 2007.** Barbara MkNelly, M.S.; Sharon Sugerman, M.S., R.D.; and Patrick Mitchell, M.A., Dr.P.H., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 552-9938, Barbara.MkNelly@cdph.ca.gov
- 11. Health of California Women Receiving Food Stamps, 2006-2007.** Barbara MkNelly, M.S.; Sharon Sugerman, M.S., R.D.; and Patrick Mitchell, M.A., Dr.P.H., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 552-9938, Barbara.MkNelly@cdph.ca.gov
- 12. California Women's Diet Quality by Household Food Security Status, 2007.** Barbara MkNelly, M.S.; Sharon Sugerman, M.S., R.D.; and Patrick Mitchell, M.A., Dr.P.H., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 552-9938, Barbara.MkNelly@cdph.ca.gov

## AGING

- 13. Timing of Menopause and Use of Hormone Replacement Therapy Among California Women, 2007.** Patricia Lee, Ph.D. and Terri Thorfinnson, J.D., Department of Health Care Services, California Department of Public Health, Office of Women's Health, (916) 440-7633, Patricia.Lee@dhcs.ca.gov

## BREAST AND CERVICAL CANCER

- 14. Obstacles to Mammography Screening for California Women Ages 50 to 64, 2006-2007.** Sepali Gunasekera, M.S.; Nana Tufuoh, M.D., M.P.H.; Weihong Zhang, M.S.; and Stan Sciortino, M.P.H., Ph.D., California Department of Public Health, Cancer Detection Section, (916) 324-0090, Nana.Tufuoh@cdph.ca.gov
- 15. Women Ages 25 to 64 Years Who Were Rarely or Never Screened for Cervical Cancer in California, 2006-2007.** Nana Tufuoh, M.D., M.P.H.; Sepali Gunasekera, M.S.; Weihong Zhang, M.S.; and Stan Sciortino, M.P.H., Ph.D., California Department of Public Health, Cancer Detection Section, (916) 324-0090, Nana.Tufuoh@cdph.ca.gov
- 16. Pap Screening History Among California Women Ages 18 and Older, 2007.** Patricia Lee, Ph.D. and Terri Thorfinnson, J.D., Department of Health Care Services, California Department of Public Health, Office of Women's Health, (916) 440-7633, Patricia.Lee@dhcs.ca.gov

## MENTAL HEALTH

- 17. Mental Health Needs Among California Women With Disabilities, 2007.** Julie Cross Riedel, Ph.D., California Department of Public Health, Epidemiology and Prevention for Injury Control Branch, Living Healthy with a Disability Program, (916) 552-9851, Julie.CrossRiedel@cdph.ca.gov

## STDs

18. **Human Papillomavirus Knowledge Among California Women, 2007.** Patricia Lee, Ph.D. and Terri Thorfinnson, J.D., Department of Health Care Services, California Department of Public Health, Office of Women's Health, (916) 440-7633, Patricia.Lee@dhcs.ca.gov
19. **Differences in Rates of Chlamydia Screening Among Young California Women, by Race/Ethnicity and Sociodemographic Factors, 2002-2007.** Adrienne Rain Mocello, M.P.H.; Joan M. Chow, Dr.P.H.; Michael C. Samuel, Dr.P.H.; and Gail Bolan, M.D., California Department of Public Health, Center for Infectious Diseases, Division of Communicable Disease Control, Sexually Transmitted Disease Control Branch, (510) 620-3718, Joan.Chow@cdph.ca.gov

## OBESITY AND PHYSICAL ACTIVITY

20. **Disparities in Prevalence of Obesity Among California Women, 2007.** Sharon Sugerman, M.S, R.D. and Patrick Mitchell, Dr.P.H., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 449-5406, Sharon.Sugerman@cdph.ca.gov
21. **Overweight and Obesity Among California Women Trying to Become Pregnant, 2006-2007.** Aldona Herndorf, M.P.H., and Suzanne Haydu, R.D, M.P.H., California Department of Public Health, Maternal, Child and Adolescent Health Division; and Patrick Mitchell, Dr.P.H.; and Sharon Sugerman, M.S., R.D., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 552-8497, Aldona.Herndorf@dhcs.ca.gov
22. **Overweight, Obesity and Lack of Physical Activity Among California Women With a Disability, 2007.** Julie Cross Riedel, Ph.D., California Department of Public Health, Epidemiology and Prevention for Injury Control (EPIC) Branch, Living Healthy with a Disability Program, (916) 552-9851, Julie.CrossRiedel@cdph.ca.gov

## VIOLENCE AGAINST WOMEN

23. **Childhood Exposure to Physical Domestic Violence in California, 2007.** Mina White, M.P.H., California Department of Public Health, Epidemiology and Prevention for Injury Control Branch, (916) 552-9844, Mina.White@cdph.ca.gov; and Nigretta Bradley, California Department of Public Health, Domestic Violence Program, (916) 552-8859, Nigretta.Bradley@cdph.ca.gov
24. **Health Status Among California Women Victimized by Sexual Violence, 2007.** Mina White, M.P.H., California Department of Public Health, Epidemiology and Prevention for Injury Control Branch, (916) 552-9844, Mina.White@cdph.ca.gov
25. **Symptoms of Depression Among Women Who Have Experienced Intimate Partner Violence and Women Who Have Experienced a Sexual Assault.** Joan Epstein, M.S., California Department of Public Health; Survey Research Group, Cancer Surveillance and Research Branch; and Moreen Libet, Ph.D., California Department of Public Health, Maternal, Child and Adolescent Health Division, Center for Family Health, (916) 779-2663, jepstein@ccr.ca.gov
26. **Differences in Knowledge of Chlamydia Among California Women, by Age, Race/Ethnicity, and Receipt of Sexual Risk Assessment, 2007.** Adrienne Rain Mocello, M.P.H; Joan M. Chow, M.P.H, Dr.P.H.; Michael C. Samuel, Dr.P.H.; and Gail Bolan, M.D., California Department of Public Health, Center for Infectious Diseases, Division of Communicable Disease Control, Sexually Transmitted Disease Control Branch, (510) 620-3718, Joan.Chow@cdph.ca.gov



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RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

The California Women's Health Survey (CWHS) is an ongoing annual telephone survey that collects information on a wide variety of health indicators and health-related knowledge, behaviors, and attitudes from a sample of approximately 4,000 randomly selected women ages 18 or older. The survey began in March 1997 as a collaborative effort between the California Department of Health Services, California Department of Mental Health, California Department of Alcohol and Drug Programs, California Medical Review, Inc., California Department of Social Services, and the Public Health Institute. The survey is administered by the Survey Research Group of the Public Health Institute.

Survey respondents are asked about past and present involvement in health care systems, food security status, participation in government nutrition programs, prenatal care, vitamin consumption, alcohol consumption, breastfeeding, sexually transmitted diseases, intimate partner violence, and utilization of cancer screening procedures and other preventative measures. They also are asked for basic demographic information such as age, race/ethnicity, employment status, and education.

Participation in the CWHS is voluntary and anonymous. Interviews are conducted by trained interviewers following standardized procedures developed by the Survey Research Group staff and the Centers for Disease Control and Prevention. Data are collected monthly from a random sample of California women living in households with

telephones. Quality control procedures are rigorous to ensure a high level of accuracy in the data collected.

Using a computer-assisted telephone interviewing system, interviewers read questions as they are displayed on a computer screen. Responses are keyed directly into the computer.

Once a household is reached, all women ages 18 or older living within that household are eligible to participate in the survey. If more than one member of the household is eligible, one person is selected at random (using a computer-generated random selection algorithm) to become the respondent. If the person selected is not available, an appointment is made to conduct the interview at a different time or on another day. Once a respondent is selected, no other household member can be selected, even if it is not possible to obtain an interview from the selected respondent. Standardized procedures are followed for encouraging selected respondents who are reluctant to participate as well as for calling numbers for telephones that ring with no answer or give a busy signal.

Through the sampling process, the Survey Research Group attempts to collect interviews from a random sample that is representative of California's population. However, the age and race/ethnicity characteristics of the CWHS sample differ to some extent from those of the female California population. In addition, the probability of selection within a household varies depending upon the number of

## *The California Women's Health Survey Methodology*

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Office of Women's Health

*The California  
Women's Health  
Survey Methodology*

Department of  
Health Care Services  
California Department of  
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Office of Women's Health

telephone numbers and individuals living in the household. To obtain meaningful population estimates, all analyses in this report have been weighted to the age and race/ethnicity of the 2000 California adult female population. No adjustment is made for the observed differences in education or income. For a variable of interest, this means that if education or income of respondents varies from that of the general California population, any associations may not be captured.

Due to the limited sample size, data were distributed among four race/ethnicity groups. "White" refers to non-Hispanic Whites, "Hispanic" refers to respondents who said that they were of Hispanic origin regardless of race, "African American/Black" refers to respondents who said that they were African American/Black, and "Asian/Other" refers to respondents who were either Asian or belonged to additional race/ethnic groups. For analyses in which there were too few women in some of the more detailed groupings, we collapsed the groups into two race/ethnicity categories: "White," which refers to non-Hispanic Whites and "non-White," which refers to women of all other race/ethnicity groups. Unless specified otherwise, comparison of behaviors and/or outcomes by the different race/ethnicity groups was not adjusted for age differences.

Data from these Data Points should be interpreted with caution. Due to the cross-sectional design of the CWHS, causality cannot be established between the variables because they are measured simultaneously. In addition, the survey is only completed in English and Spanish, which may exclude a portion of the population. Recall bias also may be a problem; information recall may be particularly difficult on a telephone survey. Another area of concern is that over reporting of healthy behaviors and underreporting of unhealthy behaviors is well-documented in behavioral survey research. This study is population-based, so the results can only be generalized to noninstitutionalized adult women in California living in households with telephones. However, more than 95 percent of households in California are estimated to have telephones, and the effects of non-coverage appear to be small.

Each Data Point is meant to "stand alone," with data presented based on program needs and definitions. The definitions used in one Data Point may differ from those in another. More methodological information and a thorough examination of the representativeness of the survey sample are available from the most recent *California Women's Health Survey SAS Dataset Documentation and Technical Report*. For a copy of the most recent technical report, please contact the Survey Research Group at (916) 779-0338.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

**E**mergency contraception (EC), also widely known as the “morning-after pill,” has the potential to reduce unintended pregnancy when used up to 120 hours after unprotected sex or in cases where a known contraceptive failure such as a broken condom occurs.<sup>1</sup> EC is not intended for use as a regular contraceptive method and should not be confused with medical abortion drugs such as mifepristone (RU-486).<sup>1</sup> In August 2006, the U.S. Food and Drug Administration approved over-the-counter access through pharmacies for Plan B, one type of EC, for women and men ages 18 and older.<sup>1</sup>

The annual California Women's Health Survey (CWHS) included questions about EC awareness and knowledge of where to obtain EC, which were sponsored by the Office of Family Planning. Both the 2006 and 2007 CWHS asked the question: “To the best of your knowledge, if a woman has unprotected sex is there anything she can do in the three days following intercourse that will prevent pregnancy?” Those who responded “Yes” to this question were asked: “What can she do?” In 2006, women were asked “Do you know where she can get emergency contraception if she needed it?” and in 2007 this question was revised to: “If she needed to obtain emergency contraception, also known as the ‘morning-after pill’, where would she go to get it?” This revised question was intended to gauge knowledge of obtaining EC over-the-counter. Data from 5,283 women ages 18-49 included in the combined 2006 and 2007 surveys were used.<sup>2</sup> Results were weighted in these analyses by age and race/ethnicity

to reflect the 2000 California adult female population.

## The highlight are as follows:

- Seven in ten women (70.7 percent) responded that there was something a woman could do after unprotected sex to prevent pregnancy; this perception was highest among White women (83.8 percent) and lowest among Hispanic women (54.4 percent).
- EC awareness varied across socio-demographic subgroups: 84.5 percent of women with college or higher education versus 40.5 percent of women with less than high school; 80.7 percent of women above 200 percent of federal poverty level (FPL) versus 57.8 percent of women at or below 200 percent FPL; 75.1 percent of women at risk of unintended pregnancy<sup>3</sup> versus 66.2 percent of those who were not (see Figure 1).
- When women were asked: “What can she do?” more than eight in ten women (85.1 percent) answered correctly<sup>4</sup> about EC. Women at risk of unintended pregnancy were more likely to answer correctly about EC (88.1 percent) than women who were not at risk (82.2 percent).
- In 2006, of those who knew about EC, 83.2 percent replied they knew where a woman could obtain EC when needed; 94.5 percent of African Americans/Blacks, 83.5 percent each for Whites and Hispanics, and 73.3 percent of Asians/Pacific Islanders.<sup>6</sup>

## Awareness of Emergency Contraception Among California Women, 2006-2007

California Department of Public Health  
Office of Family Planning

### Public Health Message:

*High awareness of emergency contraception among women at risk of unintended pregnancy is encouraging. However, there is still a need to provide information regarding emergency contraception to at-risk, low-income, and less-educated women. Knowledge about pharmacy access to emergency contraception is low, but higher among foreign-born than U.S.-born women.*

Issue 6, Fall 2010, Num. 2

*Awareness of Emergency Contraception Among California Women, 2006-2007*

California Department of Public Health  
Office of Family Planning

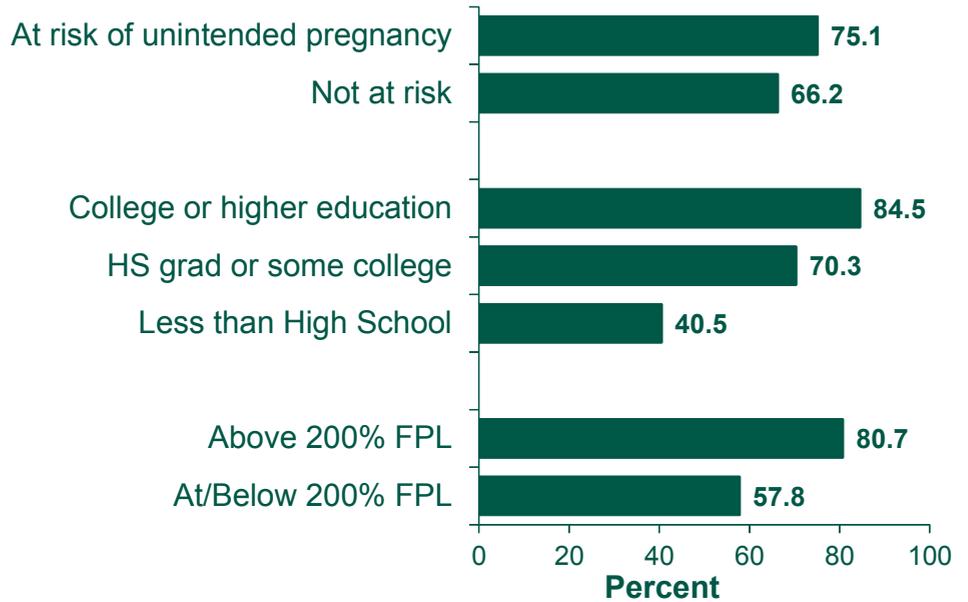
- In 2007, of women who were aware of EC, 51.1 percent identified a doctor's office/hospital as the place where EC could be obtained if needed, 23.8 percent replied school nurse or clinic, and 19.4 percent identified pharmacy.

The remaining 5.1 percent said they did not know, were not sure, or incorrectly identified where to obtain EC. The pharmacy response was higher among foreign-born women (24.6 percent) than U.S.-born women (17.6 percent).

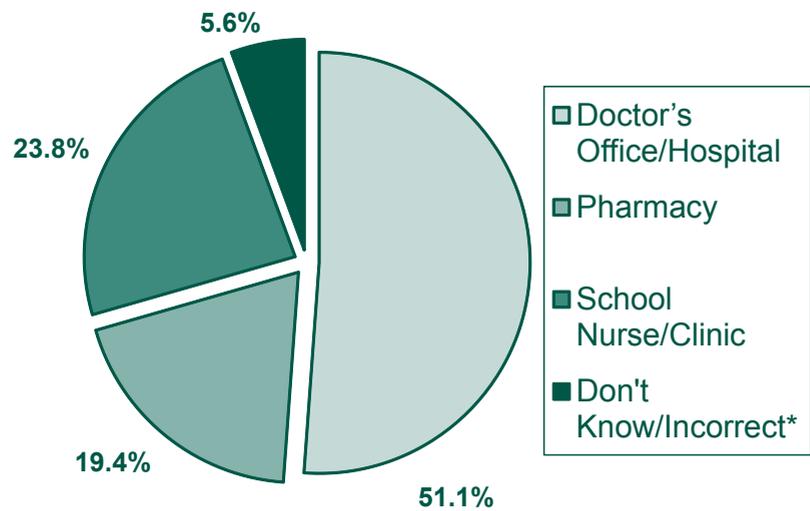
Figure 1

"Awareness of Emergency Contraception (EC) and Knowledge of Where to Obtain EC Among California Women Ages 18-49, 2006-2007"

**EC Awareness, 2006-2007**



**Knowledge Where to Get EC, 2007**



\*Incorrect responses included "a friend" or "convenience store"  
Source: California Women's Health Survey, 2006-2007

*Awareness of Emergency  
Contraception Among  
California Women, 2006-  
2007*

California Department of Public  
Health  
Office of Family Planning

- 1 Princeton University, Office of Population Research and Association of Reproductive Health Professionals. The Emergency Contraception Web site. <http://ec.princeton.edu/questions/what-fda-says.html>. Updated July 12, 2010. Accessed on 11/3/2008
- 2 Data was combined only for the question that was included in both the 2006 and 2007 surveys; otherwise single year data were used.
- 3 Women were considered at risk of unintended pregnancy if sexually active and not pregnant, not trying to get pregnant, sterilized, nor infertile.
- 4 Women were classified as answering correctly when they specifically mentioned use of Plan B or emergency contraception pills (83.3 percent), mentioned insertion of intrauterine device, or taking a stronger type of contraceptive pill (1.8 percent).
- 5  $p < 0.0001$ , chi-square test
- 6  $p < 0.05$ , chi-square test

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

**E**arly initiation of sexual intercourse is a risk factor for sexually transmitted diseases and unintended pregnancy.<sup>1</sup> It has been suggested that cultural, economic, and demographic factors could influence early debut of sexual activity.<sup>1</sup> In particular, there is evidence that differences in attitudes, values and sexual norms are possible explanations for observed differences in early sexual debut by race/ethnicity.<sup>1</sup>

Both the 2006 and 2007 California Women's Health Survey (CWHS) asked all women: "How old were you at the time of your first sexual intercourse experience with a man?" This analysis was limited to women ages 18-49 from the combined 2006 and 2007 surveys and included 5,283 respondents. Responses were examined by age, race/ethnicity, place of birth, and foster care history<sup>2</sup> and weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

More than two-thirds of women (68.0 percent) responded that their first sexual experience was before age 20, 24.4 percent between ages 18-19, and 43.7 percent before age 18. A quarter of respondents (25.0 percent) had sex for the first time at age 20 and above and the remaining seven percent replied that they had not yet had sex.

The average age at first sexual intercourse among women ages 18-49 was 18.2 years. The average age of sexual debut was highest among Asian/Pacific Islander (21.3 years), followed by Hispanic (18.6 years), White (17.5 years) and lowest among

African American/Black (16.9 years) women.

Highlights from the CWHS on the timing of first sexual intercourse among women ages 18-49 by their different socio-demographic characteristics are:

- More African American/Black women had their first sexual intercourse before age 18 (53.9 percent) than White (51.7 percent), Hispanic (38.0 percent), and Asian/Pacific Islander (19.7 percent) women<sup>3</sup> (see Figure 1).
- Foreign-born women had sex for the first time, on average, at 19.9 years, some 2.6 years later than U.S.-born women who first had sexual intercourse, on average, at 17.3 years.
- U.S.-born Hispanic women reported their first sexual intercourse experience, on average, to be two years earlier than their foreign-born counterparts (17.3 years versus 19.3 years). There was a 16 percentage point difference in the proportion of foreign-born and U.S.-born Hispanic women who had their first sex before age 18 (32.3 percent versus 48.8 percent).<sup>3</sup>
- Nearly equal proportions of women born in Mexico (31.6 percent) and Central-South America/Caribbean (32.6 percent) countries reported having their first sexual experience before age 18 than woman born in Asia<sup>3</sup> (15.3 percent).

## Demographic Differences in the Timing of First Sexual Intercourse Among California Women, 2006-2007

California Department of Public Health  
Office of Family Planning

### Public Health Message:

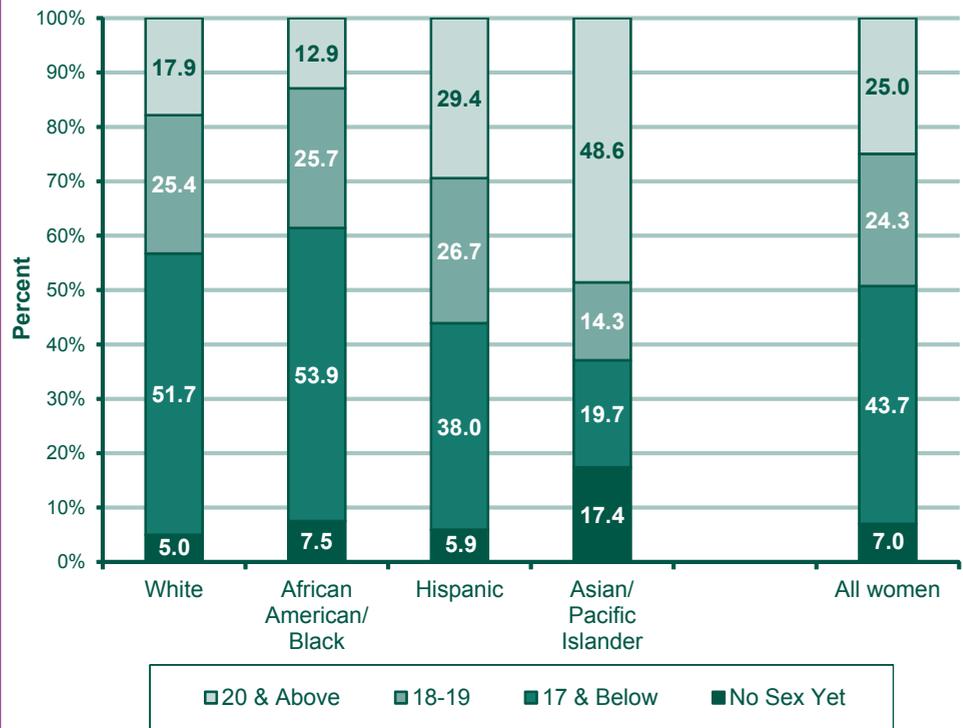
*These findings indicate that certain subgroups of women were likely to report an earlier age at sexual intercourse than others. It is critical to provide these women with education and interventions that provide the skills and information they need to protect themselves from unintended pregnancy and sexually transmitted diseases once they become sexually active.*

*Demographic Differences in the Timing of First Sexual Intercourse Among California Women, 2006-2007*

California Department of Public Health  
Office of Family Planning

- Women with a history of foster care before age 18 initiated sexual intercourse two years earlier than women without this history (16.1 years versus 18.3 years).

Figure 1 **Timing of First Sexual Intercourse With a Man Among California Women Ages 18-49, By Race/Ethnicity, 2006-2007**



Source: California Women's Health Survey, 2006-2007

1. Finer LB. Trends in Premarital Sex in the United States, 1954--2003. *Public Health Rep* January-February 2007;122(1):73-8.
2. Removal from home before 18 years of age.
3.  $p < 0.0001$ , chi-square test

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Contraceptive use is an important factor in preventing unintended pregnancy and - when condoms are used consistently and correctly - sexually transmitted diseases (STDs). In the United States, contraceptive use is nearly universal, with 98 percent of women ages 15-44 who have ever had sexual intercourse having used at least one contraceptive method at some point in their lives.<sup>1</sup> However, the seven percent of American women at risk of unintended pregnancies and not using contraception account for almost half of the country's unintended pregnancies.<sup>2</sup> Thus, examining the reasons for contraceptive non-use will help in developing appropriate interventions to increase contraception use among women at risk of unintended pregnancy.

The Office of Family Planning in the California Department of Public Health included contraceptive use questions

asked of non-pregnant, potentially fertile respondents<sup>3</sup> in the 2006 and 2007 California Women's Health Surveys (CWHS). Two questions were analyzed: (1), "Are you or your male sex partners currently using a birth control method to prevent pregnancy?" and (2) if respondents answered "No" to this first question, they were asked: "What is the MAIN reason that you are not CURRENTLY using birth control?" A total of 5,283 women ages 18-49 from the combined 2006 and 2007 CWHS were included in the analyses. Results were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

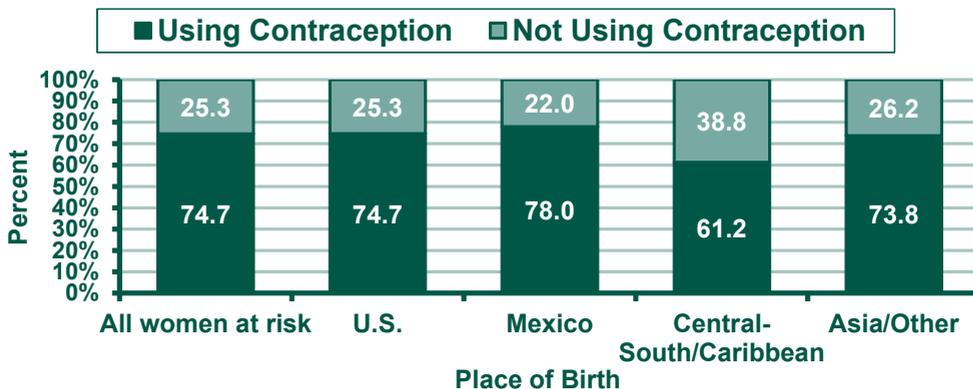
Half of women ages 18-49 were at risk of unintended pregnancy; that is, they were sexually active in the past 12 months and neither pregnant, seeking pregnancy, sterilized, nor infertile. Of these women, three quarters (74.7 percent) were using

## Contraceptive Prevalence and Reasons for Contraceptive Non-use Among California Women, 2006-2007

California Department of Public Health  
Office of Family Planning

**Public Health Message:** Women at risk of unintended pregnancy could benefit from contraceptive counseling and education that provides accurate information and addresses any misconceptions and ambivalence these women might have about contraception. Additionally, health care providers need to be sensitive to women's concerns and issues about their current contraception and provide a range of contraceptive options that are compatible with women's needs.

Figure 1 **Contraceptive Prevalence Among California Women at Risk of Unintended Pregnancy, Ages 18-49, 2006-2007**



Source: California Women's Health Survey, 2006-2007

**Contraceptive Prevalence and Reasons for Contraceptive Non-use Among California Women, 2006-2007**

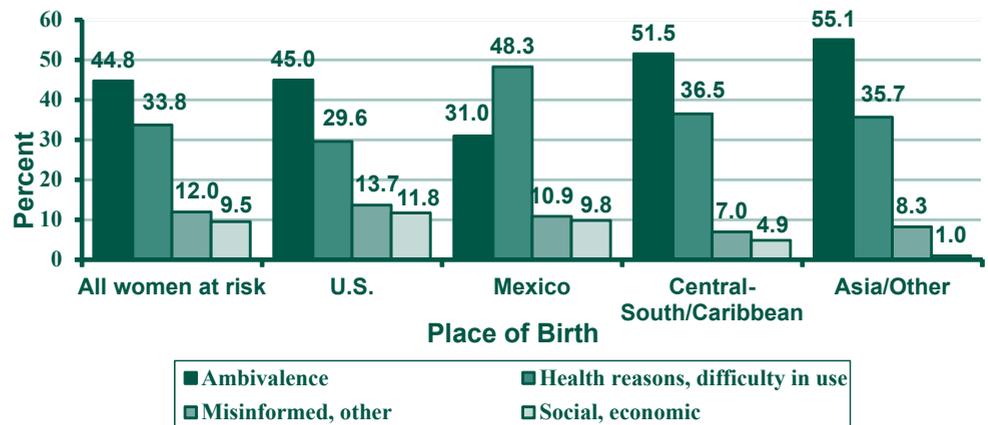
California Department of Public Health  
Office of Family Planning

some form of contraception and the remaining one quarter (25.3 percent) were not (see Figure 1).

The following highlights describe contraceptive prevalence among California women at risk for unintended pregnancy and reasons for non-use of contraception:

- Women’s age was significantly associated with contraceptive use,<sup>4</sup> while race/ethnicity was not.
- Women ages 25-29 who were at risk of unintended pregnancy had the highest contraceptive prevalence (79.4 percent), while older women ages 45-49 had the lowest (63.2 percent).
- White (76.1 percent) and Asian/Pacific Islander (76.4 percent) women had nearly equal prevalence of use, while it was slightly less among Hispanic (72.4 percent) and African American/Black (70.3 percent) women.
- While no difference in contraceptive use prevalence was observed between U.S.-born and foreign-born women (74.7 percent) for both groups, there was significant variation by the birthplace<sup>5</sup> of foreign-born women. Contraceptive use was highest among women born in Mexico (78.0 percent) and lowest among women born in the Central/South America/Caribbean group (61.2 percent).
- Women at or below 200 percent of federal poverty level (FPL) more frequently cited health reasons and difficulty in use<sup>6</sup> as a reason for contraceptive non-use (38.3 percent) than women above 200 percent of FPL (29.6 percent). However, women above 200 percent FPL more frequently cited ambivalence<sup>7</sup> (49.5 percent) than those below 200 percent of FPL (37.7 percent).<sup>8</sup>
- Nearly half of women born in Mexico (48.3 percent) cited health reasons or difficulty in using a method as the reason for non-use versus U.S.-born women (29.6 percent) and African American/Black (29.6 percent; see Figure 2).
- Ambivalence was more prevalent among women born in Asia/Other (55.1 percent), Central/South America/Caribbean (51.5 percent), and the United States (45.0 percent) than women born in Mexico (31.0 percent).

Figure 2  
**Reasons for Contraceptive Non-use Among California Women at Risk of Unintended Pregnancy, Ages 18-49, 2006-2007**



Source: California Women’s Health Survey, 2006-2007

*Contraceptive Prevalence  
and Reasons for  
Contraceptive Non-  
use Among California  
Women, 2006-2007*

California Department of Public  
Health  
Office of Family Planning

- 1 Mosher W, Martinez G, Chandra A, Abma J, Willson S. Use of contraception and use of family planning services in the United States; 1982-2002. *Adv Data*. December 2004;350:1-46.
- 2 Sonfield A. Preventing Unintended Pregnancy: The Need and the Means. *Guttmacher Rep Public Policy*. December 2003;6(5):7-10.
- 3 Defined as women ages 18-49 who reported they had not had a hysterectomy.
- 4  $p < 0.01$  chi-square test
- 5  $p < 0.05$  chi-square test
- 6 Included answers such as “It causes headache, don’t like the side effects, it’s inconvenient”.
- 7 Included answers such as “It’s OK to get pregnant, we don’t need it, nature’s plan”.
- 8  $p < 0.02$  chi-square test

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Oral contraceptives were originally designed to mimic hormone patterns during a woman's natural menstrual cycle, although they have evolved for use to suppress menstruation.<sup>1</sup> Total menstrual suppression was initially suggested for women with disorders related to the menstrual cycle such as endometriosis.<sup>2</sup> This practice is now commonly recommended to women without such disorders. However, there is not enough information on the consequences of long-term use of contraceptives in the schedules recommended. Knowledge of the medication used to suppress menstruation will help in determining future education, if needed. Therefore, the California Women's Health Survey (CWHS) assessed women's knowledge and use of hormonal contraceptives to suppress menstruation.

In 2007, the CWHS asked women ages 18 and older the question: "Have you heard about the use of hormonal contraceptives such as pills, shots or patches to suppress or reduce the number of menstrual cycles?" If women answered "Yes", they were then asked: "Are you currently taking or using any of those currently to suppress menstrual cycles?" The following data analyses were conducted on 2773 women ages 18-49 and results were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

Overall, 84.7 percent of women reported having heard of hormone contraceptives to suppress menstrual cycles. However, only 12.4 percent of women reported currently using hormone contraceptives to suppress their menstrual cycles.

## Knowledge and Use of Menstrual Cycle Pill Among California Women, 2007

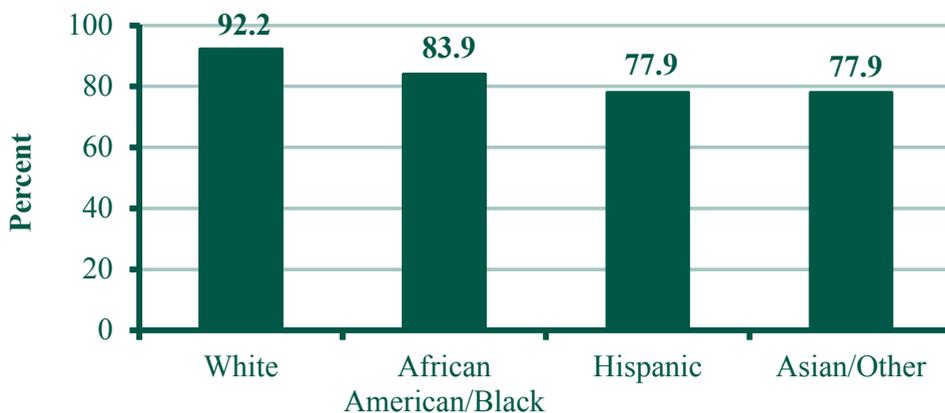
Department of Health Care Services  
California Department of Public Health  
Office of Women's Health

### Public Health Message:

*The trend among young women to use a pill to suppress their menstrual cycle will need to be monitored. The long-term health and reproductive effects of menstrual suppression remain unknown and should be investigated, since greater hormone use among younger women could have long-ranging implications.*

Figure 1

### California Women Who Have Heard of Pill to Stop Periods, by Race/Ethnicity\*, 2007



\*Asked of women under age 50

Source: California Women's Health Survey, 2007

*Knowledge and Use of Menstrual Cycle Pill Among California Women, 2007*

Department of Health Care Services  
 California Department of Public Health  
 Office of Women's Health

**Knowledge of Menstrual Cycle Pill**

- White women (92.2 percent) were significantly more likely to have heard of a hormone contraceptive to stop their cycle than African American/Black (83.9 percent), Hispanic (77.9 percent), and Asian/Other women (77.9 percent;  $p < .0001$ ) (see Figure 1).
- Women living in households with income at or below 200 percent of the federal poverty level (FPL) were significantly less likely to have heard about hormone contraceptives to stop their cycle (77.7 percent) than women living above the FPL (90.1 percent;  $p < .0001$ ) (see Figure 2).
- Women with health insurance were significantly more likely to have heard of a hormone contraceptive to stop their cycle (86.9 percent) than women without health insurance (76.6 percent;  $p < .0001$ ).
- There were no significant differences across age groups concerning knowledge of a hormone contraceptive to suppress periods.

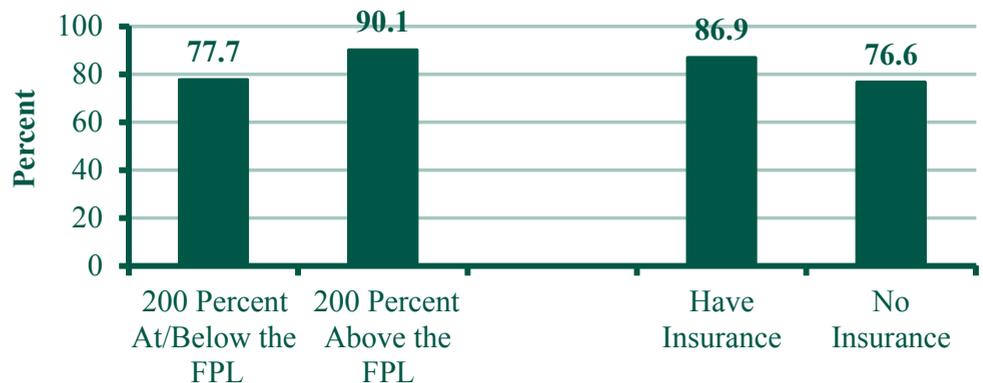
**Use of Menstrual Cycle Pill to Stop Periods**

- Women ages 18-29 were significantly more likely to be using a contraceptive to stop their periods (17.7 percent) than women ages 30-39 (9.8 percent) and ages 40-49 (7.8 percent;  $p < .0001$ ) (see Figure 3). Only women ages 18-49 were examined; however, there were four women over age 50 who reported using the contraceptive to stop their periods.
- There were no significant differences across race/ethnicity, poverty status, or health insurance status groups concerning using a hormone contraceptive to stop periods.

White women, those living above 200 percent of the FPL and those with health insurance, were more likely to have heard of a pill to suppress their menstrual cycle. While women reported low rates of using hormonal contraceptives to stop menstruation, such use was highest among younger women.

Figure 2

**California Women Who Heard of the Pill to Stop Periods, by Federal Poverty Level (FPL) and Insurance Status\*, 2007**



\*Asked of women under age 50

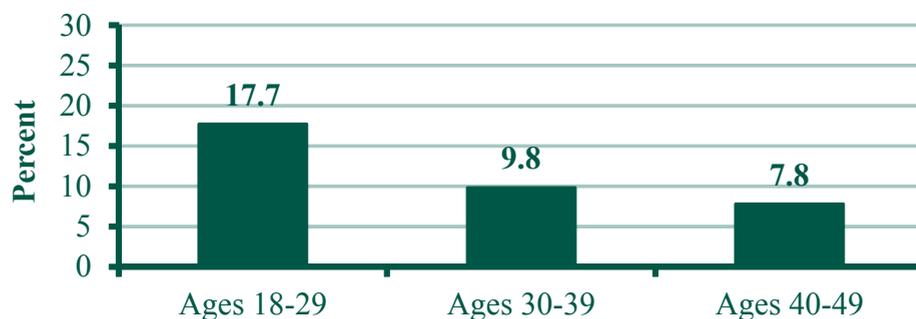
Source: California Women's Health Survey, 2007

*Knowledge and Use  
of Menstrual Cycle  
Pill Among California  
Women, 2007*

Department of Health Care  
Services  
California Department of Public  
Health  
Office of Women's Health

Figure 3

**California Women Who Are Taking a Pill  
to Stop Their Periods, by Age Group\*,  
2007**



\*Asked of women still having periods

Source: California Women's Health Survey, 2007

- 1 Association of Reproductive Health Professionals. What you need to know: menstrual suppression. <http://www.arhp.org/uploadDocs/menstruationfactsheet.pdf>. Published April 2008. Accessed July 2010.
- 2 Johnson-Robledo I, Barnack J, Wanes S. "Kiss your period goodbye": menstrual suppression in the popular press. *Sex Roles*. 2006.;54(5-6):353-360.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Women account for one quarter of all new HIV/AIDS cases.<sup>1</sup> In 2004, HIV infection was the fifth leading cause of death for women ages 35-44 years and the sixth leading cause of death for women ages 25-34.<sup>1</sup> Considering some of the issues with condom use (e.g., partner negotiation, domestic violence), having a method under a woman's direct control could enhance protection against sexually transmitted diseases/HIV acquisition. Microbicides are pharmaceutical products in development that could reduce women's risk for acquiring HIV and STDs when applied intravaginally.<sup>2</sup> Preliminary results from various microbicide phase I trials yielded disappointing results with respect to reducing women's risk of acquiring HIV and consequently, no microbicides have been approved by the U.S. Food and Drug Administration for use in the United States. Knowledge of women's acceptance of and readiness to use microbicides once available could help encourage the development of microbicides.<sup>3</sup>

In 2007, California Women's Health Survey respondents were given a brief explanation about microbicides and then asked: "Once they become available, would you be interested in using a microbicide compound?" Women were asked about their condom use and condom use based on partner reaction. Analyses were limited to sexually active women ages 18-49; results were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population and compared by chi-square statistics.

## • Demographics

- A higher proportion of Hispanic women reported interest in using microbicides (47.0 percent) compared with African American/Black (38.2 percent), Asian/Other (26.3 percent), and White (25.2 percent) women (see Figure 1).<sup>4</sup>
- A higher proportion of women ages 18-29 reported interest in using microbicides (43.8 percent) compared with women ages 30-39 (33.1 percent) and women ages 40-49 (25.3 percent; see Figure 2).<sup>4</sup>
- A higher proportion of women with an income at or below 200 percent the federal poverty level (FPL) reported interest in using microbicides (46.5 percent) compared with women with an income above this level (25.4 percent).<sup>4</sup>

## • Sexual Behavior

- A higher proportion of women who used condoms more than half the time reported interest in using microbicides (63.7 percent) compared with those using condoms half the time (60.4 percent), women using condoms less than half the time (44.1 percent), women always using condoms (42.8 percent), and women who never used condoms in the past 12 months (24.0 percent; see Figure 3).<sup>4</sup>

## *California Women's Interest in Using Microbicides, 2007*

California Department of Public Health  
Department of Health Care Services  
Office of Women's Health

### **Public Health Message:**

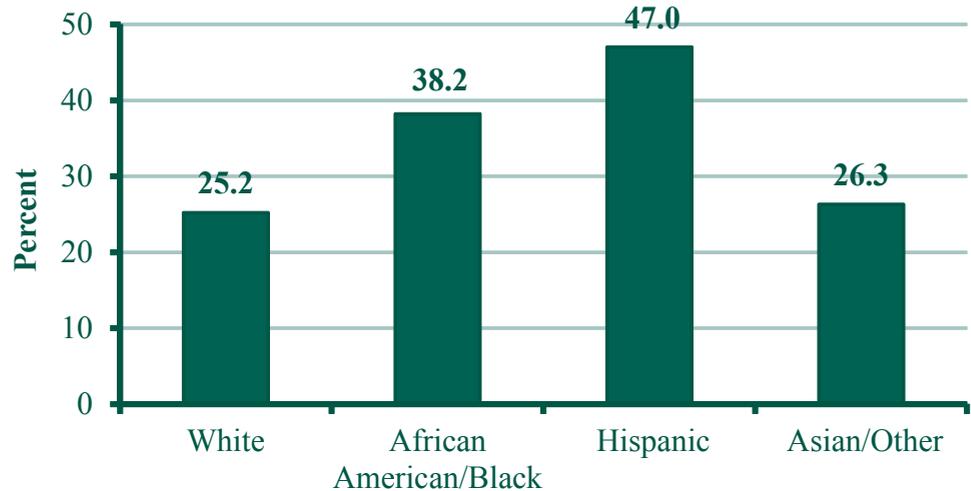
*There is a wide range of women interested in microbicides. These women could benefit from the availability of microbicides.*

## California Women's Interest in Using Microbicides, 2007

California Department of Public Health  
Department of Health Care Services  
Office of Women's Health

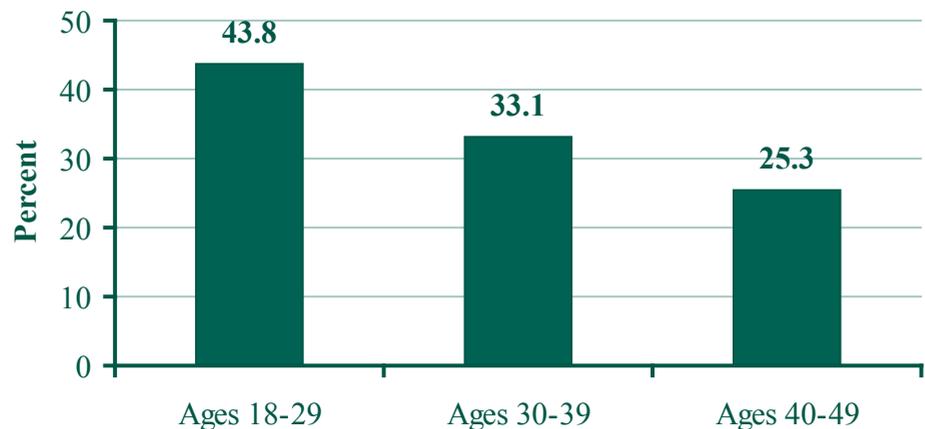
- A higher proportion of women who reported not using condoms at last sex because of partner reaction reported interest in using microbicides (65.6 percent) than women who did not attribute lack of condom use to partner reaction (29.7 percent; see Figure 4).<sup>4</sup>
- A higher proportion of women who reported having more than one male partner in the past 12 months reported interest in using microbicides (67.3 percent) than women who reported having only one male partner (30.9 percent).<sup>4</sup>

Figure 1 **Intention to Use Microbicides by Race/Ethnicity, 2007**



Source: California Women's Health Survey, 2007

Figure 2 **Intentions to Use Microbicides by Age Group, 2007**



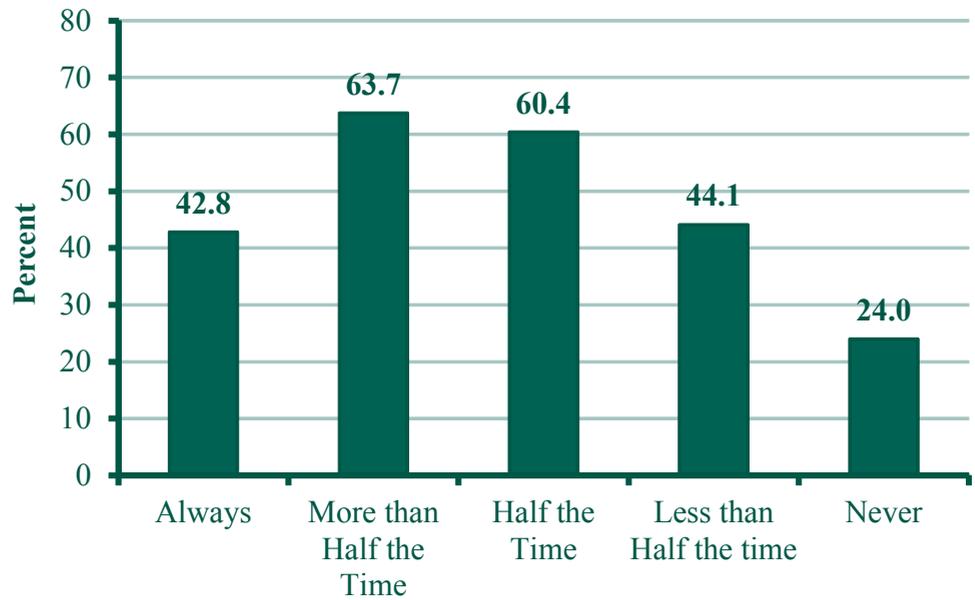
Source: California Women's Health Survey, 2007

*California Women's  
Interest in Using  
Microbicides, 2007*

California Department of  
Public Health  
Department of Health Care  
Services  
Office of Women's Health

Figure 3

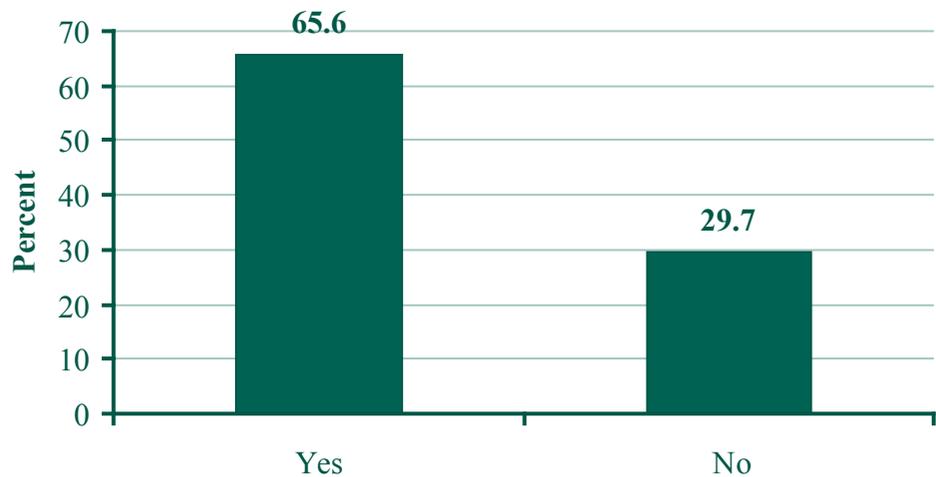
**Intentions to Use Microbicides by Condom Use,  
2007**



Source: California Women's Health Survey, 2007

Figure 4

**Intentions to Use Microbicides by Not Using  
Condoms Because of Partner Reaction, 2007**



Source: California Women's Health Survey, 2007

*California Women's  
Interest in Using  
Microbicides, 2007*

California Department of  
Public Health  
Department of Health Care  
Services  
Office of Women's Health

- 1 Centers for Disease Prevention. Fact Sheet – HIV/AIDS among women. <http://www.cdc.gov/hiv/topics/women/resources/factsheets/women.htm>. Published August 2008. Accessed August 2008.
- 2 Skoler-Karpoff S, Ramjee G, Ahmed K, Altini L, Plagianos MG, Friedland B, Govender S, De Kock A, Cassim N, Palanee T, Dozier G, Maguire R, Lahteenmaki P. Efficacy of Carraguard for prevention of HIV infection in women in South Africa: a randomized, double-blind, placebo-controlled trial. *Lancet*. 2008;372(9654):1977-87.
- 3 Family Health International. Will vaginal microbicides be acceptable? Qualitative research explores opinions and preferences of women and men. *Network*. 2002;22 (2). [http://www.fhi.org/en/RH/Pubs/Network/v22\\_2/NWvol22-2vagmiccides.htm](http://www.fhi.org/en/RH/Pubs/Network/v22_2/NWvol22-2vagmiccides.htm). Published 2002. Accessed December 2008.
- 4  $p < .0001$

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

**A**ge at menarche is a well-defined marker of reproductive maturation in adolescent females. Recent reports indicate that puberty (defined by breast development) appears to be occurring at younger ages.<sup>1,2</sup> The decline in the age at first menstruation (or menarche) occurred during the first half of the 1990s and may be continuing, but at a slower rate, to a median age of 12.<sup>2,3,4</sup> Early menarche, or puberty, can lead to a number of other problems, including risky behaviors, increased risks of teen pregnancy, and later adverse health outcomes such as breast cancer, metabolic disorders, shorter adult height, and possibly infertility.<sup>4</sup> Onset of puberty is related to larger body size, so the increasing rate of childhood obesity likely plays a role in earlier age at puberty.<sup>5</sup> Reproductive development may also be affected by exposure to chemicals that mimic or modify hormone action.<sup>5</sup>

In the 2007 California Women's Health Survey (CWHS), 4774 California women ages 18 and older were asked the following question: "How old were you when you had your first menstrual period?" If the respondent did not recall the age (N=39), she was prompted with the following: "Were you younger than 12, or were you older than 13?" These responses could be used when age was categorized at menarche as: (1) "younger age" (<12 years); (2) ages 12-13; and (3) "older age" (>13 years). The proportion of respondents in these age categories was compared by current age, race/ethnicity, and foreign- versus U.S.-born women, using a chi-square test to assess statistical significance. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population. These weighted proportions were also compared with the 1997 survey responses (without

## Age at Menarche (or First Menses) Among California Women, 2007, by Demographic Characteristics and Compared with 1997

California Department of Public Health

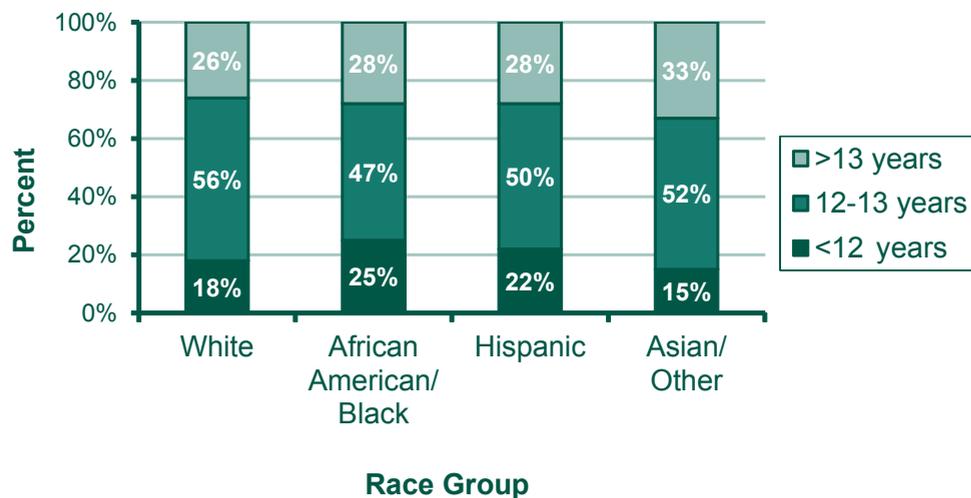
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### Public Health Message:

Consistent with prior surveys<sup>3</sup> and higher rates of other adverse health outcomes, African American/Black women were most likely to report a younger age at menarche. The youngest women (ages 18-24 and 25-34) also have younger age at menarche, potentially reflecting a birth cohort effect. Risk factors related to these patterns such as obesity, diet, physical activity, and chemical exposures are important to identify, as some may be modifiable with appropriate education and policies.

Figure 1

### Age at Menarche by Race/Ethnicity, 2007



Source: California Women's Health Survey, 2007

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*Age at Menarche (or First Menses) Among California Women, 2007, by Demographic Characteristics and Compared to 1997*

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statistical testing). Mean age at menarche was examined by demographic categories as well.

Overall, 19.3 percent of women reported being younger than age 12 and 27.6 percent reported being older than age 13 when they had their first menstrual period. Mean age was 12.7 (± 1.7).

- Women ages 25-34 were most likely to report a younger age at menarche (23.1 percent), followed by women ages 18-24 (20.3 percent), and women ages 35 or older (17-18 percent for each category; ages 35-44, ages 45-54, ages 55-64, and ages 65 and older; p<0.0001). Similarly, the youngest women (ages 18-24) had a mean age at menarche (12.3 years) about one-half year younger than women 35 or older.

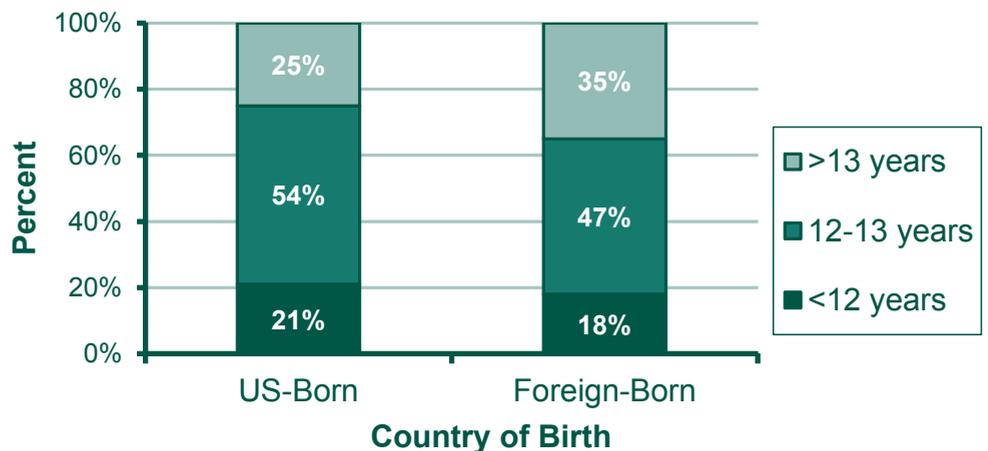
- African American/Black women were most likely to report a younger age at menarche (25.6 percent; see Figure 1), followed by Hispanic women (22.1 percent) and White women (18.3 percent), with Asian/Other women least likely (15.5 percent; p<0.001). Mean age at menarche followed a similar pattern by race/ethnicity.

- U.S.-born women were significantly more likely to report younger age at menarche (20.8 percent) than foreign-born women (17.8 percent; p<0.0001), who represented over a quarter of the sample (see Figure 2).

The percentage of women with a younger age at menarche in 1997 (18.8 percent) was relatively similar to 2007 (19.3 percent) and the mean age did not change much (12.8 years versus 12.7 years, respectively). African American/Black women showed a greater increase than the general population for a younger age at menarche (from 19.1 percent in 1997 to 25.6 percent in 2007).

Figure 2

**Age at Menarche by Country of Birth, 2007**



Source: California Women's Health Survey, 2007

*Age at Menarche (or First Menses) Among California Women, 2007, by Demographic Characteristics and Compared to 1997*

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Division of Environmental and Occupational Disease Control

- 1 Herman-Giddens ME, Slora EJ, Wasserman RC, et al. Secondary sexual characteristics and menses in young girls seen in office practice: a study from the Pediatric Research in Office Settings Network. *Pediatrics*. 1997;99:505-512.
- 2 Euling SY, Herman-Giddens PA, Lee PA, et al. Examination of U.S. puberty-timing data from 1940 to 1994 for secular trends: panel findings. *Pediatrics*. 2008;121:S172-S191.
- 3 McDowell MA, Brody DJ, Hughes JP. Has age at menarche changed? Results from the National Health and Nutrition Examination Survey (NHANES) 1999-2004. *J Adolescent Health*. 2007;40:227-231.
- 4 Golub MS, Collman GW, Foster PM, et al. Public health implications of altered puberty timing. *Pediatrics*. 2008;121:S218-S230.
- 5 Euling SY, Selevan SG, Pescovitz OH, Skakkebaek NE. Role of environmental factors in the timing of puberty. *Pediatrics*. 2008;121:S167-S171.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Infertility is a multifaceted health problem affecting a substantial number of couples of reproductive age and often leads to costly and time-consuming treatment.<sup>1,2</sup> Infertility may be caused by hormonal and medical factors (e.g., history of pelvic inflammatory disease) and related to lifestyle factors (e.g., nutrition and exercise), and exogenous exposures, (e.g., tobacco smoke).<sup>3,4</sup> Infertility is a priority addressed in the Healthy People 2010 objective 9-12, which states: "Reduce the proportion of married couples whose ability to conceive or maintain a pregnancy is impaired."

In the 2007 California Women's Health Survey (CWHS), 4774 California women ages 18 and older were asked: "Have you

ever tried for more than 12 months to get pregnant and weren't successful?" and "Have you ever been told by a doctor or other health professional that you have fertility problems not related to age?" In the analyses, responses were weighted by age and race/ethnicity to reflect the 2000 California adult female population. The proportions of women responding yes were compared by age, race/ethnicity, and health insurance status using the chi-square test. Responses were also compared qualitatively to responses from these questions last asked in the 2003 CWHS (for women ages 50 or less).<sup>5</sup> Too few women ages 18-24 reported problems conceiving or infertility, so they are not included here.

## Difficulty Getting Pregnant and History of Infertility Diagnosis in California Women, 2007, and Trends Over the Last Decade

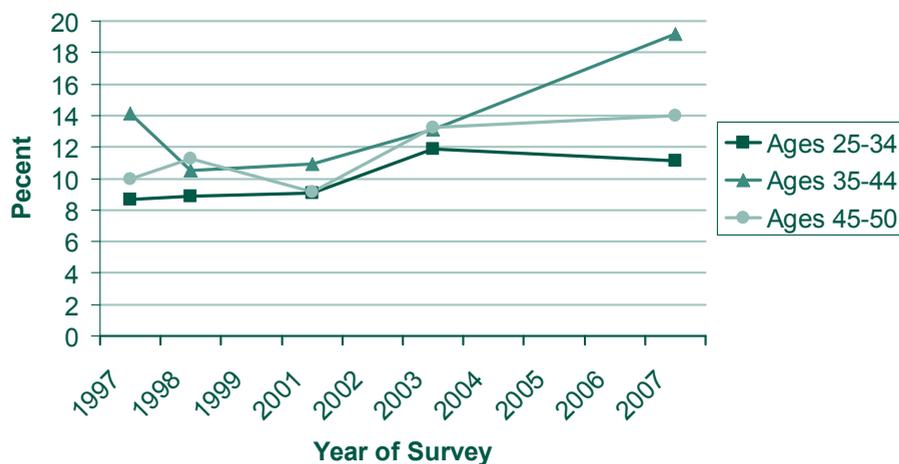
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### Public Health Message:

Reporting of ever having problems getting pregnant and particularly a history of infertility diagnoses appears to be increasing slightly over time and varies by age and race/ethnicity of women. These differences may be related to awareness and care-seeking behaviors and/or changes in the prevalence of risk factors, which may be preventable.

Figure 1

## Trends in Problems Getting Pregnant, by Age, 1997-2007



\*Only asked of women up to age 50 in prior years, so comparable groups calculated for 2007.

Source: California Women's Health Survey, 1997, 1998, 2001, 2003, and 2007

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*Difficulty Getting Pregnant and History of Infertility Diagnosis in California Women, 2007, and Trends Over the Last Decade*

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Overall in 2007, 13.4 percent of California women reported ever having problems getting pregnant after 12 months of trying; increased slightly from 11.0 percent in 2003.

- The proportion varied significantly by age, with women ages 35-44 most likely to report problems (19.1 percent), followed by women ages 45-54 (13.8 percent), 55-64 (12.4 percent), 25-34 (11.1 percent) and 65 or older (8.9 percent;  $p < 0.001$ ). Women ages 35-44 also had the greatest increase since 2003 (6.1 percent; see Figure 1).
- White women were the most likely to report problems getting pregnant (15.0 percent), compared to African American/Black women (11.5 percent), Hispanic women (8.2 percent), and Asian/Other women (7.6 percent;  $p < 0.001$ ). In 2003, only 7.5 percent of African American/Black women and 13.7 percent of White women reported these problems.
- Women with health insurance were significantly more likely to report problems getting pregnant (12.5 percent) than women without it (9.3 percent;  $p < 0.05$ ). However, current health insurance status may not reflect past status when problems occurred.

Overall in 2007, 7.8 percent of California women reported ever being told they had a fertility problem. This number was up from 4.6 percent in 2003, despite the question now excluding “age-related” problems.

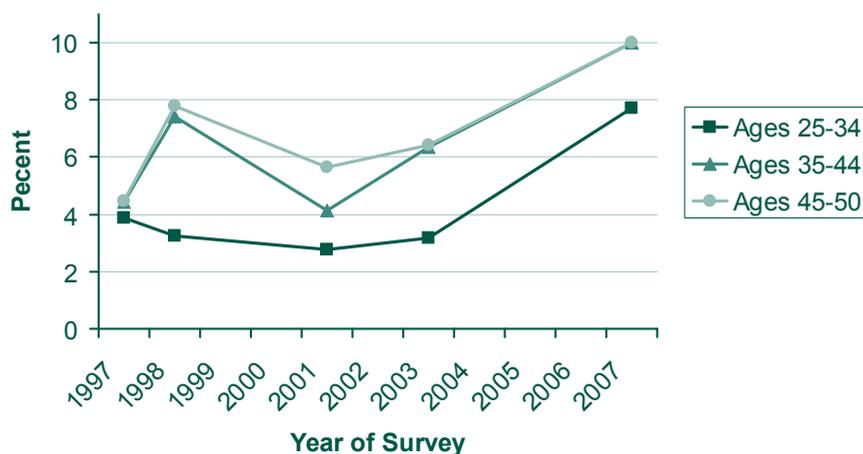
- A higher proportion of women ages 35-44 (10.0 percent) and 45-54 (9.6 percent) reported diagnosed fertility problems compared with older women ages 55-64 (8.5 percent) and 65 or older (3.7 percent), and younger women ages 25-34 (7.7 percent;  $p < 0.001$ ). All comparable age groups (25-50) showed some increase since 2003 (see Figure 2).
- White women were again significantly most likely to report diagnosed infertility (9.1 percent), than African American/Black women (5.3 percent), Hispanic women (4.6 percent), and Asian/Other women (5.0 percent;  $p < 0.001$ ). All women except African American/Black experienced some increase in this indicator since 2003.
- A higher proportion of women with health insurance reported a diagnosed fertility problem (7.4 percent) than women without insurance (3.5 percent;  $p < 0.01$ ).

*Difficulty Getting Pregnant and History of Infertility Diagnosis in California Women, 2007, and Trends Over the Last Decade*

California Department of Public Health  
Division of Environmental and Occupational Disease Control

Figure 2

## Trends in Self-Reported Diagnosis of Infertility, by Age, 1997-2007



\*Only asked of women up to age 50 in prior years, so comparable groups calculated for 2007.

Source: California Women's Health Survey, 1997, 1998, 2001, 2003, and 2007

- 1 Gnath C, Godehardt E, Frank-Herrmann PF, Friol K, Tigges J, Freundt G. Definition and prevalence of subfertility and infertility. *Hum Reprod.* 2005;5:1144-1147.
- 2 Mosher WD, Pratt WF. Fecundity and infertility in the United States, 1965-88. *Adv Data.* December 1990;192:1-10
- 3 Westhoff CL. The epidemiology of infertility. In: Kiely M, ed. *Reprod and Perinal Epidemiol.* Boca Raton, FL: CRC Press; 1990:43-61.
- 4 Buck GM, Sever LE, Batt RE, Mendola P. Life-style factors and female infertility. *Epidemiol.* 1997;8:435-441.
- 5 Chow J, Lifshay J, Bolan G. Infertility: problems getting pregnant and past infertility diagnosis among California women. *2003-2004 Data Points: Results from the California Women's Health Survey.* 2006;4(20). <http://www.cdph.ca.gov/data/surveys/Pages/CWHS.aspx>. Published Summer 2006. Accessed June 2008.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Women, who drink during pregnancy, particularly women who engage in heavier drinking, are at risk for having a child with Fetal Alcohol Spectrum Disorders (FASD). FASD is an umbrella term that describes a wide range of possible effects that can occur as a result of prenatal exposure to alcohol and includes specific conditions such as Fetal Alcohol Syndrome (FAS), Alcohol-Related Neuro-developmental Disorder (ARND), and alcohol-related birth defects.<sup>1</sup> FASD can be prevented; consequently, it is an important concern in women's and children's health.

This report, based on 2006 and 2007 combined California Women's Health Survey (CWHS) data (N = 1022), examined knowledge of FAS and beliefs about drinking during pregnancy. Knowledge about the specific diagnosis of FAS, which is more commonly known, was measured in the survey rather than the umbrella term FASD. This report also provides information about alcohol use among women ages 18-54 by pregnancy status (pregnant [4.3 percent; N=220], trying to become pregnant [4.2 percent N=238], not pregnant or trying to become pregnant [91.5 percent; N=5385]).

The 2006 and 2007 CWHS asked about past 30-day alcohol consumption (whether or not respondents drank at all, how much they drank on average, and whether or not they ever consumed five or more drinks at one time). Respondents were classified as non-drinkers (consumed no alcohol in the past 30 days); moderate drinkers (consumed alcohol in the past 30 days, but did not consume five or more drinks on

at least one occasion); or binge drinkers (consumed four or more drinks on one or more occasions in the past 30 days).<sup>2</sup> Three questions measured awareness of FAS and beliefs about drinking during pregnancy. First, women were asked: "How much would you say you know about the medical diagnosis called Fetal Alcohol Syndrome (sometimes known as FAS)?" Would you say: (1) I've never heard of FAS; (2) I've heard of FAS; (3) I know a little about FAS; or (4) I know a lot about FAS. Second, respondents were asked: "Can Fetal Alcohol Syndrome be cured?" (Yes, No, or Don't know). Finally, respondents were asked: "How often is it okay for a woman to drink during pregnancy?" Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

## FAS/FASD Knowledge and Beliefs About Alcohol Use During Pregnancy

- A majority of respondents who answered questions about FAS knowledge (81.0 percent) believed, correctly, that FAS cannot be cured. However, 16.0 percent believed that FAS could be cured, and 3.0 percent did not know.
- There were significant differences in the level of self-reported knowledge about FAS among respondents (see Figure 1;  $p < .05$ ). Most notably, close to one-quarter of respondents said they had never heard of FAS. The percentage of women who had never heard of FAS differed by demographics such as education.

## Knowledge of Fetal Alcohol Spectrum Disorder and Beliefs About Drinking During Pregnancy Among California Women, 2006-2007

California Department of Alcohol and Drug Programs  
Office of Women's and Perinatal Services

### Public Health Message:

*These findings underscore the importance of initiating discussion of alcohol use among women and conducting brief interventions in health settings with women at high risk for an alcohol-exposed pregnancy. Public health messages should continue to inform women that it is safest not to drink during pregnancy and provide information and support related to the value of reducing consumption at any time during pregnancy. Access to case management and treatment services for women with alcohol or drug dependencies are also important for improving health outcomes for both mothers and infants.*

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## *Knowledge of Fetal Alcohol Spectrum Disorder and Beliefs About Drinking During Pregnancy Among California Women, 2006-2007*

California Department of Alcohol and Drug Programs  
Office of Women's and Perinatal Services

For example, the percentage of respondents who had never heard of FAS decreased with higher education (59.2 percent high school or less; 31.7 percent high school graduate; 15.9 percent some college; and 13.0 percent college graduate). Similar trends were noted for respondents who believed (or did not know whether) FAS can be cured ( $p < .05$ ).

- Even though knowledge about FAS varied, a vast majority of respondents (92.8 percent) believed that women should never drink during pregnancy. Conversely, some women (7.2 percent) believed that some alcohol consumption during pregnancy was acceptable ( $p < .05$ ). Although, the majority of women who thought it was okay to drink during pregnancy believed that use should be infrequent, 1.6 percent of these respondents believed that drinking daily during pregnancy was okay.
- It is worth noting that knowledge about FAS did not consistently correspond to believing that women should not drink during pregnancy. Women in all demographic groups generally believed it was best for women to never drink during pregnancy regardless of their knowledge about FAS. Furthermore, respondents who had never heard of FAS were less likely to think it was okay to drink during pregnancy (4.2 percent) than respondents with more self-reported knowledge about FAS (8.2 percent;  $p < .05$ ).

## **Alcohol Use During Pregnancy**

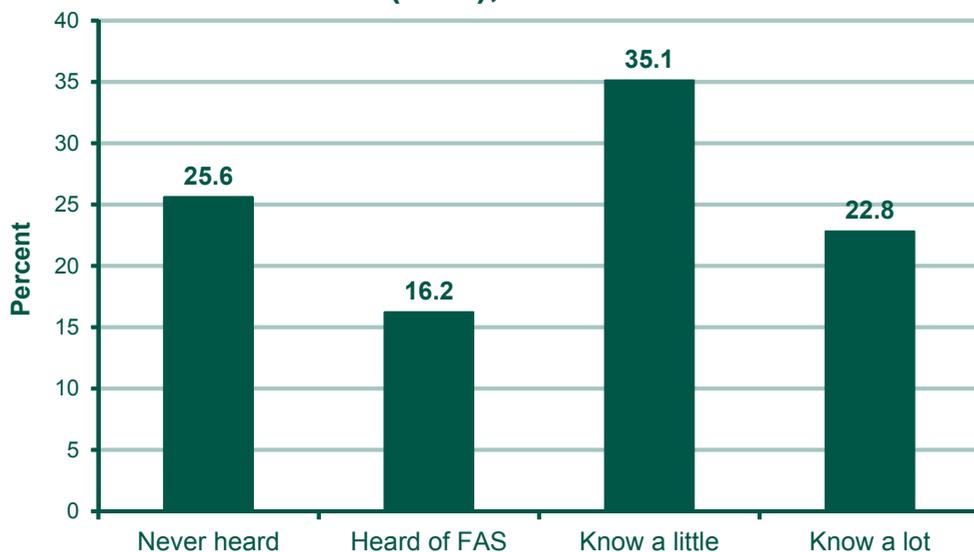
- In the overall sample of 2006-2007 respondents who provided information about drinking in the past 30 days, 53.1 percent were non-drinkers, 39.3 percent were moderate drinkers, and 8.6 percent were binge drinkers. Examining alcohol consumption by pregnancy status among women of childbearing years (ages 18-54) affirms that most pregnant women (94.3 percent) abstained from drinking. The remaining 5.7 percent had consumed alcohol in the past 30 days and none were classified as binge drinkers.
- There were no significant differences in drinking levels between women trying to get pregnant and women not trying to get pregnant. Women who were trying to get pregnant had a similar rate of moderate drinking as women who were not trying to become pregnant (41.4 percent and 39.3 percent, respectively). Women trying to get pregnant had somewhat lower rates of binge drinking (9.4 percent) than women who were not trying to become pregnant (11.4 percent).

*Knowledge of Fetal Alcohol Spectrum Disorder and Beliefs About Drinking During Pregnancy Among California Women, 2006-2007*

California Department of Alcohol and Drug Programs  
Office of Women's and Perinatal Services

Figure 1

### Knowledge About Fetal Alcohol Syndrome (FAS), 2006-2007



Source: California Women's Health Survey, 2006-2007

- 1 California Department of Alcohol and Drug Programs. *Fetal alcohol spectrum disorder Fact Sheet*, Sacramento, California, California Dept of Alcohol and Drug Programs. 2008, January.
- 2 The California Women's Health Survey criteria for binge drinkers was changed beginning in 2007 from five or more drinks on one or more occasions to four or more drinks on one or more occasions in order to be congruent with questions from the Behavioral Risk Factor Survey and emerging research suggesting that the lower cut-off point is more appropriate for women.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Several studies have demonstrated an association between acculturation of Mexican-American women in the United States and their reduced fruit and vegetable consumption.<sup>1,2</sup> However, other studies have found opposite trends, which may be explained by different or inconsistent methods in defining acculturation.<sup>3</sup> A systematic review of the literature examining the relationship between acculturation and diet among Hispanics in the United States found several consistent relationships irrespective of how acculturation was measured (e.g., acculturation score, years in the United States, birthplace, generational status, and language use).<sup>4</sup> The less acculturated Hispanics consumed "more fruit, rice, and beans and less sugar and sugar-sweetened beverages" than those who were more acculturated.<sup>4</sup> Typically these studies used multivariate models that controlled for other possible explanatory factors such as age, education, income, and gender.<sup>1-4</sup>

The California Department of Public Health's *Network for a Healthy California (Network)* represents a statewide movement of local, state, and national partners collectively working to improve the health status of low-income Californians through increased fruit and vegetable consumption and daily physical activity. The *Network's Latino Campaign* specifically targets low-income Hispanic adults and their families to help them consume the recommended amount of fruits and vegetables and enjoy physical activity every day.

The 2007 California Women's Health Survey (CWHS) was administered to 5,352 women. From the total sample, 1,819 women (34.2 percent) identified themselves as Hispanic. Responses to the questions: "In what country were you born?" and "In what year did you come to live in the United States?" were used to create five groups of Hispanic women: women living in the United States less than 4 years, from 4 to 9 years, from 10 to 15 years, 16 years or more, and those born in the United States. In the topic area of fruit and vegetable consumption, women were also asked the following two questions: "A serving is about 1/2 cup of vegetables or fruit, 6 ounces of 100% fruit or vegetable juice, a medium piece of fruit, or 1 cup of green salad. About how many servings of fruits and vegetables do you usually eat or drink on an average day?" and "Many people need to eat more fruits and vegetables. What is the one main reason you don't eat more fruits and vegetables?" In addition to various demographic information, women also responded to a series of six questions drawn from the standard U.S. Department of Agriculture's methodology for measuring food security, meaning access, at all times, to enough food for an active, healthy life for all household members. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

## California Hispanic Women's Fruit and Vegetable Consumption by Years in the United States, 2007

California Department of Public Health  
Cancer Control Branch  
Public Health Institute

### Public Health Message:

*When defined as solely "years living in the United States," acculturation among California Hispanic women is not associated with lower reported fruit and vegetable consumption. In fact, the diet quality, as measured by food insecurity and lower daily fruit and vegetable consumption, is most at risk among women who have most recently come to the United States. Economic vulnerability as well as education must be addressed by interventions designed to increase fruit and vegetable consumption among Hispanic immigrants.*

## *California Hispanic Women's Fruit and Vegetable Consumption by Years in the United States, 2007*

California Department of Public Health  
Cancer Control Branch  
Public Health Institute

Highlights of these analyses are as follows:

### **Length of Residency**

- Overall, 7.0 percent of the Hispanic women surveyed had been in the United States less than 4 years; 14.5 percent from 4 to 9-years; 9.7 percent from 10 to 15-years; 34.5 percent 16 years or more; and 34.3 percent were born in the United States.

### **Country of Birth**

- Mexico was the birth place for a majority of the Hispanic women not born in the United States (54.2 percent); however, an additional 25 countries were also mentioned.

### **Age**

- The women's average age was significantly associated with length of U.S. residence: 28.9 years for women in the U.S. less than 4 years, 30.6 years for 4 to 9-year immigrants, 34.9 years for 10 to 15-year immigrants, 44.8 years for immigrants of 16 years or more, while the average age for Hispanic women born in the United States was 37.3 years ( $p < .0001$ ).

### **Children at Home**

- Similarly, the three groups with fewer than 15 years in the United States were significantly more likely to have children living in their households (87.2 percent, 87.1 percent and 88.1 percent, respectively) than women who had lived in the United States for 16 or more years (69.3 percent) or who were born in the United States (61.2 percent;  $p < .0001$ ).

### **Education of Immigrants**

- A significantly greater percent of the immigrant women had less than a high school education (54.2 percent of those in the United States less than 4 years; 55.5 percent of 4 to 9-year immigrants; 63.7 percent of 10 to

15-year immigrants; and 56.8 percent for immigrants of 16 years or more) compared to 16.3 percent of Hispanic women born in the United States ( $p < .0001$ ).

### **Income Adequacy**

- Women in the four immigrant groups were significantly less likely to feel they had enough money to meet their basic living needs than women born in the United States: 56.8 percent of women in the United States less than 4 years; 51.7 percent of the 4 to 9-year immigrants; 54.6 percent of the 10 to 15-year immigrants; 58.1 percent of the 16 or more years immigrants, versus 71.8 percent of Hispanic women born in the United States ( $p < .0001$ ).

### **Food Insecurity**

- A consistent and significant association was evident between years in the United States and household food security status. More of the most recent immigrant group was classified as food insecure (66.3 percent) than those in the United States from 4 to 9-years (65.7 percent); 10 to 15-years (54.0 percent); 16 years or more (49.9 percent); and those born in the United States (26.8 percent;  $p < .0001$ ).

### **Fruit and Vegetable Consumption**

- Years in the United States was not associated with a reported decline in fruit and vegetable consumption (see Figure 1). The only significant difference in average consumption was between women born in the United States and immigrants of 16 years or more (2.9 and 2.6 servings, respectively;  $p < .05$ ).

### **National Goal**

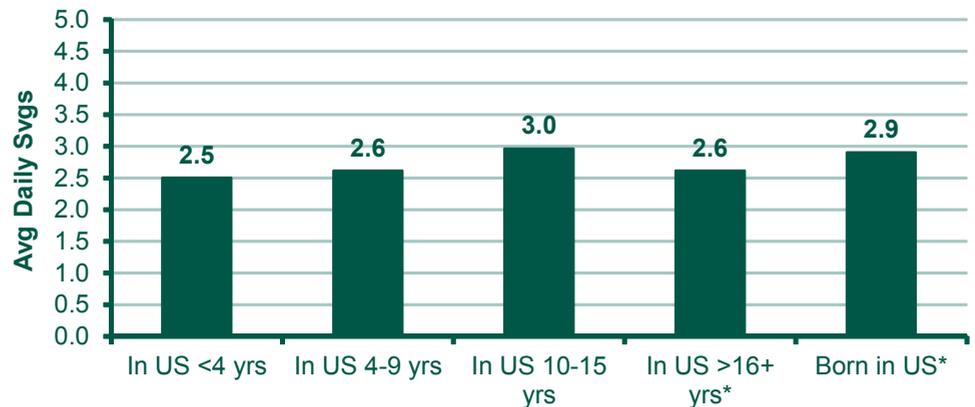
- Similarly, the two groups with fewer than ten years in the United States

## California Hispanic Women's Fruit and Vegetable Consumption by Years in the United States, 2007

California Department of Public Health  
Cancer Control Branch  
Public Health Institute

Figure 1

### Hispanic Women's Daily Fruit and Vegetable Consumption, by Years in the United States, California, 2007



\*p<.05

Source: California Women's Health Survey, 2007

were less likely to have eaten five or more fruit and vegetable servings in a usual day compared with Hispanic women born in the United States or who had lived in the United States for ten or more years. However, the difference was not significant.

The main reasons Hispanic women identified for not eating more fruits and vegetables showed both similarities and differences across the immigrant groups.

#### Habits

- One of the most frequently mentioned main reasons for not eating more fruits and vegetables by women in each group was that they were not in the habit; (28.5 percent of the less than 4 year immigrants; 22.0 percent of the 4 to 9-year immigrants; 27.8 percent of the 10 to 15-year immigrants; 30.9 percent of those living in the United States for 16 years or more years, and 29.4 percent of those born in the United States).

#### Cost

- The most recent immigrants (those with fewer than 4 years in the United States) were significantly more likely to say fruits and vegetables were "too expensive" (21.1 percent) than the 4 to 9-year immigrants (9.7 percent; p<.01); the 16 and more year immigrants (12.3 percent; p <.05); and the women born in the United States (9.4 percent; p<.001); but, not the 10 to 15-year immigrants (14.3 percent).

*California Hispanic  
Women's Fruit and  
Vegetable Consumption  
by Years in the United  
States, 2007*

California Department of Public  
Health  
Cancer Control Branch  
Public Health Institute

- 1 Montez JK, Eschback K. County of birth and language are uniquely associated with intakes of fat, fiber, and fruits and vegetables among Mexican-American women in the United States. *J Am Diet Assoc.* March 2008;108(3):473-480.
- 2 Neuhouser ML, Thompson B, Coronado GD, Solomon CC. Higher fat intake and lower fruit and vegetables intakes are associated with greater acculturation among Mexicans living in Washington State. *J Am Diet Assoc.* January 2004;104(1):51-57.
- 3 Norman S, Castro C, Albright C, King A. Comparing acculturation models in evaluating dietary habits among low-income Hispanic women. *Ethn and Dis.* Summer 2004;14(3):399-404.
- 4 Ayala GX, Baquer B, Klinger S. A systematic review of the relationship between acculturation and diet among Latinos in the United States: implications for future research. *J Am Diet Assoc.* August 2008;108(8):1330-1344.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

On average, 2.1 million people in California received food stamp benefits each month in 2007.<sup>1</sup> The majority of these recipients were children (64.2 percent),<sup>2</sup> but, three-quarters of the adult heads of household receiving benefits were women.<sup>3</sup> A general health profile for women receiving food stamps can be drawn from the California Women's Health Survey (CWHS).

The California Department of Public Health's *Network for a Healthy California* creates innovative partnerships that empower low-income Californians to increase fruit and vegetable consumption, physical activity, and food security, with the goal of preventing obesity and other diet-related chronic diseases. These efforts are funded through the U.S. Department of Agriculture Food Stamp Program and focus on food stamp recipients and other low-income families. Income eligibility for the Food Stamp Program and for Food Stamp Nutrition Education is  $\leq 130$  percent and  $\leq 185$  percent of the Federal Poverty Level (FPL), respectively.

In 2006 and 2007, a combined total of 655 women answered "Yes" to the California Women's Health Survey (CWHS) question: "Did you receive food stamp benefits in the last 12 months?" while 9,235 responded "No." In both years, women were also asked a series of core questions related to their general health and socioeconomic status as well as a variety of individual and household demographic characteristics associated with health. For example, women were asked to rate their own general health as "excellent," "very good," "good," "fair," or "poor." Women

also provided information regarding their physical and mental health, their diets, and their weights and heights. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

Comparison between women who had received food stamps in either or both 2006 and 2007 and those who had not revealed the following:

## Prevalence and Employment

- Overall, 6.6 percent of the women interviewed reported receiving food stamps in the previous 12 months while 93.4 percent had not; significantly fewer of food stamp users reported being employed (33.7 percent) than women not using food stamps (51.7 percent;  $p < .0001$ ).

## Marital Status and Children

- Food stamp recipients were significantly less likely to be married (43.8 percent) and more likely to live in households with children (90.3 percent) than women not receiving food stamps (64.2 percent and 48.2 percent, respectively;  $p < .0001$ ).

## Age and Education

- Women receiving food stamps were on average significantly younger (32.9 years) than non-recipients (45.8 years;  $p < .0001$ ) and a greater percentage had less than a high school education (40.5 percent) than non-recipients (16.6 percent;  $p < .0001$ ).

## Race/Ethnicity

- Women using food stamps were more

## Health of California Women Receiving Food Stamps, 2006-2007

California Department of Public Health  
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### Public Health Message:

*The Food Stamp Program provides important nutritional assistance to hundreds of thousands of very poor California women, especially single mothers with children at home. Hispanic and African American/Black women are particularly overrepresented in the program. Health indicators including mental, physical, health care, diet, and socioeconomic characteristics, identify women using food stamps as a segment of California women who need public health interventions to eliminate these health disparities.*

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## *Health of California Women Receiving Food Stamps, 2006-2007*

California Department of Public  
Health  
Cancer Control Branch  
Public Health Institute

likely to be Hispanic (58.3 percent), African American/Black (11.2 percent) and Indian/Aleut/Eskimo women (2.7 percent) than non-recipients who were Hispanic (33.8 percent), African American/Black (5.1 percent), and Indian/Aleut/Eskimo women (1.1 percent,  $p < .0001$ ). Recipients were less likely to be White (25.1 percent) or Asian/Pacific Islander (2.8 percent) than non-recipients who were White (54 percent) and Asian/Pacific Islander (6.6 percent;  $p < .001$ ).

Indicators of health and socio-economic characteristics associated with health also revealed considerable differences between food stamp recipients and non-recipients (see Figure 1):

### **Income and Health Care**

- Almost three-quarters of food stamp recipients (70.6 percent) reported household income at or below poverty (100 percent of the Federal Poverty Level) than non-recipients (15.9 percent;  $p < .0001$ ). One in four of the food stamp recipients (25.5 percent) reported they had no health care plan while one in six non-recipients reported no health care plan (16.9 percent;  $p < .0001$ ).

### **Self-Perception of Health**

- More than half of the non-recipients (52.9 percent) described their general health as being “excellent” or “very good”; however, less than a third of food stamp recipients (30.8 percent;  $p < .0001$ ) did so. Food stamp recipients were much more likely to report “fair” or “poor” general health (31.6 percent) than non-recipients (17.7 percent;  $p < .0001$ ).

### **Current Health Problems**

- During the previous 30 days, 17.7 percent of the food stamp recipients reported having 15 or more days when their physical health was not good

(including physical illness and injury) compared to 10.9 percent of non-recipients ( $p < .0001$ ).

### **Mental Health**

- More than one in five food stamp recipients (21.4 percent) reported having 15 or more days of the last 30 days when their mental health (defined as stress, depression, or emotional problems) was not good than non-recipients (11.3 percent;  $p < .0001$ ).

### **Food Insecurity**

- Food stamp recipients were three times more likely to have experienced food insecurity (62.7 percent) than non-recipients (20.6 percent). Food insecurity meant that due to money constraints, they or others members of their household did not have access to enough food for an active, healthy life at some time during the previous 12 months ( $p < .0001$ ). Food stamp recipients were also significantly more likely to have received food assistance from a food bank in the last 12 months (15.9 percent) than non-recipients (2.4 percent;  $p < .0001$ ).

### **Healthy Eating**

- Only 14.6 percent of the women receiving food stamps reported meeting the combined Healthy People 2010 goals of five or more fruits and vegetables a day than non-recipients (21.1 percent;  $p < .0001$ ).

### **Overweight and Obesity**

- Based on heights and weights (excluding those who were pregnant), body mass index (BMI) was calculated and more food stamp recipients were identified as being overweight or obese (71.3 percent) than non-recipients (51.6 percent); however, the greatest difference was evident in the prevalence of obesity: 45.0 percent among food stamp recipients

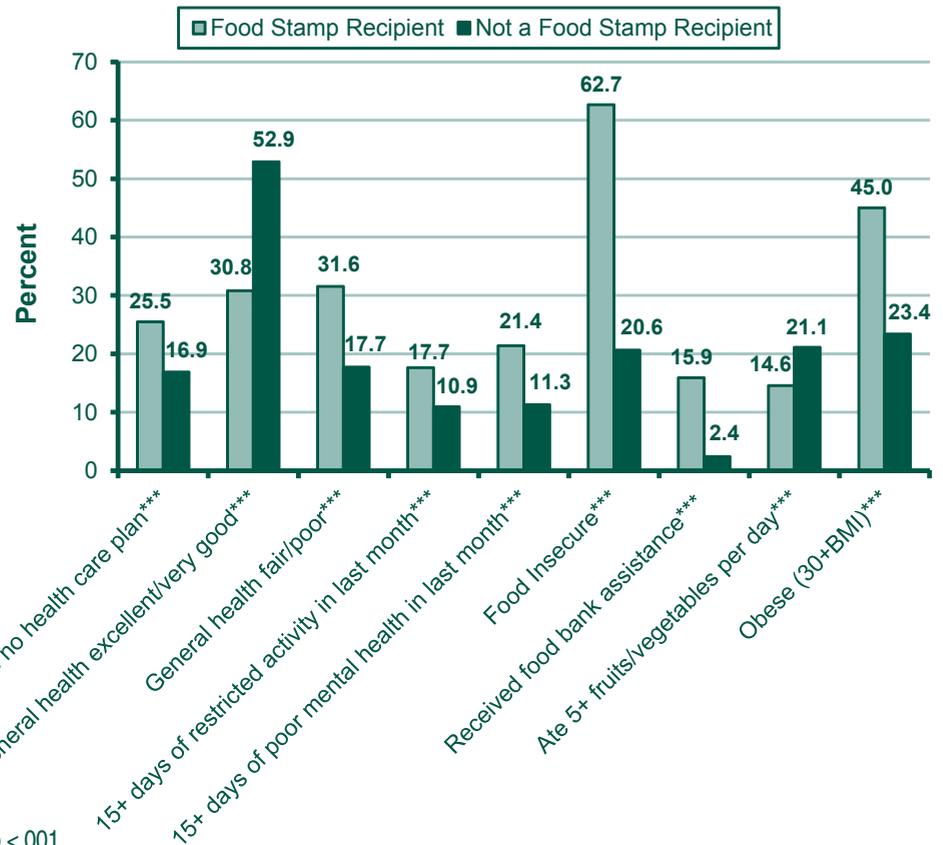
*Health of California  
Women Receiving Food  
Stamps, 2006-2007*

California Department of Public Health  
Cancer Control Branch  
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compared to 23.4 percent among non-  
recipients ( $p < .0001$ ).

Figure 1

**California Women Who Are and Who Are not Receiving  
Food Stamps, 2006-2007**



\*\*\* $p < .001$

Source: California Women's Health Survey, 2006-2007

- 1 California Department of Social Services, *DFA 256: Food Stamp Program Participation and Benefit Issuance Report January-December, 2007*. <http://www.cdss.ca.gov/research/PG352.htm>. Accessed August 2010.
- 2 United States Department of Agriculture. Food and Nutrition Services. *Characteristics of Food Stamp Households: Fiscal Year 2007*. September, 2008. Available at: <http://www.fns.usda.gov/ora/MENU/Published/snap/FILES/Participation/2007Characteristics.pdf> Accessed March 2009.
- 3 California Department of Social Services Food Stamp, *Food Stamp Household Profile, Federal Fiscal Year 2007*. Available at: <http://www.dss.cahwnet.gov/foodstamps/PG844.htm> Accessed March 2009.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Research has established a clear association between food insecurity and poor-quality diets, leading to worsened nutritional status and health outcomes.<sup>1</sup> Numerous studies have also demonstrated a positive association between fruit and vegetable intake and improved health.<sup>2</sup> The health benefits of fruit and vegetable consumption include a reduced risk of cardiovascular disease, hypertension, stroke, cancer, obesity, and birth defects as well as possible reduced risk for type 2 diabetes and delayed onset of some age-related ailments such as cataracts.<sup>2</sup> Fruit and vegetable consumption is a key measure of diet quality.<sup>3</sup> Examination of the relationship between women's household food security status and their fruit and vegetable consumption provides insight into their current, and potentially long-term, health.

The California Department of Public Health's *Network for a Healthy California* represents a statewide movement of local, state, and national partners collectively working toward improving the health status of low-income Californians through increased fruit and vegetable consumption and daily physical activity. Two additional *Network* goals are to increase food security (anti-hunger) and prevent diet-related chronic diseases, including obesity.

The 2007 California Women's Health Survey (CWHS) was administered to 5,352 women using the U.S. Department of Agriculture's standardized methodology for measuring food security with and without hunger.<sup>4</sup> The six-item validated short form of the food security scale was used to classify women into three groups:

food secure, food insecure without hunger, and food insecure with hunger. The classifications can also be collapsed into just two groups: food secure versus food insecure. In the topic area of diet quality, women were also asked the following three questions: "A serving is about 1/2 cup of vegetables or fruit, 6 ounces of 100% fruit or vegetable juice, a medium piece of fruit, or 1 cup of green salad. About how many servings of fruits and vegetables do you usually eat or drink on an average day?" and "Many people need to eat more fruits and vegetables. What is the one main reason you don't eat more fruits and vegetables?" and "How far, in miles, do you usually travel to shop for groceries?" In these analyses, responses were weighted by age and race/ethnicity to reflect the 2000 California adult female population.

Highlights of these analyses are as follows:

## Prevalence

- Overall, 75.0 percent of the women surveyed lived in households classified as food secure, 15.9 percent were food insecure without hunger, and 9.2 percent were food insecure with hunger.

## Household Composition

- Women experiencing food insecurity were significantly more likely to be unmarried (46.5 percent) and live in households with children (66.6 percent) than women classified as food secure (34.1 percent and 47.1 percent, respectively;  $p < .001$ ).

## Age and Education

- Food insecure women were on

## California Women's Diet Quality by Household Food Security Status, 2007

California Department of Public Health  
Cancer Control Branch  
Public Health Institute

### Public Health Message:

*Food insecurity is associated with poorer nutritional quality as measured by fruit and vegetable consumption, a component of a healthy diet. While public health efforts are needed to encourage California women overall to increase their fruit and vegetable consumption, economic barriers such as cost, norms, and availability of fruit and vegetables are constraints for food insecure women, especially those living in households classified as food insecure with hunger.*

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## California Women's Diet Quality by Household Food Security Status, 2007

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average younger (39.7 years) than food secure women (46.5 years;  $p < .0001$ ). Food insecure women were also much more likely to have less than a high school education (43.1 percent) than food secure women (10.9 percent;  $p < .001$ ).

### Race/Ethnicity

- The highest rates of food insecurity were among Hispanic women (46.2 percent), American Indian/Aleut/Eskimo women (39.8 percent), and African American/Black women (27.5 percent) compared to Asian/Pacific Islander women (14.2 percent) and White women (11.8 percent;  $p < .0001$ ).

### Food Assistance

- Food insecure women were also significantly more likely to have received food stamps (16.1 percent) and assistance from food banks (9.7 percent;  $p < .0001$ ) in the last 12 months than food secure women (3.7 percent and 1.1 percent, respectively;  $p < .0001$ ).

### Going without Food

- Food insecure women were also significantly more likely (42.5 percent) than food secure women (2.1 percent;  $p < .0001$ ) to report that at some time in the last year they had eaten less than they had wanted (or had not eaten at all, so that another member of their household would have enough to eat).

### Diet Quality

- In terms of diet quality, food insecure women were much more likely to report eating only one-two servings of fruit and vegetables in the average day (63.4 percent) than food secure women (34.9 percent;  $p < .0001$ ).

### National Goal

- Women living in households classified as food insecure without hunger (9.3 percent) and women living in

households classified as food insecure with hunger (7.8 percent) were less likely to meet the combined Healthy People 2010 goals of five or more daily servings of fruits and vegetables than food secure women (24.7 percent;  $p < .0001$ ).

The main reasons women identified why they did not eat more fruits and vegetables also differed across the food security categories (see Figure 1).

### Cost

- Food insecure women with hunger (41.6 percent) and without hunger (18.0 percent) were much more likely to say fruits and vegetables were "too expensive" than food secure women (3.1 percent;  $p < .0001$ ).

### Perception

- Food secure women were more likely to state they ate enough fruit and vegetables already (22.3 percent) or that they take too much time to prepare and cook (21.6 percent) than food insecure women without hunger (9.7 percent and 11.7 percent, respectively;  $p < .0001$ ) or food insecure women with hunger (5.0 percent and 8.3 percent, respectively;  $p < .001$ ).

### Skills

- Very few women in any of the three groups (less than 3 percent) referred to not being sure how to fix or select fruits and vegetables as a main reason why they did not eat more fruits and vegetables.

### Distance to Shop

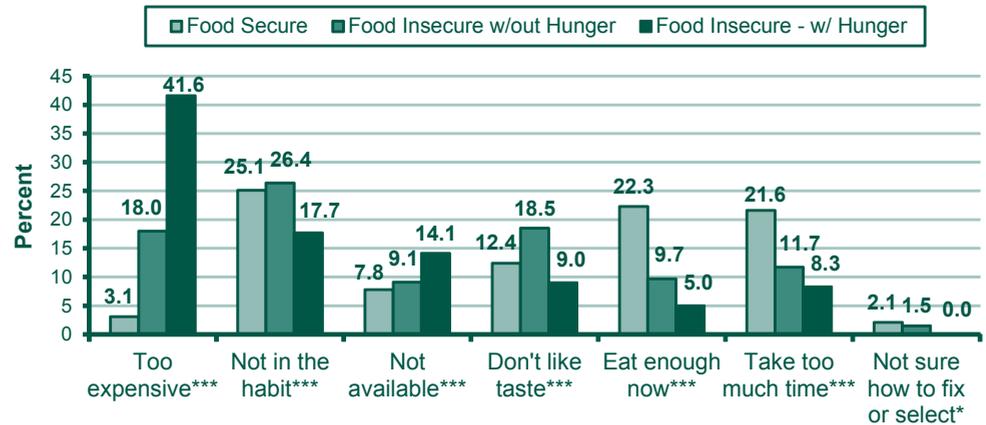
- Women classified as food insecure traveled significantly farther to shop for groceries (5.2 miles) than food secure women (4.2 miles;  $p < .001$ ) possibly indicating either less availability of grocery stores or a higher priority for lower cost options.

*California Women's Diet Quality by Household Food Security Status, 2007*

California Department of Public Health  
Cancer Control Branch  
Public Health Institute

Figure 1

**Reasons Why California Women Say They Don't Eat More Fruit and Vegetables, by Household Food Security Status, 2007**



\*p<.05, \*\*\*p<.001

Source: California Women's Health Survey, 2007

- 1 Harrison G, Manalo-LeClair G, Ramirez A, Chia YJ, Kurata J, McGarvey N, Sharp M. More than 2.9 million Californians now food insecure one in three low-income, an increase in just two years. *Health Policy Research Brief*, UCLA; June 2005.
- 2 Hyson D. *The Health Benefits of Fruits and Vegetables: A Scientific Overview for Health Professionals*. Washington, DC. Produce for Better Health Foundation; 2002.
- 3 Center for Nutrition Policy and Promotion. *Diet Quality of Low-Income and Higher Income Americans in 2003-04 as Measured by the Healthy Eating Index-2005*. Alexandria VA: United States Dept of Agriculture. December 2008. Nutrition Insight 42.
- 4 Bickel G, Nord M, Price C, Hamilton W, Cook J., *Guide to Measuring Food Security, Revised*. 2000. Alexandria VA: US Dept of Agriculture, Food and Nutrition Service; March 2000.

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# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Evidence from randomized trials published in 2002 demonstrated adverse effects of hormone replacement therapy (HRT) on cardiovascular health and an increase in the risk of other diseases.<sup>1</sup> As a result, the U.S. Preventive Services Task Force (USPSTF) recommended against the routine use of combined estrogen and progestin, one form of HRT, for the prevention of chronic conditions in postmenopausal women. The USPSTF concluded that the harmful effects of combined estrogen and progestin are likely to exceed the chronic disease prevention benefits in most women.<sup>1</sup> Since the USPSTF recommendation there has been an overall decrease in the use of HRT in the United States<sup>2</sup> and in California.<sup>3</sup>

The California Women's Health Survey (CWHS) questions were intended to obtain information specific to the timing of

menopause, as well as updated information on the use of HRT in California. In 2007, the CWHS asked women ages 18 and older about the status of their menstrual cycle. Women who reported not having regular periods were asked when they either stopped having periods or when their periods became irregular. Women were also asked if they were currently using HRT. The following data analyses were conducted on women ages 18-55 years and results were weighted by age and race/ethnicity to reflect the 2000 California adult female population.

## Timing of Menopause

- About 76.8 percent of women reported still having regular periods when asked about menopause; 9.4 percent reported their periods had stopped because of medical/surgical reasons, 6.3 percent cited their periods were irregular because of menopause, and

## Timing of Menopause and Use of Hormone Replacement Therapy Among California Women, 2007

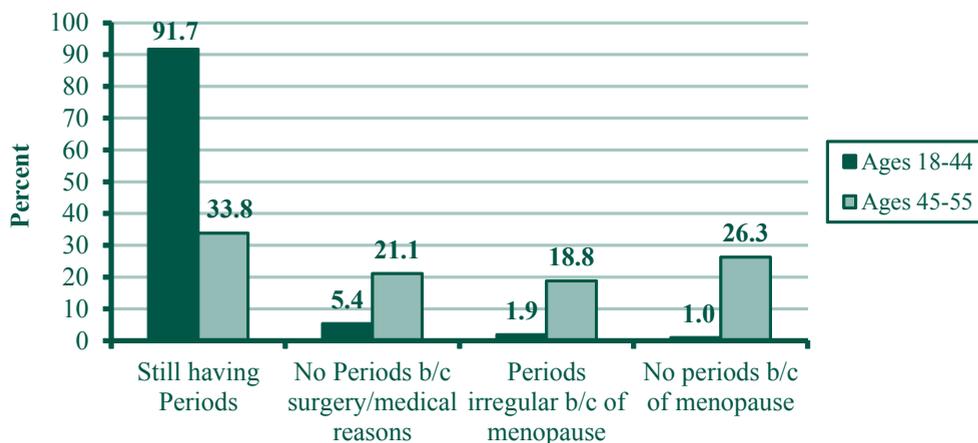
Department of Health Care Services  
California Department of Public Health  
Office of Women's Health

### Public Health Message:

Women who entered menopause naturally used HRT less. The average age at which periods stopped because of surgical/medical reasons occurred earlier for women than natural menopause. Women who reported surgical/medical reasons also reported more HRT use. Therefore, these women could potentially take HRT longer, which could increase the health risks related to HRT.

Figure 1

### Timing of Menopause for Women Ages 18-55, 2007



Source: California Women's Health Survey, 2007

## *Timing of Menopause and Use of Hormone Replacement Therapy Among California Women, 2007*

Department of Health Care Services  
California Department of Public Health  
Office of Women's Health

7.5 percent reported that their periods had stopped because of menopause.

- The average age of women when their periods stopped due to medical/surgical reasons was 38. However, the average age of women when their periods became irregular because of menopause was 46.

### **Timing of Menopause and Demographics**

- White women reported lower rates of being in menopause than other women. However, data was unreliable due to small sample size for African American/Black women.
- Women ages 18-44 reported significantly lower rates of being in menopause (1.0 percent) than women ages 45-55 (26.3 percent;  $p < .0001$ ) (see Figure 1).
- More women in menopause had insurance (14.9 percent) than did not (9.3 percent;  $p < .0001$ ).

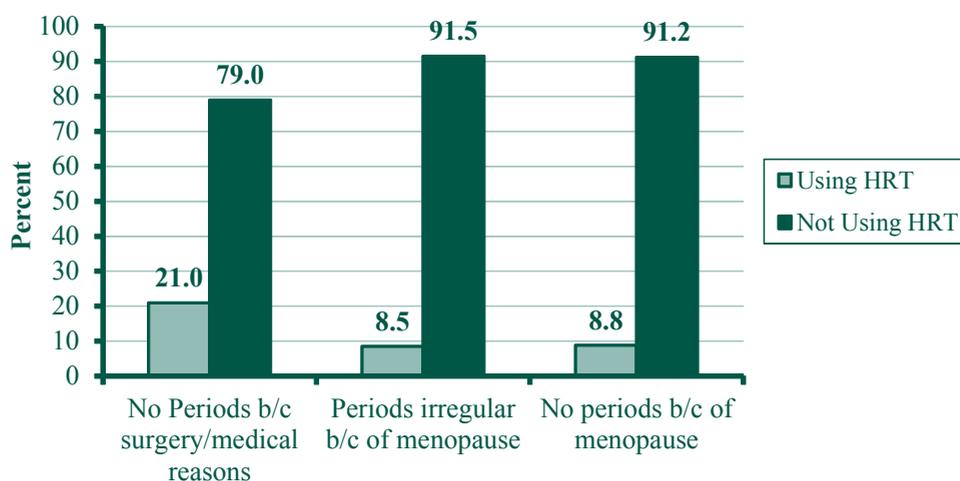
### **Hormone replacement therapy (HRT)**

- Overall, 13.6 percent of women who were not having periods reported using HRT.
- Women who reported not having periods because of surgery/medical reasons reported more HRT use (21.0 percent), than women whose periods were irregular because of menopause (8.5 percent) and those whose periods stopped because of menopause (8.8 percent;  $p < .0001$ ) (see Figure 2).
- Women with income at or below 200 percent of the federal poverty level reported significantly lower rates of using HRT (7.6 percent) than women above this level (16.2 percent;  $p < .001$ ).
- While not significant, there was a trend for women with health insurance coverage to report higher rates of using HRT (14.1 percent) than women without insurance (8.1 percent).
- There were no significant race/ethnicity or age differences in HRT use among women.

*Timing of Menopause and Use of Hormone Replacement Therapy Among California Women, 2007*

Department of Health Care Services  
 California Department of Public Health  
 Office of Women's Health

Figure 2 **Menopause and Use of Hormone Replacement Therapy (HRT) Among Women Ages 18-55, 2007**



Source: California Women's Health Survey, 2007

- 1 U.S. Preventive Services Task Force. Hormone replacement Therapy for the prevention of chronic conditions in postmenopausal women. Agency for Healthcare Research and Quality Web site. <http://www.ahrq.gov/clinic/uspstf/uspspmho.htm>. Published May 2005. Accessed March 2009.
- 2 Hersh L, Stefanick ML, Stafford RS. National use of postmenopausal hormone replacement therapy: Annual trends and response to recent evidence. *JAMA*. 2004;291:47-53.
- 3 Health of California's adults, adolescents and children. Findings from California Health Interview Survey 2003 and California Health Information Survey 2001.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

**B**reast cancer is most effectively treated when detected at an early stage, reducing both morbidity and mortality for women.<sup>1</sup> Breast cancer is the second leading cause of cancer deaths in women in the United States and in California.<sup>2</sup> Studies of the etiology of breast cancer have failed to identify feasible primary prevention strategies suitable for use in the general population;<sup>3</sup> therefore, secondary prevention such as mammography screening is an effective way of reducing mortality. A significant barrier to screening found among women who do not get mammograms is a lack of access to health care or not having health insurance.<sup>4</sup>

The American Cancer Society recommends that women start screening for breast cancer at age 40.<sup>5</sup> The risk for breast cancer increases with advancing age.<sup>2</sup> Efficacy for reducing the death rate from breast cancer within five years after diagnosis is greater among postmenopausal than premenopausal women.<sup>6</sup>

The Cancer Detection Section (CDS) *Cancer Detection Programs: Every Woman Counts* was formed by the National Breast and Cervical Cancer Early Detection Program (NBCCEDP) in 1992. The NBCCEDP targets lower income women<sup>7</sup> who are often uninsured or underinsured.

Data from the California Women's Health Survey (CWHS) for 2006 and 2007 were analyzed in order to examine obstacles to mammography screening for women ages 50 to 64 who lived at or below 200 percent of the federal poverty level (FPL;

which is an annual gross household income of \$42,408 for a family of four). The CWHS asked women whether they had ever had a mammogram and how long had it been since their last mammogram. If respondents reported not having a mammogram in the past year then they were asked what their main reason was for not having a mammogram within the past year. The women were grouped as Hispanic, White, African-American/Black, and Asian/Other. Women who refused to answer the questions or who did not know if they had ever had a mammogram were excluded from the analyses. Women who had breast problems or cancer were also excluded. While CDS does screen younger women, this report focused on women ages 50 to 64, a group that may benefit most from screening. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

- Of respondents ages 50 to 64, living at or below 200 percent of the FPL, 62.0 percent of White women had an annual screening mammogram compared with 18.2 percent of Hispanic, 6.8 percent of African American/Black, and 13.0 percent of Asian/Other women (Chi-square test,  $p < .01$ ).
- Analyses found a relationship between health insurance and income status to whether women obtained mammograms. Among women with lower incomes, the main reason for not having a mammogram was either lack of health insurance or inability to

## *Obstacles to Mammography Screening for California Women Ages 50 to 64, 2006-2007*

California Department of Public Health  
Cancer Detection Section

### **Public Health Message:**

*Lower income and ethnic minority women are significantly less likely to go for regular mammography screening. Education and outreach are important to increase breast cancer screening for all women in California. Uninsured, underinsured, and lower income women who can not afford a mammogram will benefit from free breast cancer screening services to encourage early detection and help reduce their cancer burden.*

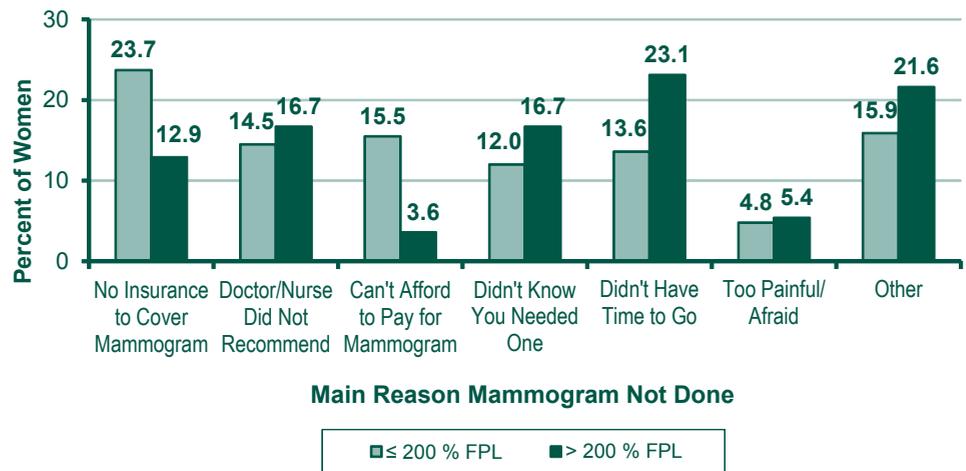
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*Obstacles to Mammography Screening for California Women Ages 50 to 64, 2006-2007*

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pay for a mammogram (see Figure 1). Taken together, 39.2 percent of women of lower incomes (at or below 200 percent of the FPL) indicated that these two economic factors prevented them from receiving a mammogram (Chi-square test,  $p < .01$ ). In contrast, 23.1 percent of women with higher income (above 200 percent of the FPL) stated their main reason as not having time to go for a mammogram; only 3.6 percent indicated they could not afford one (Chi-square test,  $p < .01$ ).

Figure 1 **Obstacles for Not Having a Mammogram Within the Past Year for California Women Ages 50-64, by Federal Poverty Level (FPL), 2006-2007**



Source: California Women's Health Survey, 2006-2007

*Obstacles to  
Mammography  
Screening for California  
Women Ages 50 to 64,  
2006-2007*

California Department of Public  
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Cancer Detection Section

- 1 American Cancer Society. Breast cancer. <http://www.cancer.org/acs/groups/content/@nhp/documents/documei/breastcancerpdf.pdf>. Published 2007. Accessed June 2008.
- 2 Humphrey LL, Helfand M, Chan BKS, Woolf SH. Breast Cancer Screening: a summary of the Evidence for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2002;137:347-360.
- 3 Lawson HW, Henson R, Bobo JK, Kaeser MK. Division of Cancer Prevention and Control, National Center for Chronic Diseases Prevention and Health Promotion. Implementing recommendations for the early detection of breast and cervical cancer among low-income women. *MMWR - Recommendations and Reports* - March 31, 2000 49(RR02):35-55.
- 4 Meissner HI, Breen N, Taubman ML, Vernon SW, Graubard BI. Which women aren't getting mammograms and why? *Cancer Causes and Control.* 2007;18:61-70.
- 5 Smith RA, Saslow D, Sawyer KA, Burke W, Costanza ME, Evans III WP, Foster jr. RS, Hendrick E, Eyre HJ, Sener S. American Cancer Society Guidelines for Breast Cancer: Updated 2003. *CA Cancer J Clin.* 2003;53:141-169.
- 6 Norman SA Localio AR, Weber AL, Coates RJ, Zhou L, Bernstein L, Malone KE, Marchbanks PA, Weiss LK, Lee NC, Nadel MR. Protection of mammography screening against death from breast cancer in women ages 40 - 64 years. *Cancer Causes Control.* 2007;18:909-918.
- 7 Adams EK, Breen N, Joski PJ. *Impact of the National Breast and Cervical Cancer Early Detection Program on Mammography and Pap Test Utilization Among White, Hispanic, and African American Women: 1996 - 2000.* American Cancer Society. 2006.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Cancer of the cervix grows slowly, providing ample opportunity for early detection and treatment.<sup>1</sup> Regular screening using the Papanicolaou (Pap) test has successfully decreased the incidence of cervical cancer.<sup>2</sup> Early detection can save lives because pre-malignant lesions are more effectively treated than invasive cancers.<sup>1</sup> Therefore, death due to cervical cancer can be considered a missed opportunity for prevention.<sup>2</sup>

The American Cancer Society recommends that women have annual Pap tests beginning three years after the start of sexual activities and begin annual testing no later than 21 years of age.<sup>3</sup> With increasing age or after three consecutive normal Pap tests, it is recommended that women be screened less frequently, approximately every two to three years.<sup>3</sup> The Cancer Detection Programs: Every Woman Counts, run by the Cancer Detection Section, is funded by the National Breast and Cervical Cancer Early Detection Program. This program provides free cervical cancer screening services to underinsured, uninsured, and low-income women<sup>2,4</sup> who are mainly ethnic minorities. Even though screening Pap test rates have increased in recent years, many lower-income and ethnic minority women still do not go for regular screenings.<sup>1,4</sup>

Data from the California Women's Health Survey for 2006 and 2007 were combined and analyzed. Women were asked if they had ever had a Pap test and if so, how long it had been since their last Pap test. Data was analyzed for women ages 25

to 64 who had either last been screened more than five years ago or had never been screened for cervical cancer by race/ethnicity and income status. These women were referred to as "rarely or never screened." Those women who lived at or below 200 percent of the federal poverty level (FPL), which is an annual gross household income of \$42,408 for a family of four, were considered lower-income, and women who lived above 200 percent of the FPL were considered higher income. Those women who refused to respond, or who answered they did not know to the question when asked if they have had a hysterectomy were excluded from the analysis. The numbers for African American/Black and American Indian/Native Alaskan women surveyed were too small to report any findings for these groups. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

- Combined data from 2006 and 2007 showed that 90.6 percent of California women were screened for cervical cancer in the past three years, 3.3 percent of them in the past four to five years, and 6.1 percent of them had rarely or never been screened before.
- More Asian/Pacific Islander women were rarely or never screened for cervical cancer (11.0 percent) than Hispanic (5.7 percent) and White (5.6 percent) women (Chi-square test,  $p < .01$ ).

## Women Ages 25 to 64 Who Were Rarely or Never Screened for Cervical Cancer in California, 2006-2007

California Department of Public Health  
Cancer Detection Section

### Public Health Message:

*Women seem to be more aware of the need to go for regular cervical cancer screening. For instance, in 2006 and 2007, 6.0 percent of Californian women were rarely or never screened for cervical cancer compared to 7.0 percent in 2005, which reflects an improvement. Lower-income and ethnic minority women continue to have significantly lower screening rates than higher-income women. Outreach efforts to promote regular screening and free screening services for the uninsured, underinsured, and lower-income women appear to have increased the number of women going for cervical cancer screening in California.*

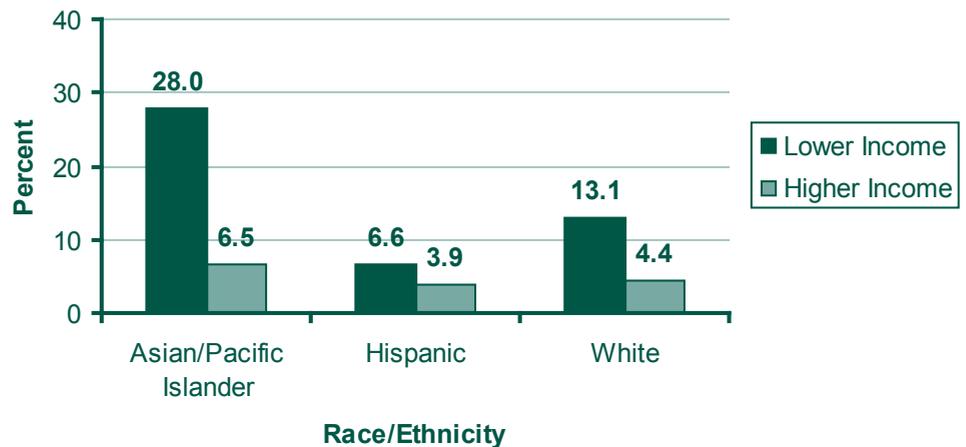
*Women Ages 25 to 64 Who Were Rarely or Never Screened for Cervical Cancer in California, 2006-2007*

California Department of Public Health  
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- The percentages of women who had rarely or never been screened in the reported race/ethnicity groups (White, Hispanic, and Asian/Pacific Islanders) were significantly higher for the lower-income groups than for the higher-income groups (see Figure 1; Chi-square test,  $p < .01$ ).

Figure 1

**Percentages of Women Rarely or Never Screened for Cervical Cancer, by Race/Ethnicity and Income Status, California, 2006-2007**



Source: California Women's Health Survey, 2006-2007

- 1 Leyden WA, Manos MM, Geiger AM, Weinmann S, Mouchawar J, Bischoff K, Yood MU, Gilbert J, Taplin SH. Cervical cancer in women with comprehensive health care access: attributable factors in the screening process. *J Natl Cancer Inst.* May 2005;97(9):675-683.
- 2 Hofer BM, Bates JH, McCusker ME, Nasser K, Cress R. *Cervical Cancer in California 2008*, California Cancer Registry; 2008.
- 3 American Cancer Society Guidelines for the Early Detection of Cancer. American Cancer Society Web site [www.cancer.org/docroot/PED/content/PED\\_2\\_3X\\_ACS\\_Cancer\\_Detection\\_Guidelines\\_36.asp](http://www.cancer.org/docroot/PED/content/PED_2_3X_ACS_Cancer_Detection_Guidelines_36.asp). Accessed September 2008.
- 4 Adams EK, Breen N, Joski P. *Impact of the National Breast and Cervical Cancer Early Detection Program on Mammography and Pap Test Utilization among White, Hispanic, and African American Women: 1996-2000*. American Cancer Society. November 2006.

Submitted by: Nana Tufuoh, M.D., M.P.H., Sepali Gunasekera, M.S., Weihong Zhang, M.S., and Stan Sciortino, M.P.H., Ph.D., California Department of Public Health, Cancer Detection Section (916) 324-0090, [Nana.Tufuoh@cdph.ca.gov](mailto:Nana.Tufuoh@cdph.ca.gov)



CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Cervical cancer used to be the leading cause of cancer deaths in women in the United States.<sup>1</sup> Regular Pap smear screening can detect cervical cancer in its early stages,<sup>1</sup> and if found early cervical cancer is highly treatable. Six out of ten cervical cancers occur in women who have never had a Pap test or who have not been screened in the past five years.<sup>1</sup> During the past four decades, the number of cervical cancer cases and deaths has significantly declined because of increases in Pap testing.<sup>1</sup> In the United States, cervical cancer cases and deaths have both decreased by 3.7 percent per year during 1996 to 2004.<sup>1</sup>

In 2007, the California Women's Health Survey asked women ages 18 and older if they had ever had a Pap test, and if they had, how long it had been since their last test. The women were also asked

about their race/ethnicity, age, and family income. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

In 2007, 81 percent of all women surveyed ages 18 and older reported they had had a Pap test within the past three years, 15 percent within three to five years, and 4 percent never had a Pap test.

- Women ages 60 and older were least likely to report having had a Pap test within the past three years (73.9 percent) than ages 18-29 (74.6 percent), ages 50-59 (86.5 percent), ages 30-39 (90.1 percent) and ages 40-49 (92.9 percent; see Figure 1).
- Women ages 18-29 were more likely to report never having a Pap test (23.1

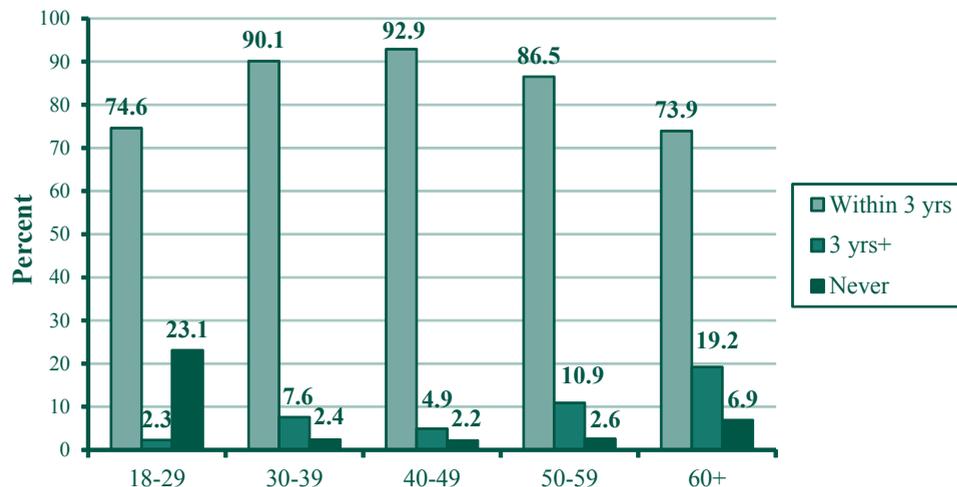
## Pap Screening History Among California Women Ages 18 and Older, 2007

Department of Health Care Services  
California Department of Public Health  
Office of Women's Health

### Public Health Message:

Although most Californian women reported recent screening for cervical cancer, low-income and Asian/Other women reported relatively infrequent Pap testing. For younger women (under the age of 26) there are vaccines to prevent cervical cancer. Efforts to increase access to screening for low-income and Asian/Other women as well as women under age 30 and over age 59 could reduce cervical cancer morbidity.

Figure 1  
PAP Testing Status of Women by Age Group, California, 2007



Source: California Women's Health Survey, 2007

Issue 6, Fall 2010, Num. 16

**Pap Screening History  
Among California Women  
Ages 18 and Older, 2007**

Department of Health Care  
Services  
California Department of Public  
Health  
Office of Women's Health

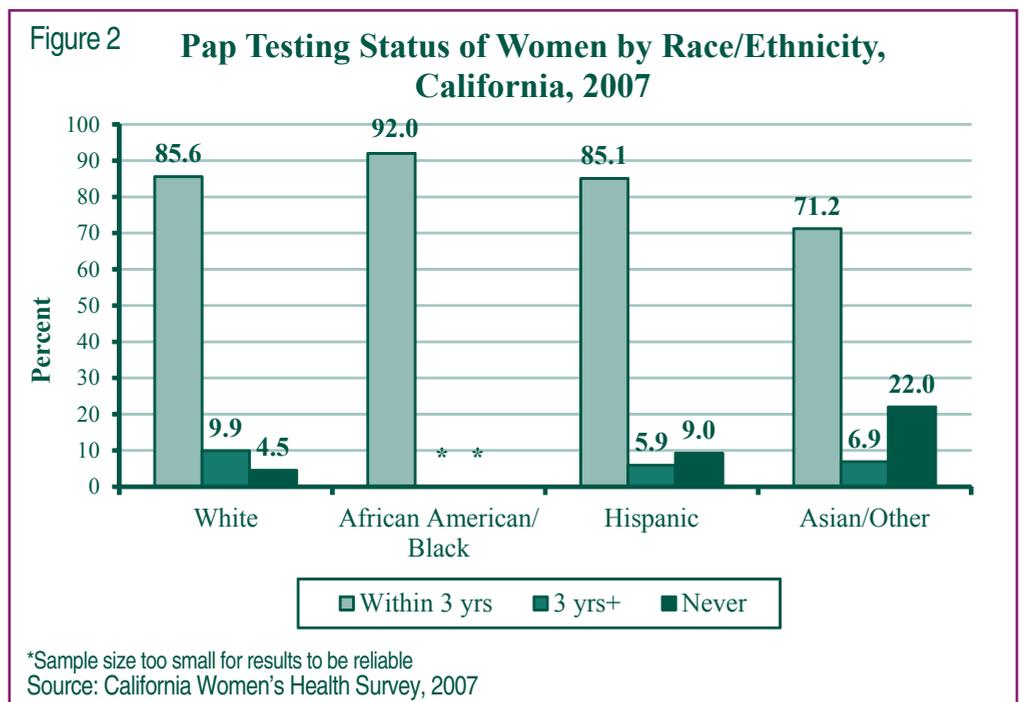
percent) than ages 60 and older (6.9 percent), ages 50-59 (2.6 percent), ages 30-39 (2.4 percent), and ages 40-49 (2.2 percent).

were more likely to report having a Pap test within the past three years (90.7 percent) than women at or below 200 percent of the FPL (74.6 percent).

- White (85.6 percent), African American/Black (92.0 percent), and Hispanic (85.1 percent) women were more likely than Asian/Other (71.2 percent) women to have a Pap test within the past three years.
- Asian/Other women (22.0 percent) were more likely than the other race/ethnic groups to report never having a Pap test compared to White (4.5 percent), African American/Black (4.1 percent), and Hispanic (9.0 percent) women (see Figure 2).
- Women with incomes at 200 percent above the federal poverty level (FPL)

- Women with incomes at or below 200 percent FPL were more likely to report never having had a Pap test (15.3 percent) than women with higher incomes (2.8 percent).

As expected, women above 200 percent of the FPL were more likely to have Pap tests than women below that level, which suggests that women above 200 percent of the FPL are more likely to be insured. However, nearly 74 percent of the women who could not otherwise afford a Pap test appear to be receiving these services with the assistance of government programs. Health disparities still appear to exist, particularly among Asian/Other women.



1 Centers for Disease Control and Prevention. Learn about prevention and screening. <http://www.cdc.gov/Features/CervicalCancer/>. Published January 2008. Accessed December 2008.

Submitted by: Patricia Lee, Ph.D. and Terri Thorfinnson, J.D., Department of Health Care Services, California Department of Public Health, Office of Women's Health, (916) 440-7633, Patricia.Lee@dhcs.ca.gov



# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

**M**ental disorders such as depression are among the leading causes of poor health worldwide.<sup>1</sup> According to the 2000 American Community Survey, 22 percent of women in the United States had a disability, and nearly one quarter of these women had a mental disability. Disability type is not mutually exclusive; the majority of women with a mental disability cited another type of disability as well (e.g., physical or sensory).<sup>2</sup> For some, a mental health condition may be the primary disabling condition, while for others a mental health condition occurs secondary to a physical disability.

The 2007 California Women's Health Survey (CWHS) assessed the overall

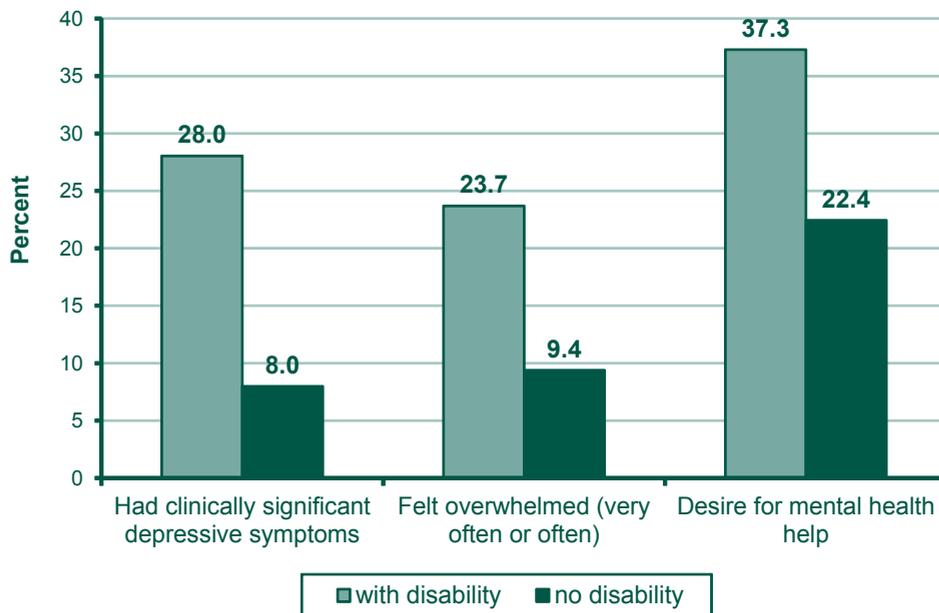
increase in mental health needs among women with disabilities. These women were identified on the CWHS by a "Yes" response to either of two questions: (1) "Do you now have any health problem that requires you to use special equipment, such as a cane, a wheel chair, a special bed, or a special telephone?" and (2) "Are you limited in any way in any activities because of a physical, mental, or emotional problem?" The level of depressive symptoms was measured using the Patient Health Questionnaire (PHQ), a screening tool designed to identify the presence of depression.<sup>3</sup> Responses were scored to create a total PHQ score, with a value of ten or greater identifying clinically significant depressive symptoms.

## Mental Health Needs Among California Women With Disabilities, 2007

California Department of Public Health  
Epidemiology and Prevention for Injury Control (EPIC) Branch  
Living Healthy with a Disability Program

**Public Health Message:**  
*Women with a disability are more likely than women without disabilities to face a variety of mental health problems, including increased prevalence of depressive symptoms, likelihood of feeling overwhelmed, and the need for professional mental health help for personal problems. It is important that treatment and prevention activities are available, accessible, and affordable for people with disabilities, and that policies dealing with mental health include this vulnerable population.*

Figure 1 **Mental Health Needs Among California Women, by Disability Status, 2007**



Source: California Women's Health Survey, 2007

## *Mental Health Needs Among California Women With Disabilities, 2007*

California Department of Public Health  
Epidemiology and Prevention for Injury Control (EPIC) Branch  
Living Healthy with a Disability Program

Feeling overwhelmed was measured by the question: “*In the past 30 days, how often have you felt problems were piling up so high that you could not overcome them?*” A desire for mental health help was measured by the question: “*In the past 12 months did you ever want help with personal or family problems from a mental health professional or religious or spiritual leader?*” Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

In 2007, 22.3 percent of CWHS respondents reported having a disability. Women with disabilities had a higher prevalence of the mental health issues examined below.<sup>4</sup> Compared with women without a disability, women with disabilities (see Figure 1):

- Were more than three times as likely to report depressive symptoms (28.0 percent versus 8.0 percent),
- Had higher PHQ scores, indicating a greater severity level of depressive symptoms (mean score of 6.9 versus 3.5),
- Were more than twice as likely to feel overwhelmed often or very often (23.7 percent versus 9.4 percent),

- Were more likely to need mental health help for personal problems (37.3 percent versus 22.4 percent). Interestingly, there was no difference in the percentage of women who received help (68.3 percent of disabled women received the help they needed, compared to 68.0 percent of women without disabilities).

Disability and mental health problems are often found concurrently and it is not possible here to determine whether the mental health issues described are the primary cause of disability or a consequence of another disabling condition. It is clear, however, that there is a significant need for help with mental health issues among women with a disability.

- 1 World Health Organization. *The Global Burden of Disease: 2004 Update*. Switzerland; World Health Organization; 2008.
- 2 Waldrop J. Stern SM. *Disability Status: 2000*. Census 2000 Brief. Washington, DC; US Census Bureau; March 2003.
- 3 Kroenke K, Spitzer RL. The PHQ-9: A new depression diagnostic and severity measure. *Psychiatr Ann*. 2002;32(9):1-7.
- 4 All comparisons reported here are statistically significant at  $p < 0.0001$ .

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Approximately 20 million people in the United States are infected with human papillomavirus (HPV) and another 6.2 million people become newly infected each year.<sup>1-2</sup> HPV is a significant cause of cervical cancer and an HPV vaccine has been recently approved for females ages 9-26.<sup>1</sup> An estimated 11,070 U.S. women will be diagnosed with cervical cancer in 2008.<sup>1</sup> Although HPV is acknowledged to be the most prevalent sexually transmitted infection (STI) in this country, earlier research found that less than a third of the general population has heard of HPV and awareness is low among young women in particular.<sup>3</sup>

In 2007, respondents of the California Women's Health Survey were asked if the following statements were true or false: (1) "Some strains (types) of the human papillomavirus (HPV) cause cervical cancer; and (2) The human papillomavirus (HPV) is sexually transmitted." Women were also asked if they had ever had a Pap test, heard about HPV, had a doctor talk with them about HPV and cervical cancer, and their condom use. Comparisons between groups were evaluated using Chi square analyses. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population. Analyses were limited to women ages 18-49 (see Figure 1).

## HPV Causes Cervical Cancer

- A higher proportion of White women correctly reported that HPV causes cervical cancer (95.7 percent) compared with Hispanic (93.3 percent), African American/Black (93.2 percent),

and Asian/Other women (80.9 percent;  $p < .0001$ ).

- A higher proportion of women ages 30-39 reported that HPV causes cervical cancer (94.9 percent) compared with women ages 40-49 (93.4 percent) and ages 18-29 (90.0 percent;  $p < .05$ ).
- A higher proportion of women with income above 200 percent of the federal poverty level (FPL) reported that HPV causes cervical cancer (95.5 percent) compared with women with incomes below that level (88.7 percent;  $p < .0001$ ).
- Women who had heard about the HPV vaccine (95.6 percent;  $p < .0001$ ) and reported that their doctor talked to them about HPV and cervical cancer (96.6 percent;  $p < .01$ ) were more likely to be correct about HPV causing cancer compared with those who had not heard about the vaccine (84.2 percent) or had not discussed the relationship between HPV and cervical cancer with their doctor (90.9 percent).
- Sample size was too small for results to be reliable concerning differences for women's knowledge of HPV causing cancer by history of Pap test or frequency of condom use.

## HPV is Sexually Transmitted

- A higher proportion of White women correctly reported that HPV is sexually transmitted (90.0 percent) compared with Hispanic (85.8 percent), African American/Black (81.1 percent), and Asian/Other women (77.5 percent;  $p <$

## Human Papillomavirus Knowledge Among California Women, 2007

Department of Health Care Services  
California Department of Public Health  
Office of Women's Health

### Public Health Message:

*These findings demonstrate that young, minority, and low-income women had lower levels of knowledge about the association of HPV with cervical cancer and sexual transmission of HPV. Also, those women who did not have a doctor discuss HPV had less knowledge about the association between HPV and cervical cancer. Educational materials on HPV and HPV vaccination could be effectively targeted toward these specific populations to improve awareness.*

*Human Papillomavirus  
Knowledge Among  
California Women, 2007*

Department of Health Care  
Services  
California Department of Public  
Health  
Office of Women's Health

Asian/Other women (77.5 percent;  $p < .01$ ).

- A higher proportion of women, ages 30-39 reported that HPV is sexually transmitted (89.9 percent) compared with women ages 40-49 (88.3 percent) and ages 18-29 (81.5 percent;  $p < .001$ ).
- A higher proportion of women with incomes above 200 percent of the FPL reported that HPV is sexually transmitted (88.2 percent) compared

with women with incomes at or below 200 percent of the FPL (83.1 percent;  $p < .05$ ).

- There were no significant differences found for women's correct knowledge that HPV is sexually transmitted based on ever having a Pap test, hearing about the HPV vaccine, frequency of condom use, or having a doctor talk with them about the relationship between HPV and STIs.

*Human Papillomavirus  
Knowledge Among  
California Women, 2007*

Department of Health Care  
Services  
California Department of Public  
Health  
Office of Women's Health

Figure 1  
HPV Knowledge of women 18-49, by Demographics and Sexual behaviors

Variables	HPV causes cervical cancer (%True)		HPV is sexually transmitted (%True)	
<b>Demographic Variables</b>				
• Race/Ethnicity		p < .0001		p < .0028
○ White	95.7		90.0	
○ African-American/Black	93.2		81.1	
○ Hispanic	93.3		85.8	
○ Asian/Other	80.9		77.5	
• Age Groups by Decade		p < .0238		p < .0004
○ 18-29 yrs old	90.0		81.5	
○ 30-39 yrs old	94.9		89.9	
○ 40-49 yrs old	93.4		88.3	
• Federal Poverty Level (FPL)		p < .0001		p < .0181
○ Women 200 percent at/below the FPL	88.7		83.1	
○ Women 200 percent above the FPL	95.5		88.2	
• Ever had a Pap Test		*		p < .0872
○ Yes	93.2		87.0	
○ No	*		78.7	
• Heard about HPV Vaccine		p < .0001		p < .2841
○ Yes	95.6		86.9	
○ No	84.2		84.3	
• How often use condoms in last 12 months		*		p < .3043
○ Always	93.8		83.9	
○ More than ½ the time	87.5		93.3	
○ ½ the time	*		85.3	
○ Less than ½ the time*	99.8		91.9	
○ Never	91.9		86.7	
○ No male partner	95.4		87.6	
• Health care provider ever talked about HPV & cervical cancer		p < .0040		p < .1026
○ Yes	96.6		89.1	
○ No	90.9		84.9	

\*Sample size is too small for results to be reliable  
Source: California Women's Health Survey, 2007

*Human Papillomavirus  
Knowledge Among  
California Women, 2007*

Department of Health Care  
Services  
California Department of Public  
Health  
Office of Women's Health

- 1 Centers for Disease Control. Fact Sheet, Genital HPV. <http://www.cdc.gov/std/HPV/STDFact-HPV.htm>. Published November 2009. Accessed December 2009.
- 2 Montano DE, Kasprzyk D, Carlin L, Freeman C. (2005). HPV Provider Survey: knowledge, attitudes, and practices about genital HPV infection and related conditions. <http://www.cdc.gov/std/HPV/HPVProviderSurveyExecSum.pdf>. Published June 2005. Accessed December 2008.
- 3 Anhang R, Goodman A, Goldie S. HPV communication: Review of existing research and recommendations for patient education. *CA Cancer J Clin.* 2004; 54; 248-259.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

**C**hlamydia *trachomatis*, a sexually transmitted infection, is the most commonly reported communicable disease in California.<sup>1</sup> Untreated infections in women are associated with adverse health outcomes such as pelvic inflammatory disease, ectopic pregnancy, tubal factor infertility, and chronic pelvic pain.<sup>2</sup>

In 1999, the California Chlamydia Action Coalition (CCAC) began working with public and private sector health care provider partners to increase screening among young women. In 2002, CCAC developed and disseminated a toolkit to promote best practices in chlamydia screening and treatment consistent with the Centers for Disease Control and Prevention (CDC) *2002 Sexually Transmitted Diseases Treatment Guidelines*, which recommended annual chlamydia testing for all sexually active girls and women ages 25 and younger.<sup>3</sup>

Because most women with chlamydia have no symptoms or noticeable signs of infection, screening tests are necessary to identify cases for timely treatment and prevention of further transmission. A better understanding of the sociodemographic characteristics of young women who are not receiving routine screening is needed.

Annually from 2002 to 2007 (with the exception of 2006), California Women's Health Survey participants were asked: "Have you been tested for chlamydia during the past 12 months?"<sup>4</sup> Survey participants were also asked: "About how long has it been since you last visited a doctor for a routine medical checkup?"<sup>5</sup>

Those women who lived at or below 200 percent of the federal poverty level (FPL), which is an annual gross household income of \$42,408 for a family of four, were considered lower-income, and women who lived above 200 percent of the FPL were considered higher income.

Data were aggregated across years and all analyses were restricted to women ages 18 to 24<sup>6</sup> who had had sex with a male partner in the previous 12 months. Analysis of chlamydia testing was further restricted to women who had had a routine medical checkup in the previous 12 months, in order to assess their opportunity for being screened for chlamydia. There were 584 total respondents in this group. Results were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

## Highlights of the Results

- Women who had had an annual checkup were more likely to have been tested for chlamydia (59.5 percent) than those who had not had an annual checkup (35.2 percent;  $p < .001$ ).
- Among women who had had a checkup, no statistically significant differences in rates of reported chlamydia testing were found between women above 200 percent of the federal poverty level (57.8 percent) and those below (61.0 percent), or between those with health insurance (60.7 percent) and those without (53.4 percent).

## *Differences in Rates of Chlamydia Screening Among Young California Women, by Race/Ethnicity and Sociodemographic Factors, 2002-2007*

California Department of Public Health  
Sexually Transmitted Disease Control Branch  
Division of Communicable Disease Control  
Center for Infectious Diseases

**Public Health Message:**  
*Rates of chlamydia screening among young California women vary across several indicators of socioeconomic status and access to care. Analyses reveal significant racial and ethnic disparities in access to care and rates of chlamydia testing. Additional efforts to increase patient awareness of chlamydia and the need for routine screening, particularly among Spanish speakers, are needed. Barriers to chlamydia testing among women with private insurance need to be explored.*

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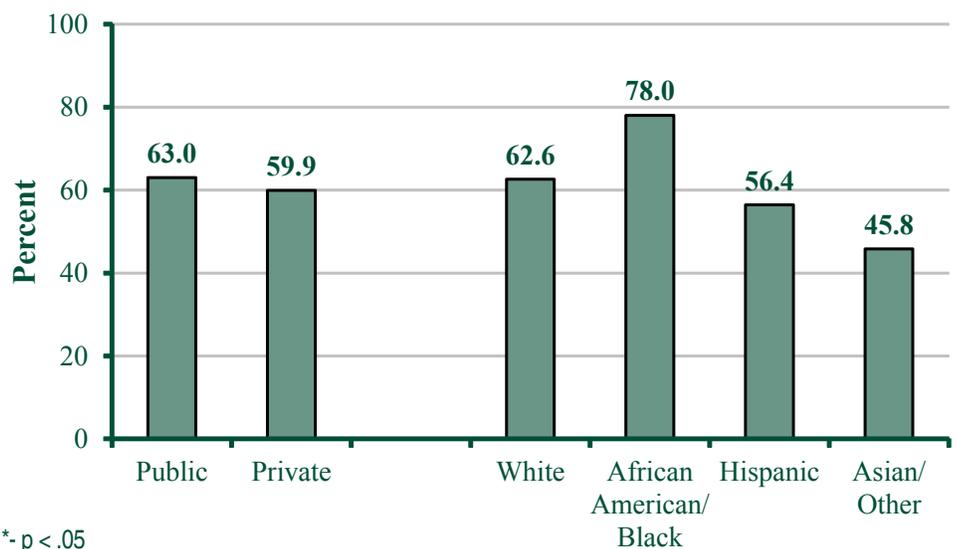
*Differences in Rates of Chlamydia Screening Among Young California Women by Race/Ethnicity and Sociodemographic Factors, 2002-2007*

California Department of Public Health  
 Sexually Transmitted Disease Control Branch  
 Division of Communicable Disease Control  
 Center for Infectious Diseases

- While no significant differences were observed in rates of chlamydia testing in the aggregate data between women with public insurance (63.0 percent) and those with private insurance (59.9 percent; see Figure 1), in more recent years (2005 and 2007), a significantly higher proportion of women with public insurance were tested (67.0 percent), than those with private insurance (52.0 percent;  $p < .05$ ).
- Among those who had had a checkup, African American/Black women<sup>8</sup> were significantly more likely to have been tested for chlamydia (78.0 percent) than White women (62.6 percent), Hispanic women (56.4 percent), and Asian/Other women (45.8 percent) (see figure;  $p < .05$  for all comparisons).
- Individuals interviewed in Spanish were significantly less likely to report having been tested for chlamydia (44.5 percent) than English-speaking respondents (61.4;  $p < .05$ ).
- Some women were unfamiliar with the term “chlamydia” and were therefore unable to answer whether they had been tested in the previous 12 months (12.7 percent).
- Furthermore, significantly more Spanish-speaking, Hispanic women were unfamiliar with chlamydia (43.4 percent) than English-speaking Hispanics (7.4 percent) and all other racial groups combined (5.5 percent;  $p < .0001$ ).
- Racial disparities in awareness of chlamydia might lead to significant racial/ethnic bias in estimating screening rates because of both reduced self-advocacy for chlamydia testing and correct knowledge of one’s chlamydia testing history.

Figure 1

**Proportion of Women Ages 18-24 Tested for Chlamydia in the Previous 12 Months, by Insurance Type\* and Race/Ethnicity\***



\*-  $p < .05$

Source: California Women’s Health Survey, 2002, 2003, 2004, 2005, and 2007

*Differences in Rates of Chlamydia Screening Among Young California Women by Race/Ethnicity and Sociodemographic Factors, 2002-2007*

California Department of Public Health  
Sexually Transmitted Disease Control Branch  
Division of Communicable Disease Control  
Center for Infectious Diseases

- 1 Sexually Transmitted Disease (STD) Control Branch, Division of Communicable Disease Control, Center for Infectious Diseases, California Department of Public Health. *Sexually Transmitted Diseases in California 2006*; November 2007. <http://www.cdph.ca.gov/data/statistics/Documents/STD-Data-2006-Report.pdf>. Published November 2007. Accessed June 2009.
- 2 Centers for Disease Control and Prevention (CDC). CDC Fact Sheet - Chlamydia; December 2007. <http://www.cdc.gov/std/Chlamydia/Chlamydia-Fact-Sheet.pdf>. Published December 2007. Accessed June 2009.
- 3 Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines 2002. *MMWR*. 2002; 51(No. RR-6):32. Note: Earlier guidelines recommended screening for sexually active females under the age of 20, and for women ages 20 to 24 years who had had a new partner or multiple partners in the previous 12 months.
- 4 In 2002, 2003, and 2005, being unfamiliar with the term “Chlamydia” was included as a response option in the Chlamydia testing question. In 2004 and 2007, respondents were asked if they had ever heard of Chlamydia; a response of “No” resulted in the Chlamydia testing question being automatically skipped.
- 5 Analyses exclude data from 2006, the year in which this question was not asked.
- 6 Although screening are recommended for women ages 25, they were unable to be included in these analyses, due to the weights available for analysis.
- 7 This subanalysis was not restricted to women who had reported having had a checkup in the previous 12 months, in order to include the 2005 data.
- 8 African American/Black women were designated as the comparison group for all statistical tests assessing differences among racial/ethnic groups.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Obesity continues to be a prevalent public health problem. The 2007 national rate for self-reported obesity in adult women in the United States was 24.8 percent.<sup>1</sup> Obesity contributes to several chronic diseases found at disproportionately higher rates among certain race/ethnicities and low-income, less-educated populations.<sup>2,3</sup> The Cancer Control Branch's Network for a Healthy California is one of several California Department of Public Health programs working in the area of obesity prevention, focusing its efforts on the low-income population participating in or eligible for the Food Stamp Program (FSP).

Core questions in the 2007 California Women's Healthy Survey asked women to self-report height and weight, which were used to calculate the body mass index (BMI), a measure for obesity. Obesity is defined as a BMI greater than or equal to 30. Demographic data and use of the FSP and the Women, Infants, and Children Supplemental Nutrition Program (WIC) were also collected. A six-item U.S. Department of Agriculture food security scale was also used to classify women into three groups: food secure (i.e., having access at all times to enough food for an active healthy life); food insecure without hunger; or food insecure with hunger.

Only the 4,667 non-pregnant women who were post-partum one year or more were included in this analysis. The relationship between sociodemographic variables and obesity was initially examined for statistical significance using bivariate statistics. Regression analysis was subsequently

performed to adjust for multiple confounding factors. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

The overall obesity rate among California women in 2007 was 24.3 percent. Obesity prevalence varied significantly by respondents' demographic characteristics, household income federal poverty level (FPL), food insecurity, and participation in the FSP or WIC.

- The lowest rates of obesity were among the youngest and oldest women (ages 18-24 at 16.5 percent and ages 65+ at 19.3 percent) than ages 25-34 (26.5 percent), ages 35-44 (24.2 percent), ages 45-54 (28.4 percent), and ages 55-64 (29.2 percent;  $p < .0001$ ).
- The highest rates of obesity were among African American/Black women (35.7 percent) and Hispanic women (33.4 percent), than White women (19.8 percent) and Asian/Other women (13.9 percent;  $p < 0.001$ ).
- The prevalence of obesity was also associated with educational level (see Figure 1). The prevalence of obesity was lowest among college graduates (15.7 percent) than women with some college (24.9 percent), high school graduates (24.6 percent), and women with less than a high school education (38.2 percent;  $p < .0001$ ).

## *Disparities in Prevalence of Obesity Among California Women, 2007*

California Department of Public Health  
Cancer Control Branch  
Public Health Institute

### **Public Health Message:**

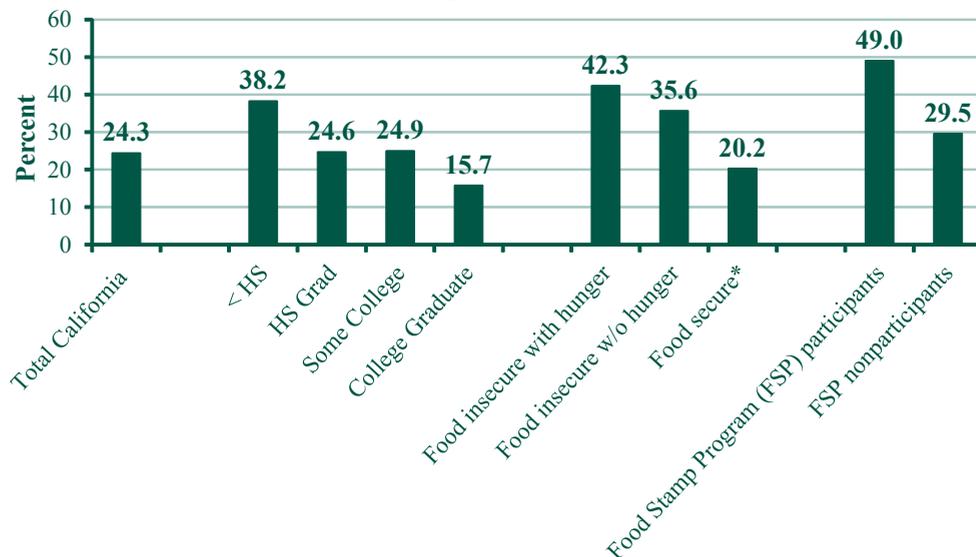
*Although cross-sectional studies cannot determine causality, disparities in race/ethnicity, socioeconomic status, and education are interrelated, cross-cutting factors that are strongly associated to obesity. Additionally, women who were food insecure and those who were receiving food stamps were at significantly greatest obesity risk. Findings point to the importance of employing a multifaceted public health approach to address disparities in obesity prevalence.*

*Disparities in Prevalence of Obesity Among California Women, 2007*

California Department of Public Health  
Cancer Control Branch  
Public Health Institute

**Figure 1 Obesity Prevalence Among California Women, by Education and Poverty-Related Factors, 2007**

N = 4667



\*Food secure - having access, at all times to enough food for an active healthy life

Source: California Women's Health Survey, 2007

- Poverty-related factors were highly associated with obesity. Women from households with income reported as less than or equal to 130 percent of the FPL had an obesity prevalence rate of 32.8 percent; those at 131 percent to 185 percent of the FPL, had a rate of 30.1 percent, and those with income above 185 percent of the FPL had a rate of 19.9 percent ( $p < .0001$ ).
- Women from households with reported income at or above 400 percent of the FPL (16.2 percent) were nearly half as likely to be obese as women with income below that level (29.0 percent;  $p < .0001$ ).
- The prevalence of obesity among food insecure women with hunger was 42.3 percent, among food insecure women without hunger 35.6 percent, and among food secure women 20.2 percent. Food insecure women had a combined prevalence rate of 38.2 for obesity ( $p < .0001$ ).
- Women who participated in a major supplemental food program within the past 12 months were more likely to be obese than income-eligible non-participants.<sup>4</sup> Among women meeting the income-eligibility criterion for the FSP, participants had an obesity prevalence of 49.0 percent, while nonparticipants at this income level had a 29.5 percent rate. Among those meeting the criterion for WIC, participants had a 38.0 percent prevalence rate while nonparticipants at the same income level had a 31.3 percent rate ( $p < .05$ ).
- Looking only at WIC-eligible<sup>5</sup> women, significant differences were observed by assistance program combinations, with obesity rates of 49.6 percent for women participating in both the FSP and WIC, 47.5 percent for FSP participation alone, 32.6 percent for WIC participation alone, and 26.4 percent for eligible women who did not participate in either program during the past year ( $p < .0001$ ).

*Disparities in Prevalence of Obesity Among California Women, 2007*

California Department of Public Health  
Cancer Control Branch  
Public Health Institute

- When poverty level, food insecurity, use of supplemental food programs, education, race/ethnicity, and age were included in a logistic regression model, after taking into account the remaining variables, FPL and WIC were no longer statistically significant. When controlled for the confounders, FSP participants were 2.3 times more likely to be obese than non-FSP users with income less than or equal to 130 percent of the FPL; and food insecure women were 1.6 times more likely than food secure women to be classified as obese. Women who had not graduated from college were 1.6 to 1.9 times more likely to be obese than those who had attained college degrees. White women were 1.7 times, Hispanic women were 2.3 times, and African American/Black women were 3.2 times more likely to be obese than women of Asian/Other background.
- 1 Galuska DA, Gillespie C, Kuester SA, Mokdad AH, Cogswell ME, Philip CM. State-specific prevalence of obesity among adults --- United States, 2007. *MMWR*. July 18, 2008;57(28):765-768.
  - 2 Atiedu AA, Network for a Healthy California, Health Disparities Action Team. Issue paper: Health disparities in California. Sacramento, CA. California Department of Public Health, Cancer Prevention and Nutrition Section; 2008.
  - 3 U.S. Department Of Health And Human Services. Summary health statistics for U.S. adults: National Health Interview Survey, 2007. Data from the National Health Interview Survey. National Center for Health Statistics. *Vital Health Stat*. 2008;10(240):1-169.
  - 4 Income-eligibility criterion for FSP participation is less than or equal to 130 percent FPL, while income-eligibility criterion for WIC is less than or equal to 185 percent FPL.
  - 5 For WIC participation, only women taking part on behalf of their children less than five years old were included; since women who were pregnant or up to one year post-partum had been eliminated from the sample.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Being overweight or obese increases the risk of hypertension, diabetes, and coronary heart disease as well as endometrial, breast and colon cancer.<sup>1</sup> For women of reproductive age, being overweight or obese poses additional health risks during pregnancy such as gestational diabetes, pregnancy-induced hypertension and eclampsia, giving birth to an abnormally large baby (macrosomia), or having an induced labor or cesarean delivery. Moreover, babies born to women who are overweight or obese prior to conception are less likely to be breastfed and are at increased risk for being overweight themselves, for infant death, and for certain birth defects.<sup>2-4</sup>

Data on weight status among women of reproductive age from the California Women's Health Survey (CWHS) point to

an increased trend in combined overweight and obesity over the past ten years, from 38.8 percent in 1997 to 49.1 percent in 2007.<sup>6</sup>

The CWHS asked women about their pregnancy status and intent, their height and weight for body mass index (BMI) calculations, the number of children born to them, and demographic questions. For the current analysis, data from the 2006 and 2007 surveys were combined and limited to women ages 18-44 (n=4,237). Pregnancy intent was measured with the question: "Are you trying to become pregnant?" Weight status was categorized into four groups based on the National Heart, Lung and Blood Institute guidelines<sup>7</sup>: *underweight* (BMI of <18.5), *healthy weight* (BMI of 18.5 – 24.9), *overweight* (BMI of >25 – 29.9), and *obese* (BMI of >30).

## Overweight and Obesity Among California Women Trying to Become Pregnant, 2006-2007

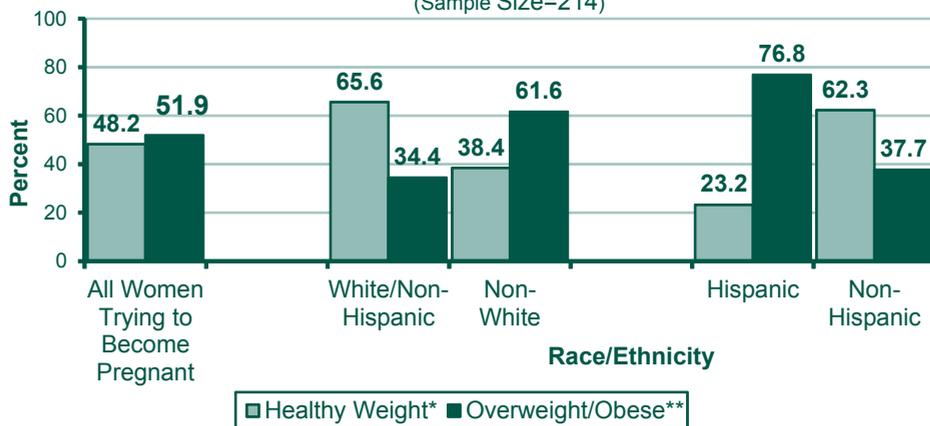
California Department of Public Health  
Maternal Child and Adolescent Health Division  
Cancer Control Branch

### Public Health Message:

Since over 40 percent of births in California are unplanned,<sup>5</sup> the Maternal, Child and Adolescent Health (MCAH) Division encourages all women of reproductive age to maintain a healthy weight to minimize these chronic illnesses and pregnancy-related health risks. MCAH programs encourage women to enter pregnancy at an optimal weight, gain appropriate weight during pregnancy, return to a healthy postpartum weight, and breastfeed, all of which may reduce the risk of childhood obesity.

Figure 1 **Combined Overweight and Obesity vs. Healthy Weight Among California Women Ages 18-44 Trying to Become Pregnant, 2006-2007**

(Sample Size=214)



\*Healthy weight includes women with a BMI of 18.5 - 24.9; underweight women (BMI <18.5) excluded<sup>8</sup>

\*\*Overweight/Obese includes women with a BMI of >25

Source: California Women's Health Survey, 2006-2007

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## *Overweight and Obesity Among California Women Trying to Become Pregnant, 2006-2007*

California Department of Public Health  
Maternal Child and Adolescent Health Division  
Cancer Control Branch

Women with missing or unknown BMI or pregnancy intent responses (n=251) were excluded from our analyses. All responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

### **Among all non-pregnant women of reproductive age**

- A little over 3 percent (3.1 percent) were underweight and 48.6 percent were at a healthy weight, while 25.4 percent were considered overweight and an additional 22.9 percent were obese.

### **Among women trying to become pregnant (N=214; see Figure 1)<sup>8</sup>**

- Compared with all non-pregnant women of reproductive age, the prevalence of being overweight and obese combined was similar among the subgroup of women who were trying to become pregnant (48.2 percent versus 51.9 percent). Obesity, however, was notably higher among women trying to become pregnant (30.2 percent) than all non-pregnant women (22.9 percent).
- Non-White women had a significantly higher prevalence of combined overweight and obesity (61.6 percent) than White/non-Hispanic women (34.4 percent; chi-square test  $p < 0.0001$ ).<sup>9</sup>
- Hispanic women had twice the prevalence of combined overweight and obesity (76.8 percent) compared with non-Hispanic women (37.7 percent; chi-square test  $p < 0.0001$ ).

- Combined overweight and obesity increased with parity levels; for never pregnant women, the prevalence was 47.0 percent, among women who had given birth to one child the prevalence was 52.4 percent, and among women who had given birth to two or more children the prevalence was 62.9 percent (Mantel-Haenszel chi-square test,  $p < 0.0001$ ).

Data from this analysis indicate many California women trying to become pregnant are not at an optimal preconception weight and those most likely to be overweight or obese are Hispanic women and other women of color. In addition, each subsequent pregnancy places women at increased risk for overweight and obesity.

Factors that influence overweight/obesity rates among California women trying to become pregnant are the same as those identified for U.S. women of reproductive age in several population-based studies.<sup>10-13</sup> Given the high proportion of unintended pregnancies in California, promoting healthy weight is warranted among all women of reproductive age for the sake of their own health as well as for the health of any unplanned pregnancy.

1 Health and Human Services, Centers for Disease Control and Prevention. Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion. Overweight and Obesity: Health Consequences. <http://www.cdc.gov/nccdphp/dnpa/obesity/consequences.htm>. Accessed September 2008.

*Overweight and Obesity  
Among California Women  
Trying to Become  
Pregnant, 2006-2007*

California Department of Public  
Health  
Maternal Child and Adolescent  
Health Division  
Cancer Control Branch

- 2 Amir LH, Donath S. A systematic review of maternal obesity and breastfeeding intention, initiation and duration. *BMC Pregnancy and Childbirth*. 2007;7:9.
- 3 Thompson DR, Clark CL, Wood B, Zeni MB. Maternal Obesity and Risk of Infant Death Based on Florida Birth Records for 2004. *Public Health Rep*. July-August 2008;123:487-493.
- 4 Kent H, Skala J, Desmarais J. Promoting Healthy Weight among Women of Reproductive Age. Washington, DC. Association of Maternal and Child Health Programs. January 2006.
- 5 California Department of Public Health, Maternal Child and Adolescent Health Division. Preconception Health: selected measure, California, 2005. October 2007. <http://www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Documents/MO-PreconceptionHealthOct07.pdf>. Accessed June 2008.
- 6 Unpublished data from the Department of Public Health, Cancer Control Branch, 2008.
- 7 National Institute of Health. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: the Evidence Report*. NIH Publication No. 98-4083. Washington, DC. National Institute of Health; 1998.
- 8 Women who were trying to become pregnant and were considered “underweight” (those with a BMI of 18.5 and below) represented a very small group (n=3), and were excluded for this analysis.
- 9 Non-white women include those who reported their race/ethnicity as one of the following: African American/Black, Hispanic and Asian/Other.
- 10 Sugerman SB, Adkins S, Foerster SB, Hoegh H. Body weight and obesity-related risk factors and relationships among California women: Findings from the California Women’s Health Survey, 1997-2002. *Women’s Health Findings from the California Women’s Health Survey, 1997-2003*. California.2006. <http://www.cdph.ca.gov/programs/owh/pages/default.aspx>. Published May 2006. Accessed June 2008.
- 11 Centers for Disease Control and Prevention. State-Specific Prevalence of Obesity among Adults --- United States, 2007. *MMWR*. 2008;57(28):765-768.
- 12 Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of Overweight and obesity in the United States, 1999-2004. *JAMA*. 2006;295:1549-1555.
- 13 Kim SY, Dietz PM, England L, Morrow B, Callaghan WM. Trends in pre-pregnancy obesity in nine states, 1993-2003. *Obes* 2007;15(4):986-993.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Obesity and lack of physical activity are widely recognized as risk factors for poor health. They have been associated with an increase in a variety of chronic diseases, including cardiovascular disease, hypertension, type-2 diabetes, and depression.<sup>1,2</sup> Because of their importance to health, Healthy People 2010 objectives were defined targeting both obesity and physical activity.<sup>3</sup> Women with disabilities may be more likely than other women to be overweight and less likely to engage in regular physical activity, due to the activity limitations and changes in mobility often associated with disability. Thus, women with a disability may face health threats associated with excess weight in addition to their disabling condition. This report uses data from the California Women's Health Survey (CWHS) to assess the prevalence of being overweight or obese and engaging in physical activity among women with and without a disability.

Women with a disability were identified on the 2007 CWHS by a "Yes" response to either of these two questions: (1) "Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?" or (2) "Are you limited in any way in any activities because of a physical, mental, or emotional problem?" Body mass index (BMI), a standard measure used to categorize weight, was calculated using a woman's self-reported height and weight. Women with a BMI of 25 to 29.99 were classified as being overweight and women with a BMI of 30 or greater were classified as obese.<sup>4</sup>

To assess physical activity, women were asked how many days in a usual week they did "moderate or vigorous activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate." Women who responded "none" to this question were classified as engaging in no regular physical activity. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

In 2007, 22.3 percent of CWHS respondents reported having a disability. Similar percentages of women with and without a disability were overweight (27.5 percent and 26.6 percent, respectively; see Figure 1). However, there was a considerable difference in prevalence of obesity between women with a disability (32.8 percent) and women with no disability (20.9 percent;  $p < 0.0001$ ). Similarly, twice as many women with a disability reported not engaging in regular physical activity (16.8 percent) than those without disability (8.5 percent;  $p < 0.0001$ ).

The observed association between obesity, physical activity, and disability was made up of complex interrelationships. While a causal relationship between disability and obesity cannot be determined with these data, the results indicate a strong association that needs to be explored. Disability can lead to obesity by affecting a woman's mobility and energy, consequently affecting the amount of physical activity in which she can engage. Conversely, obesity can cause disability, since it may lead to activity limitations.

## *Overweight, Obesity and Lack of Physical Activity Among California Women With a Disability, 2007*

California Department of Public Health  
Epidemiology and Prevention for Injury Control (EPIC) Branch  
Living Healthy With a Disability Program

### **Public Health Message:**

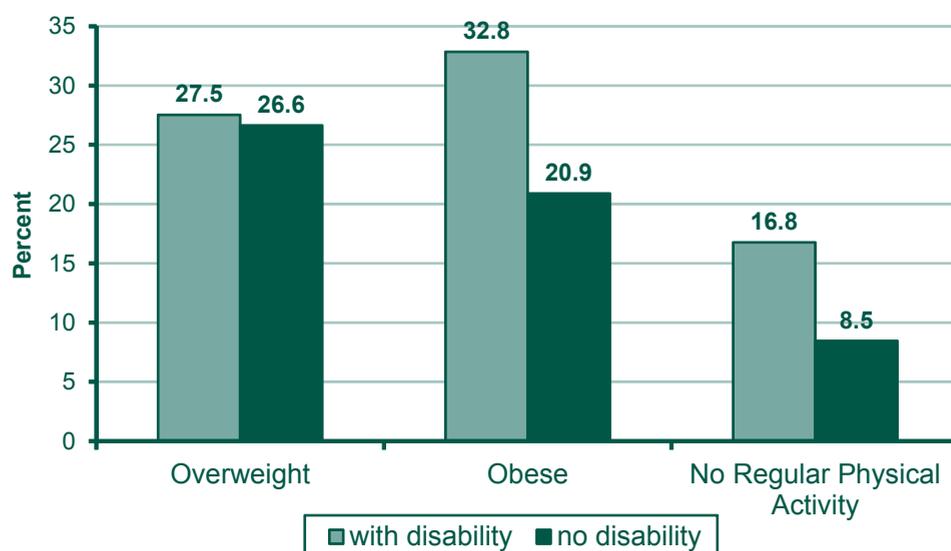
*One in three women with a disability is obese and one in six does not participate in any regular physical activity. Women with a disability are a vulnerable population at risk for health problems due to excess weight. Health promotion activities such as weight control and exercise options should be available, accessible, and affordable to women with disabilities.<sup>5</sup>*

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## Overweight, Obesity and Lack of Physical Activity Among California Women With a Disability, 2007

California Department of Public Health  
Epidemiology and Prevention for Injury Control (EPIC) Branch  
Living Healthy With a Disability Program

Figure 1 **Overweight, Obesity and Lack of Physical Activity Among California Women, by Disability Status, 2007**



Source: California Women's Health Survey, 2007

- 1 The Centers for Disease Control and Prevention: Division of Nutrition, Physical Activity and Obesity. Overweight and Obesity Web site. <http://www.cdc.gov/nccdphp/dnpa/obesity/index.htm>. Accessed June 2008.
- 2 The Centers for Disease Control and Prevention: Division of Nutrition, Physical Activity and Obesity. Physical Activity for a Health Weight Web site. [http://www.cdc.gov/nccdphp/dnpa/healthyweight/physical\\_activity/index.htm](http://www.cdc.gov/nccdphp/dnpa/healthyweight/physical_activity/index.htm). Accessed June 2008.
- 3 U.S. Department of Health and Human Services. *Healthy People 2010. Understanding and Improving Health*. 2nd ed. Washington, DC: U.S. Government Printing Office, November 2000.
- 4 The Centers for Disease Control and Prevention: Division of Nutrition, Physical Activity and Obesity. Assessing your Weight Web site. <http://www.cdc.gov/nccdphp/dnpa/healthyweight/assessing/index.htm>.
- 5 Rimmer JH, Riley B, Wang E, Rauworth A, Jurkowski J. Physical activity participation among persons with disabilities: barriers and facilitators. *Am J Prev Med*. 2004;26(5):419-25.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Research shows that domestic violence (DV) is a threat to the health and well-being of many women in the United States. Recent research shows that DV also damages the children who are exposed to it.<sup>1-4</sup> Children exposed to DV in their homes can suffer from a range of harmful emotional, social, physical, cognitive, psychological, and developmental consequences.<sup>1-5</sup> The impact of violence in the home is especially strong among small children and adolescents<sup>1</sup> and includes risk taking, problems in school, and mental health issues.<sup>1-4</sup> In the longer term, children exposed to DV can have poor health as adults and even become perpetrators or victims of violence themselves.<sup>2-5</sup>

The California Women's Health Survey (CWHS) showed that many California women have been witnesses or victims of DV. The CWHS further supported the research identifying the connection between exposure to DV as a child and poor health-related outcomes as an adult. On the 2005 CWHS, about 18.6 percent of respondents said they had witnessed their mother being treated violently before the age of 18. Women exposed to violence as children reported an average of 6.4 poor mental health days during the past 30 days, whereas women who were not exposed to violence as children reported an average of 4.4 poor mental health days. This difference was statistically significant.<sup>6</sup>

About 4,800 women participating in the 2007 CWHS reported on their own experiences with physical and psychological DV. Women were asked about any physical violence in the previous 12 months: whether an intimate partner threw something at them; pushed; kicked; or beat them; threatened them with (or used) a knife or gun; or forced them to have sex. Psychological abuse was assessed by asking whether the respondent was frightened, controlled, or followed by an intimate partner in the previous 12 months. The CWHS also asked respondents who said they had experienced physical DV whether any children were present or overheard any of the DV incidents. All findings from the CWHS were weighted by age and race/ethnicity to reflect the 2000 California adult female population.

The data showed that women and children are exposed to psychological and physical DV. About 6.6 percent of women reported at least one incident of psychological DV and about 3.8 percent of women reported at least one incident of physical DV during the previous 12 months (see Figure 1). Approximately 69.3 percent of the respondents experiencing physical DV had one or more children living in the home. Of the physical DV victims with children living in the home, 26.7 percent reported that children (not only those living in the home, but any child) overheard or were present during a DV incident during the past 12 months. The estimated number of women who experienced DV and children exposed to it appear in the following table.

## *Childhood Exposure to Physical Domestic Violence in California, 2007*

California Department of Public Health  
Epidemiology and Prevention for Injury Control Branch  
Violence Surveillance Unit  
Office of Family Planning Division  
Domestic Violence Program

### **Public Health Message:**

*The mental and physical health consequences to children who are exposed to incidents can be severe and life-long. Public health has an important role in preventing DV from ever occurring in the first place (primary prevention), and the continuing need to offer comprehensive shelter services to victims and their children when DV has already occurred.*

**Childhood Exposure to Physical Domestic Violence in California, 2007**

California Department of Public Health  
Epidemiology and Prevention for Injury Control Branch  
Violence Surveillance Unit  
Office of Family Planning Division  
Domestic Violence Program

Figure 1

<b>Domestic Violence (DV) Experienced by California Women and Childhood Exposure to Physical DV in the Previous 12 Months, 2007</b>	<b>Percent<sup>7</sup></b>	<b>Estimated number</b>
Women experiencing psychological DV	6.6	742,834
Women experiencing physical DV	3.8	421,667
Women experiencing physical DV with children living in the home	69.3	292,068
Women reporting any children exposed to physical DV incident(s)	26.7	77,826

Source: California Women’s Health Survey, 2007.

- 1 Osofsky JD. Prevalence of children’s exposure to domestic violence and child maltreatment: implications for prevention and intervention. *Clin Child and Fam Psychol Rev.* 2003;6(3):161-170.
- 2 Graham-Bermann SA, Edleson JL. (Eds.) Domestic violence in the lives of children: the future of research, intervention and social policy. 2001; Washington, DC: American Psychological Association.
- 3 Centers for Disease Control and Prevention. Atlanta: CDC. Adverse Childhood Experiences Study. <http://www.cdc.gov/nccdphp/ace/> Published January 2008. Accessed September 2008.
- 4 Dube SR, Anda RF, Felitti VJ, Edwards VJ, Williamson DF. Exposure to abuse, neglect and household dysfunction among adults who witnessed intimate partner violence as children: implications for health and social services. *Violence Vict.* 2002;286 (24):3089-96.
- 5 Whitfield CL, Anda RF, Dube SR, Felitti VJ. Violent childhood experiences and the risk for intimate partner violence in adults: assessment in a large health maintenance organization. *J Interpers Violence.* 2003;18(2):166-85.
- 6 p<.0001, chi-square test
- 7 Denominator used to calculate percent of “women experiencing psychological DV” and “Women experiencing physical DV” is out of all CWSHS respondents. Denominator used to calculate percent of “women experiencing physical DV with children living in the home” is out of all respondents who reported experiencing physical DV. Denominator used to calculate percent of “women reporting any children exposed to physical DV incident(s)” is out of all women who reported experiencing physical DV and had children living in the home.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

In the United States, one in six women report they have been the victim of attempted or completed sexual violence (SV) at some time in their lives.<sup>1</sup> In addition to the immediate impact of the violent crime itself, SV can adversely affect women's health. Researchers have shown that victims of sexual violence experience increased levels of post-traumatic stress disorder, depression, anxiety, suicidal ideation, substance abuse, and even physical problems.<sup>2</sup> In short, sexual violence is a serious threat to the health of American women. This report assesses this threat to California women.

To determine the number of California women victimized in 2007, California Women's Health Survey (CWHS) respondents were asked whether anyone had forced them into unwanted sexual activity: (1) before the age of 18; (2) since the age of 18; and (3) during the previous 12 months. Approximately 4,750 women responded to these questions.<sup>3</sup> The data were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population. Results appear in Figure 1.

To determine the health effects of SV, women who reported having experienced SV at any point during their lives were compared with women who had not ever experienced SV. The survey asked

respondents about both their physical and mental health in the past 30 days. Women who reported 15 or more days of physical health that were "not good" were considered to have poor physical health, and women who reported 15 or more days of mental health that were "not good" were considered to have poor mental health.

California women who reported a history of forced sexual activity were significantly more likely to report poor physical and mental health than women without a history of forced sexual activity (see Figure 2).

- Women experiencing SV were 1.6 times more likely to report poor physical health (27.2 percent) than women with no history of SV (16.7 percent).<sup>4</sup>
- Women experiencing SV were 1.9 times more likely to report poor mental health (30.1 percent) than women with no history of SV (16.1 percent).<sup>4</sup>
- Only 38.3 percent of women experiencing sexual violence reported zero days of poor mental health, compared with 56.9 percent of women with no history of SV.<sup>4</sup> In other words, women with no history of SV were more likely to have no poor mental health days.

## Health Status Among California Women Victimized by Sexual Violence, 2007

California Department of Public Health  
Violence Surveillance Unit  
Epidemiology and Prevention for Injury Control Branch

### Public Health Message:

*California women who have experienced sexual violence (SV) during their lifetime are significantly more likely to report poor mental and physical health than women who were not victims of SV. From a public health perspective, primary prevention of SV (stopping it before it happens) is critical to safeguard the physical and mental health of California women and ensure they do not experience adverse health conditions later in life. Victims of SV may also benefit from targeted interventions to improve their physical and mental health.*

Figure 1

Unwanted Sexual Activity	Percent	Estimated Number of California Women
In the previous 12 months	0.4%	44,280
Before the age of 18	12%	1,327,679
Since the age of 18	10%	1,153,874
In your lifetime	18%	1,996,614

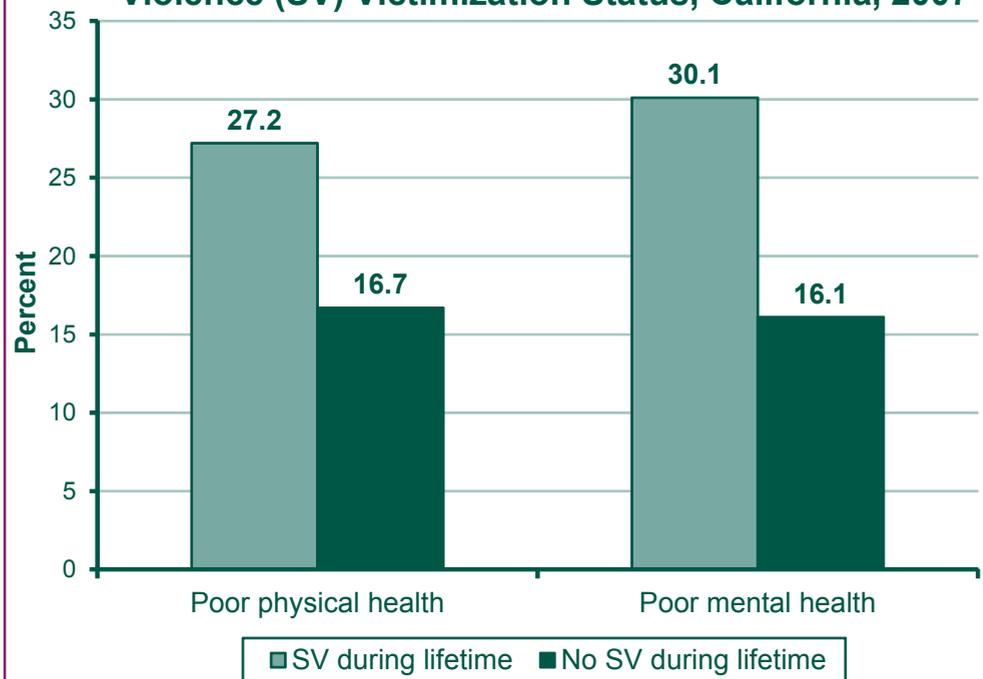
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*Health Status Among  
California Women  
Victimized by Sexual  
Violence, 2007*

California Department of Public  
Health  
Violence Surveillance Unit  
Epidemiology and Prevention for  
Injury Control Branch

Figure 2

**Reported Poor Physical and Mental Health, by Sexual  
Violence (SV) Victimization Status, California, 2007**



Poor health = 15 or more days of poor health reported out of past 30 days

Source: California Women's Health Survey, 2007

- 1 Tjaden P, Thoennes N. *Extent, nature, and consequences of intimate partner violence: Findings from the National Violence against Women Survey*. Washington (DC): Department of Justice (US); 2000.
- 2 Corso PS, Mercy JA, Simon TR, Finkelstein EA, Miller TR. Medical costs and productivity losses due to interpersonal and self-directed violence in the United States. *Am J Prev Med.* 2007;32(6):474-482.
- 3 Eleven percent of respondents did not answer SV or other relevant questions and were excluded from the analysis.
- 4  $p < 0.0001$ , chi-square test

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# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Intimate partner violence (IPV), also referred to as domestic violence, is defined as physical or sexual violence or psychological/emotional abuse by a current or former husband, partner, boyfriend, or girlfriend.<sup>1</sup> Research has indicated that IPV is consistently associated with negative health outcomes, both physical and mental.<sup>2</sup> Depression is associated with IPV as well as impairment in physical and social functioning.<sup>3</sup> This report examines the association between IPV in the past year and clinically significant symptoms of depression. This report also investigates the association between sexual assault and clinically significant symptoms of depression among California women.

This study used data from both the 2006 and 2007 California Women's Health Survey (CWHS). The CWHS included

nine questions on types of IPV. The six physical violence questions asked whether the respondent's intimate partner threw something at her; pushed, grabbed, or slapped her; kicked, bit or hit her; beat or choked her; forced her to have sex against her will; or used a knife or gun on her during the previous 12 months. Respondents answering "yes" to any of the physical violence questions were defined as having experienced intimate partner physical violence (physical IPV).

The three psychological/emotional abuse questions asked whether the respondent was frightened, controlled, or followed by an intimate or former partner. A respondent with no physical IPV who said "yes" to one of the psychological/abuse questions was defined as having psychological-only IPV.

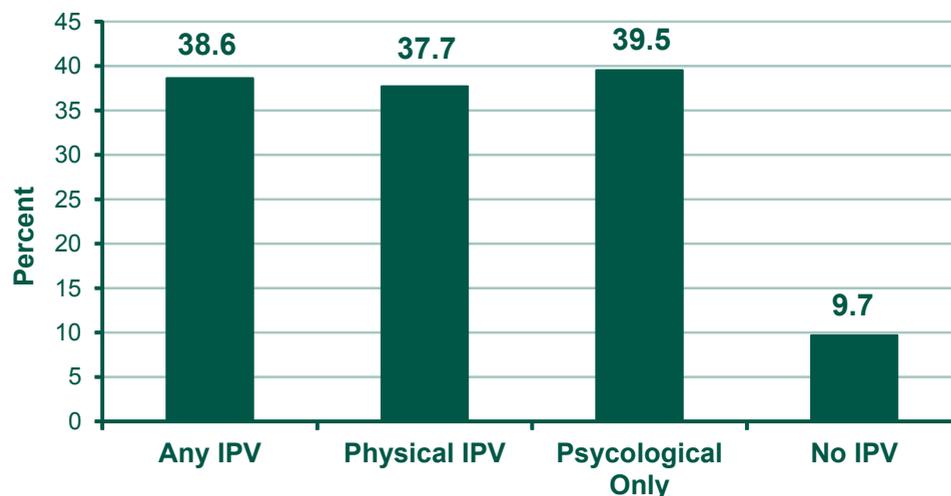
## *Symptoms of Depression Among Women Who Have Experienced Intimate Partner Violence and Women Who Have Experienced a Sexual Assault*

California Department of Public Health  
Chronic Disease Surveillance  
Research Branch  
Survey Research Group Section

### **Public Health Message:**

*When treating women who have experienced any type of IPV or sexual assault it is important to be aware that these women are at high risk for depression. Therefore, it would be important to screen women who have experienced any IPV or sexual assault for depression so that those who are affected can receive the treatment they need.*

Figure 1 **Current Depression by Intimate Partner Violence (IPV), 2007**



Source: California Women's Health Survey, 2007

## *Symptoms of Depression Among Women Who Have Experienced Intimate Partner Violence and Women Who Have Experienced a Sexual Assault*

California Department of Public Health  
Chronic Disease Surveillance Research Branch  
Survey Research Group Section

The 2006 and 2007 CWHS included two additional questions asking “*whether anyone ever forced you into unwanted sexual activity by using force or threatening to harm you.*” One question asked if this happened before age 18 and the second asked if this happened after age 18.

The 2006 and 2007 CWHS also included the patient health questionnaire (PHQ-8) to measure clinically significant symptoms of depression.<sup>4</sup> The PHQ-8 consists of eight questions asking how often respondents have been bothered by a symptom over the last two weeks.<sup>3-5</sup> Women with a score of ten or greater were defined as having clinically significant symptoms of depression.<sup>6</sup> The analysis on IPV and symptoms of depression included 8,992 respondents. All reported differences were significant at  $p < .05$ .

The results of the analysis indicated a strong significant association between IPV and symptoms of depression. The rate of clinically significant symptoms of depression among women with any IPV (38.6 percent) was almost four times higher than the rate among women with no IPV (9.7 percent). The rates of clinically significant symptoms of depression among both women with physical IPV (37.7 percent) and women with psychological IPV (39.5 percent) were significantly higher than the rate among those with no IPV (9.7 percent).

The results also indicated a strong association between sexual assault and clinically significant symptoms of depression. Women who experienced a sexual assault at any time in their life had significantly higher rates of clinically significant symptoms of depression (26.1 percent) than women who never experienced a sexual assault (8.6 percent). Women who experienced a sexual assault were divided into three mutually exclusive groups: those who experienced a sexual assault before the age of 18; those who experienced a sexual assault after the age of 18; and those who experienced an assault before and after the age of 18. The rate of depression among women who reported being sexually assaulted before the age of 18 (20.3 percent) and the rate among women who reported being sexually assaulted after the age of 18 (22.3 percent) were significantly higher than the rate among women who reported never being sexually assaulted (8.6 percent). Also, women who experienced a sexual assault both before and after the age of 18 had a significantly higher rate of depression (41.7 percent) than women who were sexually assaulted only before age 18 and women who were sexually assaulted only after age 18 (see Figure 2).

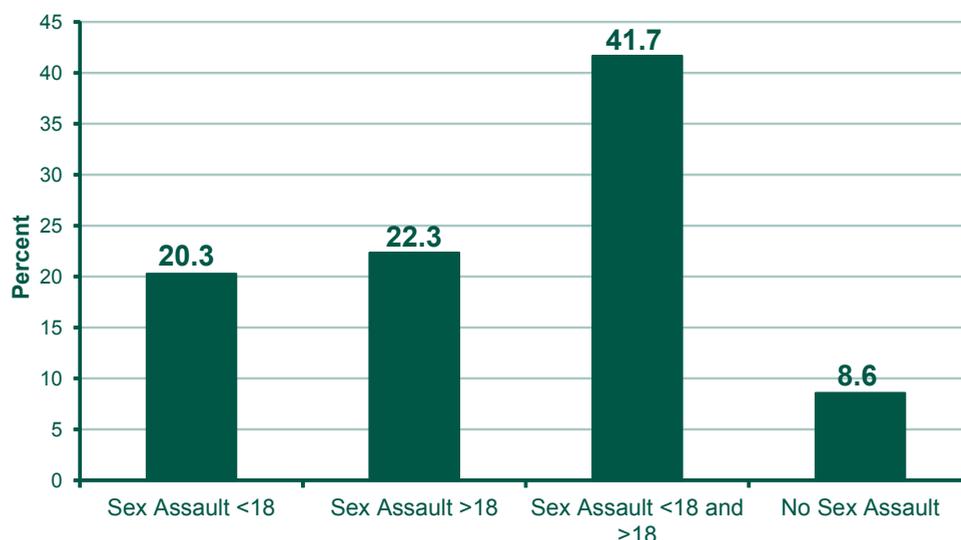
The results of this study emphasize how prevalent symptoms of depression are among women who have experienced any type of IPV or sexual assault.

*Symptoms of Depression Among Women Who Have Experienced Intimate Partner Violence and Women Who Have Experienced a Sexual Assault*

California Department of Public Health  
Chronic Disease Surveillance Research Branch  
Survey Research Group Section

Figure 2

**Current Depression by Sexual Assault, 2007**



Source: California Women's Health Survey, 2007

- 1 King G, Hershey LS, Trent R. Women with disabilities and their health, health care access and utilization. *Women's Health: Findings from the California Women's Health Survey, 1997-2003*. California.2006. <http://www.cdph.ca.gov/programs/owh/pages/default.aspx>. Published May 2006. Accessed June 2008.
- 2 Ellsberg M, Jansen H, Heise L, Watts C, Garcia-Moreno C. Intimate partner violence and women's physical and mental health in the WHO multi-county study on women's health and domestic violence: an observational study. *Lancet*. 2008;371:1165-72.
- 3 Kroenke K, Spitzer R. The PHQ-9: A new depression diagnostic and severity measure. *Psychiatr Ann*. 2002;32(9):1-7.
- 4 The CWHS response set was slightly modified from the response set in the original PHQ-8. Each CWHS question asks about the number of days a symptom occurred during the last two weeks. The response set is based on days rather than "not at all," "several days," "more than half the days," or "nearly every day" in the original PHQ-8. To score the questions, days are converted to points (0-1 day = 0 points: 2-6 days = 1 point: 7-11 days = 2 points: and 12-14 days = 3 points) and summed to obtain a total score.
- 5 Kroenke K, Spitzer R, Williams J. The PHQ-9 validity of a brief depression severity measure. *J Gen Intern Med*. 2001;6(9):606-13.
- 6 Kroenke K, Strine T, Spitzer R, Williams J, Berry J, Mokdad A. The PHQ-8 as a measure of current depression in the general population. *J Affective Disord*. 2008;in press.

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CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Chlamydia, a sexually transmitted disease (STD), is the most commonly reported communicable disease in California.<sup>1</sup> Untreated infections in women are associated with adverse health outcomes such as pelvic inflammatory disease, ectopic pregnancy, and infertility.<sup>2</sup> Because most women with chlamydia have no symptoms, screening tests are necessary to identify infections for timely treatment and to prevent long-term adverse outcomes.

Correct and specific knowledge about chlamydia contributes to women's awareness of the importance of accessing STD screening. Knowledge of chlamydia may also increase protective behaviors (e.g., condom use). The California STD Control Branch sought to assess the extent of this knowledge.

In 2007, California Women's Health Survey participants were asked, "Have you ever heard of Chlamydia?". Respondents who answered affirmatively were then asked, "What have you heard?". Response options reflecting specific and correct knowledge included: it is an STD; young women get it; it can cause health problems such as infertility; and Other. Multiple responses were allowed. Free-text responses to "Other" were coded as either correct or incorrect knowledge about chlamydia.

Analyses were restricted to women ages 18 to 44 (N = 2,218) and were stratified by age, race/ethnicity, and sexual risk assessment (i.e., "During the past 12 months, did a doctor or other health care

provider talk to you about your personal sexual behavior?"). Chi-square statistics were calculated for comparisons of proportions. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

- Overall, 79.1 percent of respondents reported having heard of chlamydia. No significant differences by age were observed.
- Higher proportions of White and African American/Black women reported having heard of chlamydia (95.5 percent and 93.9 percent, respectively) than Hispanic women (59.1 percent) or Asian/Other women (68.6 percent; all  $P < .0001$ ).
- Hispanic women interviewed in English were substantially more likely to have heard of chlamydia (89.9 percent) than were those interviewed in Spanish (39.8 percent;  $P < .0001$ ), but still less likely than White women (95.5 percent;  $P < .01$ ).
- Among respondents who had heard of chlamydia, 76.8 percent provided at least one specific and correct example of knowledge about the disease, with women ages 25 to 44 significantly more likely to have correct knowledge of chlamydia (78.7 percent) than women ages 18 to 24 (70.4 percent;  $P < .05$ ) (see Figure 1).

## Differences in Knowledge of Chlamydia Among California Women, by Age, Race/Ethnicity, and Receipt of Sexual Risk Assessment, 2007

California Department of Public Health  
Sexually Transmitted Disease Control Branch  
Division of Communicable Disease Control  
Center for Infectious Diseases

### Public Health Message:

Targeted awareness and health education interventions, including efforts to improve sexual risk assessments, could have an impact on chlamydia awareness and specific knowledge among younger women, Spanish-speaking Hispanic women, and Asian women. This could increase their likelihood of accessing STD services, including recommended screening and other risk-reduction resources.

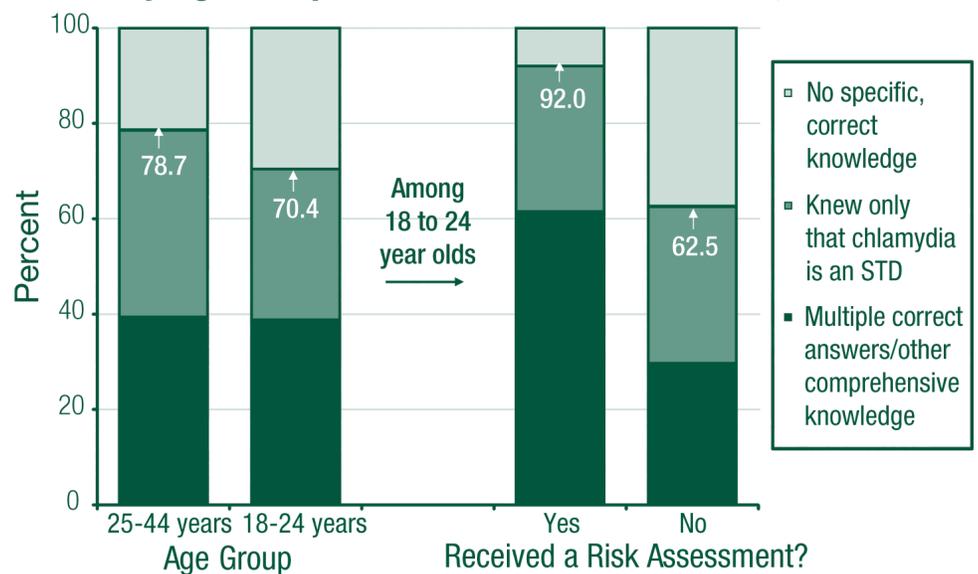
*Differences in Knowledge of Chlamydia Among California Women, by Age, Race/Ethnicity, and Receipt of Sexual Risk Assessment, 2007*

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- Of women who had heard of chlamydia, 39.3 percent identified multiple/other comprehensive facts; an additional 37.5 percent identified only that chlamydia is an STD.
- A greater proportion of Hispanic women (81.5 percent) demonstrated specific and correct knowledge of chlamydia than did White women (74.8 percent,  $P < .05$ ). Although 83.1 percent of African American/Black women and 71.9 percent of Asian/Other women reported specific knowledge of chlamydia, these were based on small numbers and comparisons with White respondents and were not significant.
- Only 20.3 percent of women ages 18 to 44 received a sexual risk assessment in the previous year. Women ages 18 to 24 were more likely to have received a risk assessment (25.7 percent) than women ages 25 to 44 (18.6 percent;  $P < .05$ ).
- Among women ages 18 to 24, those who received a risk assessment demonstrated greater knowledge of chlamydia (92.0 percent; see Figure 1), including 60 percent who identified multiple/other comprehensive facts, compared to those without an assessment (62.5 percent;  $P < .0001$ ). Among women ages 25 to 44, no differences in knowledge of chlamydia were observed between those with a risk assessment and those without, including the proportion citing multiple/other comprehensive facts.

Figure 1

**Proportion of California Women With Correct and Specific Knowledge of Chlamydia, Among Those Who Have Heard of Chlamydia, by Age Group and Risk Assessment Status, 2007**



Source: California Women's Health Survey, 2007

*Differences in Knowledge  
of Chlamydia Among  
California Women,  
by Age, Race/Ethnicity,  
and Receipt of Sexual  
Risk Assessment, 2007*

California Department of Public  
Health  
Sexually Transmitted Disease  
Control Branch  
Division of Communicable  
Disease Control  
Center for Infectious Diseases

- 1 *Sexually Transmitted Diseases in California, 2007*. California Department of Public Health, STD Control Branch; 2008. <http://www.cdph.ca.gov/data/statistics/Documents/STD-Data-2007-Report.pdf>. Accessed July 2009.
- 2 Centers for Disease Control and Prevention (CDC). CDC Fact Sheet - *Chlamydia; 2007*. <http://www.cdc.gov/std/Chlamydia/STDFact-Chlamydia.htm>. Accessed July 2009.

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