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Publication Date
2004-07-01

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Contraception

Contraception 70 (2004) 000–000
Original research article

Contraceptive use and risk of unintended pregnancy in California

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Received 12 November 2003; received in revised form 22 January 2004; accepted 22 January 2004

Abstract

California is home to more than one out of eight American women of reproductive age. Because California has a large, diverse and growing population, national statistics do not necessarily describe the reproductive health of California women. This article presents risk for pregnancy and sexually transmitted infections among women in California based on the California Women's Health Survey. Over 8900 women of reproductive age who participated in this survey between 1998 and 2001 provide estimates of access to care and use of family-planning methods in the state. We find that 49% of the female population aged 18–44 in California is at risk of unintended pregnancy. Nine percent (9%) of women at risk of an unintended pregnancy are not using any method of contraception, primarily for method-related reasons, such as a concern about side effects or a dislike of available contraceptive methods. Among women at risk for unintended pregnancy, we find disparities by race/ethnicity and education in use of contraceptive methods.

AQ: 4 *Keywords:*

1. Introduction

Despite the availability of a growing number of safe and effective contraceptive methods in the United States, unintended pregnancy continues to be a significant public health concern. It is estimated that 49% of all pregnancies among women in the United States are unintended, and over half of those end in abortion [1]. While national surveys document contraceptive trends for the United States as a whole, factors associated with variations in contraceptive use and risk for unintended pregnancy in the state of California are not well known. Because of California's large, diverse and growing population, understanding contraceptive behavior in this state is especially important. Contraceptive method choice significantly affects a woman's likelihood of experiencing an unintended pregnancy. An analysis of trends in contraceptive use will provide critical information to California family-planning providers and policy-makers about risk for unintended pregnancy in the state. In this article, we examine risk for unintended pregnancy among women age 18–44; contraceptive use patterns and reasons women give for not using a method of contraception. We examine factors that may hinder access to family-planning services and we identify subgroups in California that are at especially high risk of unintended pregnancy.

California is the most populous and ethnically diverse state in the United States. In addition to its size, three factors distinguish California's population—a high rate of growth, a high level of immigration and great ethnic diversity. California has a population growth rate of 1.9% per annum [2], driven primarily by birth to state residents.[1] The Hispanic and Asian populations are growing most rapidly, with an average annual growth rate of nearly 3%, seven times that of whites [3]. The state's high level of immigration contributes to population growth and to the increasing diversity of the state. Half of the current California population was born elsewhere, either in a foreign country (26%) or in a different state (23%) [4]. Finally, unlike any other state in the nation, no one racial or ethnic group constitutes a majority in

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0010-7824/04/$ – see front matter
doi:10.1016/j.contraception.2004.01.012

California. The state's population of 34 million is 47% white, 32% Hispanic/Latino, 12% Asian and 7% Black/African American, making California home to roughly one third of the nation's Hispanic and Asian populations [5].

While a significant body of current research describes national demographics of contraceptive method choice [6–8] and unintended pregnancy [9–13], few articles address unintended pregnancy and contraceptive method use in California. In their study of unintended pregnancies in 1999 and 2000 in California, Cubbin et al. [14] report differences in the intendedness of births between race/ethnic groups that persist after controlling for socioeconomic factors—African American women and native born Latinas were more likely to experience an unintended pregnancy than other women. While examining determinants of contraceptive method among women in Northern California from 1996 to 1999, Raine et al. [15] found that Asian and Latina women were less likely than other women to use contraception. Previous research suggests that race/ethnic differences may be important in understanding contraceptive use and risk for unintended pregnancy in California.

2. Material and methods

2.1. Data

This article describes risk for unintended pregnancy among women in California based on 4 years of the California Women's Health Survey (CWHS), an annual telephone survey of over 4000 randomly selected adult women (aged 18 years and older) in California. The survey is a collaborative effort between the California Departments of Health Services, Mental Health, Alcohol and Drug Programs, and Social Services; the California Medical Review, Inc.; and the Public Health Institute. The CWHS contains over 200 demographic, health behavior and healthcare access questions. Data are collected in English and Spanish. The percentages of eligible women who agreed to participate in the CWHS were 70% in 1998, 81% in 1999 and 74% in 2000 and 2001.

Combining the survey responses of over 8900 women of reproductive age who participated in the CWHS between 1998 and 2001 provides a sufficient sample to make estimates of risk for pregnancy and contraceptive use among small demographic subgroups. The analysis of risk for pregnancy is limited to women between 18 and 44 years of age. Data about the health of women below age 18 are not available through the CWHS. Because questions regarding menopause were inconsistent across study years, it is difficult to assess fecundity in women over age 44. Results are weighted to account for sample design and to reflect the age and racial/ethnic composition of California women in the 2000 census.

2.2. Methodology

The analyses in this article focus on the risk for unintended pregnancy in California. Women are considered to be at risk of unintended pregnancy if they are sexually active, fecund, not pregnant or postpartum and do not want to become pregnant. Women are considered to be sexually active if they report having had sex with a male partner in the past 12 months. Women are considered to be postpartum if they have delivered within the previous 3 months. Among women at risk of unintended pregnancy, some report using reversible contraceptive methods and may become pregnant due to user error or method failure, while others are using no method of contraception. We present estimates of women at risk of unintended pregnancy and highlight those who are at risk but are using no method, as these women have especially large odds of having an unintended pregnancy.

In order to identify women at risk of unintended pregnancy, we construct a risk-for-pregnancy variable by assigning each woman to 1 of 10 pregnancy risk groups based on her responses to questions about her fertility, pregnancy intentions and contraceptive use. The pregnancy risk groups in order of assignment are: hysterectomy, sterilized/partner sterilized, menopausal, infertile, pregnant, seeking pregnancy, not sexually active (no male partner) past 12 months, postpartum, contracepting and not contracepting. Women are assigned to the first category that fits their risk for pregnancy. For example, a woman who reports having had a hysterectomy and who is also not sexually active is placed in the hysterectomy group.

In the CWHS, women are asked about all methods of contraception that they are currently using. To present these data, we construct a primary method of contraception variable. The methods in order of assignment are: male sterilization, female sterilization, intrauterine contraceptive, implant, injectables, oral contraceptives, diaphragms, cervical caps, male condoms, female condoms, spermicides alone, natural family planning and withdrawal. The first method that women report having used is considered to be their primary method.

Race and ethnicity categories for these analyses include white, Hispanic, Black/African American, North Asian, South/Southeast (S/SE) Asian and other (including American Indians and Pacific Islanders). The North Asian group includes Korean, Chinese and Japanese women. The S/SE Asian group includes Filipina, Vietnamese, Cambodian, Laotian, East Indian and Indonesian women.

In presenting the factors that are associated with risk for unintended pregnancy and contraceptive use, we test all cross tabulations using analysis of variance tests to determine significance between groups. To examine nonuse of contraceptive methods among women at risk of an unintended pregnancy, we use a multivariate logistic regression model.

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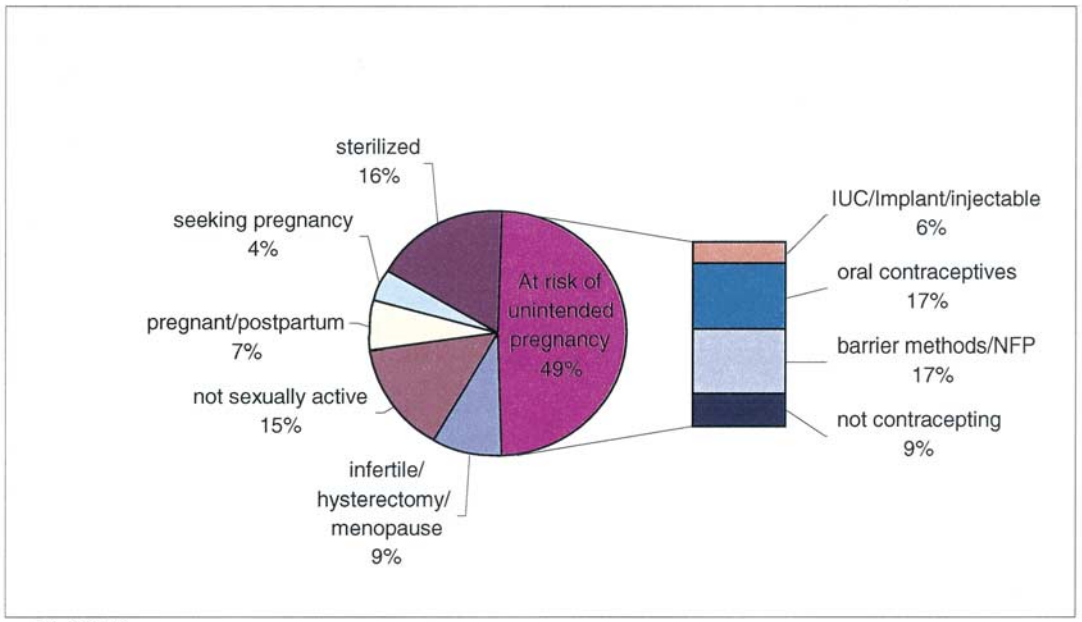

Fig. 1. Risk for pregnancy in California.

3. Results

3.1. Risk for unintended pregnancy among women age 18–44

Just over half of the women (51%) aged 18–44 in California are not at risk of unintended pregnancy. Sixteen percent have been sterilized or have partners who have been sterilized. Nine percent are infertile, menopausal or have had a hysterectomy. Fifteen percent of women aged 18–44 have not been sexually active with a male partner in the past year, and 11% are pregnant, postpartum or seeking pregnancy.

The remaining 49% of the female population aged 18–44 in California are at risk of unintended pregnancy. Forty percent are using reversible methods, including barrier methods and natural family planning (17%), oral contraceptives (17%) and long-acting methods such as intrauterine contraceptives (IUCs), implants and injectibles (6%). Nine percent (9%) of women who are at risk of an unintended pregnancy are not using any method of contraception (Fig. 1).

There are significant differences in the risk for unintended pregnancy by sociodemographic characteristics. Table 1 presents the percentage of women not at risk of an unintended pregnancy; the percentage at risk who are using a reversible method of contraception and the percentage at risk who are not using a method of contraception, by significant sociodemographic characteristics.

Women in their 20s are most likely to be at risk of an unintended pregnancy. Women aged 18–20 are less likely to be sexually active than women in their 20s. Women older than age 29 are more likely to have had a hysterectomy or be sterilized than women in their 20s. Contraceptive use also peaks in the 20s. Women in their late 20s (25–29 years) are most likely to be at risk for unintended pregnancy and not using any method of contraception.

Risk for unintended pregnancy and contraceptive use varies significantly by race/ethnicity. Among all racial/ethnic groups, use of reversible methods of contraception is highest among North Asian women and lowest among S/SE Asian women (45% and 34%, respectively). Six percent of white women are at risk and are not using contraception, compared to 13% of S/SE Asian women, 12% of women of other race/ethnicity, 10% of Hispanic and North Asian women and 9% of Black/African American women. The high percentage of S/SE Asian women who are at risk and are not using a method of contraception is due to a low sterilization rate, which increases the prevalence of risk for unintended pregnancy, but is not matched by increased use of reversible contraceptives.

Use of a contraceptive method is correlated with income. Women with higher incomes are more likely to use a method of contraception than low-income women. Forty-two percent of women with incomes over 200% of the federal poverty level (FPL) are using a reversible method compared to 37% of women who have incomes below 200% FPL. As a result of differential contraceptive use, women with lower incomes are more likely to be at risk of an unintended pregnancy and using no method of contraception. Twelve percent of women at risk for unintended pregnancy whose incomes are below 100% FPL are not

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Table 1
Percentage of California women aged 18–44 who are not at risk of unintended pregnancy and contraceptive prevalence among those at risk of an unintended pregnancy, by selected characteristics[a]

	Not at risk (%)[b]	Using reversible method of contraception (%)[c]	Not using contraception (%)	Total (%)	Total respondents	Probability value
Total	51.4	40.0	8.7	100	8,970	
Age						
18–19	48.8	42.6	8.7	100	416	0.000
20–24	38.4	53.4	8.2	100	1,168	0.000
25–29	39.3	50.3	10.4	100	1,642	0.000
30–34	47.7	44.7	7.7	100	1,908	0.000
35–39	59.3	32.1	8.6	100	2,008	0.000
40–44	69.9	21.5	8.6	100	1,828	Reference
Race/ethnicity						
White	54.1	39.7	6.2	100	4,387	Reference
Hispanic	48.5	41.3	10.2	100	3,117	0.000
Black/African American	50.8	40.3	9.0	100	526	0.031
North Asian	45.6	44.8	9.6	100	262	0.000
S/SE Asian	52.8	33.9	13.4	100	333	0.002
Other	53.5	34.2	12.2	100	343	0.082
Union type						
Not in union	52.5	39.1	8.4	100	3,007	0.000
Unmarried couple	40.3	50.4	9.3	100	687	0.870
Married couple	52.1	39.2	8.8	100	5,274	Reference
Poverty status						
Below 100% FPL	50.7	37.1	12.2	100	1,716	0.008
100–200% FPL	52.9	39.6	7.6	100	1,767	0.208
Over 200% FPL	50.7	41.7	7.6	100	5,024	Reference
Educational level						
No high school diploma	50.7	38.3	11.1	100	1,622	0.395
High school diploma	53.1	38.2	8.7	100	4,847	0.063
College diploma	48.3	44.8	6.9	100	2,501	Reference
Health insurance						
No health insurance	47.0	42.0	11.0	100	1,760	0.000
Medi-Cal	57.5	32.5	10.0	100	1,007	0.086
Private health insurance	51.6	40.7	7.7	100	6,203	Reference
Place of birth						
Native US-born	53.3	40.0	6.8	100	6,052	Reference
Foreign-born	47.9	40.0	12.1	100	2,916	0.000

Data: California Women's Health Survey, 1998–2001.

[a] Percentages are weighted to reflect sample design and the age and ethnic distribution of the female California population according to the 2000 Census.

[b] Women who are not at risk of unintended pregnancy are infertile, menopausal, not sexually active, pregnant/postpartum, seeking pregnancy, sterilized or have had a hysterectomy.

[c] Reversible methods of contraception include intrauterine contraceptives, implants, injectables, oral contraceptives, barrier methods and natural family planning.

using a method of contraception, compared to 8% of women whose incomes are over 100% of the FPL.

Women with a college diploma are more likely to be at risk of an unintended pregnancy than women with less education, but they are also much more likely to be using a reversible method of contraception. Women with no high school diploma are most likely to be at risk of an unintended pregnancy and not using a method of contraception (11%), compared to high school graduates (9%) and college graduates (7%).

Health insurance coverage and type of coverage is related to women's risk for unintended pregnancy and use of reversible methods. Because many low-income women can receive coverage through Medi-Cal, California's Medicaid program, if they become pregnant, we expect to find big differences in reproductive health status by health insurance coverage. Seventeen percent of the women who report receiving Medi-Cal for their healthcare coverage are pregnant or postpartum. Women without a source of healthcare coverage are more likely to be at risk of an unintended pregnancy and not using contraception than women with private health insurance coverage (11% vs. 8%).

One of the greatest differences in use of contraception is by place of birth. Although 40% of both native US-born and foreign-born women are using a reversible method of contraception, foreign-born women are significantly more

Table 2
Percentage distribution of primary contraceptive method for California women aged 18–44[a]

Contraceptive method	Age (y) 18–19	20–24	25–29	30–34	35–39	40–44	All women
Male sterilization	0.0	0.7	4.0	8.4	17.6	28.0	11.5
Female sterilization	0.0	1.6	8.5	17.0	26.3	33.3	17.1
Intrauterine contraceptive	2.3	2.7	4.3	4.8	5.2	2.7	3.9
Implant	0.7	1.2	1.5	0.7	0.2	0.2	0.7
Injectables	10.9	13.7	8.8	5.1	2.2	0.5	6.0
Oral contraceptive	42.7	47.0	42.9	34.1	21.5	12.0	31.5
Diaphragm	0.0	0.4	0.6	0.9	1.5	2.5	1.1
Cervical cap	0.0	0.2	0.0	0.0	0.1	0.4	0.2
Male condom	41.9	30.1	26.7	25.5	21.3	16.9	24.8
Female condom	0.0	0.0	0.2	0.1	0.0	0.0	0.1
Spermicides	0.8	0.3	0.2	0.7	0.7	0.8	0.6
Natural family planning	0.3	1.9	1.8	2.3	2.5	2.7	2.2
Withdrawal	0.3	0.2	0.4	0.5	0.9	0.2	0.5
Total	100	100	100	100	100	100	100
Total unweighted respondents	201	722	1044	1243	1278	1087	5575
Probability value	0.000	0.000	0.000	0.000	0.000		

Data: California Women's Health Survey, 1998–2001.
[a] Percentages are weighted to reflect sample design and the age and ethnic distribution of the female California population according to the 2000 Census.

likely to be at risk for unintended pregnancy and not using contraception than US-born women (12% vs. 7%).

3.2. Methods used by contracepting women

In California, the most commonly reported primary methods of contraception are oral contraceptives (32%), male condoms (25%), female sterilization (17%), and male sterilization (12%). Eleven percent of California women use long-acting methods of reversible contraception (6% injectables, 4% IUC, 1% implant). Over 3% of women are relying on low-efficacy methods—spermicide alone, natural family planning or withdrawal—as their primary method of contraception (Table 2).

Among contracepting women, almost one third (29%) use condoms alone or in addition to another method of contraception. Among women aged 18–19 years, over half (56%) use condoms as a primary method of contraception or concurrent with another primary method. The percentage of women using condoms decreases with age, with fewer than one in five 40–44-year-olds using condoms (19%). Concurrent condom use data are not shown in the table.

Primary method of contraception varies considerably across racial and ethnic groups. In particular, both North Asian and S/SE Asian women are more likely to use condoms or natural family planning and less likely to use sterilization (male and female) compared to women in other racial and ethnic groups. Forty percent of North Asians and S/SE Asians use condoms, compared to 21% of white women and 24% of Hispanic women. Roughly one of five North Asian women (19%) and S/SE Asian women (21%) use either male or female sterilization, compared to one third of white women (33%) and a quarter (26%) of Hispanic and Black/African American women. Finally, North Asian and S/SE Asian women are more likely to use natural family planning, 4% and 7%, respectively, compared to 2% or fewer of white, African American and Hispanic women (Table 3).

Use of male vs. female sterilization is specific to racial/ethnic groups. White women and North Asian women are more likely to rely on male sterilization (18.2% and 11.1%, respectively), whereas women in other racial and ethnic groups are more likely to use female sterilization (20.8% of Hispanic women, 22.3% of Black/African American women and 22.9% of women of Other race/ethnicity).

3.3. Reasons for not using a method of contraception among women at risk of an unintended pregnancy

The 735 women at risk of an unintended pregnancy and not using a method of contraception were asked their main reason for not using contraception. A total of 673 women gave a response (92%). We group the responses to this question into six types. Forty-five percent gave reasons related to contraceptive methods—20% reported that they did not like method side effects, and 11% reported that they do not like or do not want to use birth control. One third (33%) of the women did not consider themselves to be at risk, despite having answered other survey questions that put them in the category of at risk of unintended pregnancy. Among those who did not consider themselves to be at risk, 12% reported that they were not sexually active and 6% reported that they do not need birth control. Nine percent (9%) of women gave answers that showed unconcern about pregnancy or contraceptive use (5% did not think about it, 4% said they were not worried about pregnancy). Five percent of women reported problems of access to birth

Table 3
Percentage distribution of primary contraceptive method for California women aged 18–44 by race/ethnicity[a]

Contraceptive method	White	Hispanic	Black/ African American	North Asian	S/SE Asian	Other	All women
Male sterilization	18.2	5.6	3.6	11.1	6.0	9.3	11.5
Female sterilization	14.3	20.8	22.3	7.4	15.6	22.9	17.1
Intrauterine contraceptives	2.8	5.3	3.6	7.1	2.0	3.1	3.9
Implant	0.2	1.5	0.9	0.0	0.0	1.7	0.7
Injectables	3.8	9.4	10.0	0.0	3.7	5.1	6.0
Oral contraceptives	34.9	29.7	28.5	30.2	23.5	25.1	31.5
Diaphragm	2.1	0.4	0.3	0.0	0.0	0.4	1.1
Cervical cap	0.2	0.1	0.0	0.0	0.0	0.4	0.2
Male condom	20.9	24.1	27.8	39.9	40.6	28.3	24.8
Female condom	0.0	0.2	0.0	0.0	0.0	0.0	0.1
Spermicides	0.7	0.4	1.3	0.4	0.0	0.0	0.6
Natural family planning	1.8	1.8	1.8	3.6	6.5	2.5	2.2
Withdrawal	0.2	0.5	0.0	0.3	2.2	1.0	0.5
Total	100	100	100	100	100	100	100
Total unweighted respondents	2828	1917	314	157	164	194	5574
Probability value		0.001	0.002	0.000	0.000	0.177	0.001

Data: California Women's Health Survey, 1998–2001.
[a] Percentages are weighted to reflect sample design and the age and ethnic distribution of the female California population according to the 2000 Census.

control methods or services and 7% of women gave other reasons (Table 4).

In the CWHS, women were asked if they had ever gone without birth control supplies in the past year for three specific reasons: because they lacked money; they lacked knowledge about services or supplies or they had barriers to getting appointments. Six percent (6%) of women at risk of unintended pregnancy went without contraceptives because they did not have enough money to pay for them; 4% did not know where to get services or supplies; and 6% could not get an appointment or a convenient appointment. These percentages are higher among women not using a method of contraception (10%, 6% and 10%, respectively). However, even among women who were using a method at the time of the survey, some had gone without contraception in the previous year for one of these three reasons (5%, 3% and 6%, respectively) (Table 5).

3.4. Predictors of nonuse of contraceptive methods

We use a logistic regression model to examine the many factors that correlate with noncontraceptive use among women at risk of an unintended pregnancy. This model is restricted to women at risk of an unintended pregnancy and predicts who is not using any method of contraception. The reference group is married native-born white women aged 30–34 with a college diploma, private insurance and an income above 200% FPL. Many variables are significantly associated with nonuse of contraception. However, there is significant variation in nonuse of contraceptive methods that is not explained by these variables (adjusted $R^2 = 5\%$).

South/Southeast Asian women are more than twice as likely not to use a method of contraception as this reference

Table 4
Main reasons for not using a contraceptive method among women aged 18–44 at risk for unintended pregnancy and not using contraception

	n	%
Contraceptive method-related reasons	302	45
Does not like side effects	134	20
Does not like/want to use birth control	75	11
Health reasons	36	5
Concern about long-term health problems	24	4
Birth control too difficult to use	16	2
Partner objects to using birth control	13	2
Lovemaking would be interrupted	4	1
Do not consider themselves to be at risk	225	33
Not sexually active	84	12
No need for birth control	40	6
Cannot get pregnant	25	4
Partner sterile	20	3
Postpartum nursing	17	3
Monogamous	16	2
Infrequent sexual activity	15	2
Too old to get pregnant	6	1
Partner is a woman	2	0
Unconcerned about contraceptive use or pregnancy	61	9
Did not think about it	31	5
Not worried about pregnancy	24	4
Pregnancy would be okay	6	1
Problems of access to methods	33	5
Cannot afford birth control	25	4
Does not know how/where to get birth control	8	1
Other reasons	52	7
Against religion	16	2
Other	36	5
Total	673	100

Data: California Women's Health Survey, 1998–2001.

Table 5
Reasons for going without contraception over past year, California women at risk of unintended pregnancy age 18 to 44[a]

In the past year, have you ever gone without birth control because…	Women who are using a method of contraception		Women who are not using contraception		Total women at risk of unintended pregnancy	
	%	n	%	n	%	n
…you did not have enough money to pay for them?	5.4	3619	10.4	709	6.2	4328
…you did not know where to get services or supplies?	3.2	3615	5.7	705	3.6	4320
…you could not get an appointment or it was not convenient to go to an appointment?	5.6	3608	9.8	702	6.3	4310

Data: California Women's Health Survey, 1998–2001.
[a] Percentages are weighted to reflect sample design and the age and ethnic distribution of the female California population according to the 2000 Census.

group. Women aged 35 and older are significantly less likely to use contraception than women under age 35. Foreign born women are 55% more likely not to use a method of contraception. Education also has a strong effect—women who do not have a college diploma are nearly twice as likely not to use a method of birth control as college graduates. Neither marital union status, health insurance coverage nor poverty level has a significant effect on the likelihood of using contraception among women at risk for unintended pregnancy when we control for age, race/ethnicity, nativity and education (Table 6).

4. Discussion

The CWHS reveals that certain subgroups of women at risk for unintended pregnancy have high levels of contraceptive nonuse, as well as high levels of use of less effective contraceptive methods. Specifically, women in their late 20s and women over age 35, women with incomes below 100% FPL, women with low education levels, women without health insurance, foreign-born women and women of S/SE Asian race/ethnicity all have high levels of nonuse. Although we identify several factors that are associated with nonuse of contraception among women at risk of unintended pregnancy, there is much variation that is not explained by our models. The need for protection against unintended pregnancy spans all age, race/ethnic and socioeconomic groups.

Even women who use contraceptives may have a high probability of having an unintended pregnancy. We find that many Asian women and younger women rely on condoms as their primary method of contraception. Asian women, especially S/SE Asian women, are more likely to use natural family planning and withdrawal as their primary method. These contraceptive methods are inexpensive or free, but they are also less effective, placing women at a potentially greater risk of unintended pregnancy. One of 20 women who report current contraceptive use revealed that they have gone without birth control in the past year due to a lack of money.

Our findings validate the need for more detailed analyses among the Asian population. Our race/ethnicity division of S/SE and North Asian women reveals distinctive patterns of

Table 6
Logistic regression predicting nonuse of contraceptives among women at risk of unintended pregnancy in California (1998–2001)

Variable	Odds ratio	95% Confidence interval
Race/ethnicity		
White	(Reference)	
Hispanic	1.027	(0.769, 1.371)
Black/African-American	1.177	(0.791, 1.750)
North Asian	1.169	(0.695, 1.966)
S/SE Asian	2.132*	(1.367, 3.324)
Other	1.812*	(1.141, 2.877)
Age (y)		
18–19	1.201	(0.742, 1.945)
20–24	0.804	(0.565, 1.144)
25–29	1.174	(0.876, 1.574)
30–34	(Reference)	
35–39	−1.686*	(1.263, 2.251)
40–44	2.497*	(1.828, 3.411)
Union status		
Not in a union	1.066	(0.847, 1.343)
Part of unmarried couple	0.948	(0.676, 1.329)
Married	(Reference)	
Nativity		
Native US-born	(Reference)	
Foreign-born	1.548*	(1.180, 2.030)
Health insurance status		
No health insurance	1.134	(0.850, 1.515)
Medi-Cal coverage	1.326	(0.929, 1.892)
Private health insurance	(Reference)	
Poverty level		
Below 100% FPL	1.348	(0.989, 1.837)
Between 100–200% FPL	0.873	(0.658, 1.158)
Above 200% FPL	(Reference)	
Education		
No high school diploma	1.583*	(1.091, 2.298)
High school diploma	1.786*	(1.374, 2.321)
Some college	(Reference)	

Data: California Women's Health Survey, 1998–2001.
N = 4161 women at risk of unintended pregnancy. LR χ^2 (19) = 148.51. R^2 = 0.0509.
* Significant at 0.05 level.

contraceptive method use. The Asian population in California is diverse and these differences result in potentially significant variations in health practices, beliefs and use of the healthcare system. To date, very few studies have examined the sexual and reproductive health status and needs of the US Asian population [16–19]. Additional multilingual studies of the Asian population and culturally appropriate services are needed to effectively meet the reproductive health needs of Asian subgroups in California.

One of the most striking findings of our analysis is the extent to which barriers to contraceptive use are method-related. Fear of side effects, health-related effects, a dislike of birth control and difficulty with method use are reported by nearly half of women who are at risk of an unintended pregnancy and not using a method of birth control. A large reduction in nonuse of methods may be achieved through outreach and education about family-planning method choices, the availability of emergency contraception, and new advances in contraception.

According to our algorithm, one third of women who are at risk of unintended pregnancy gave answers that indicated they did not consider themselves to be at risk when asked why they were not using a method of birth control. Half of these women report that they are not sexually active—a potential discrepancy between our definition of sexual activity (having had intercourse in the past year) and women's current risk for pregnancy. Because of the inconsistency in the timeframe of our definition of sexually active and use of contraception, we may overestimate the population at risk of unintended pregnancy and the proportion of women at risk who do not use birth control. However, many women who do not believe themselves to be at risk experience unintended pregnancies—one of the causes of a high abortion rate among older women [1].

Because the CWHS does not survey women younger than age 18, our analysis does not include data about contraceptive use for Californian teenagers under 18 years old. This exclusion is unfortunate, because some of the greatest changes in contraceptive use have occurred among women under age 18. California's teen birth rate is now lower than the national average (45.1 compared to 46 per thousand in 2001) after years of being among the highest in the country. From 1998–2001, California's teen birth rate dropped 15.2% with decreases reflected across all ethnic groups [20].

We find that problems of access to family-planning services are less common than other reasons for not using birth control. Six percent of women at risk of an unintended pregnancy have gone without birth control in the past year due to a lack of money or difficulty getting an appointment. Only 5% of nonusers report that their nonuse is due to financial constraints or not knowing where to get methods. The apparent low barriers to family-planning services and supplies may be due to the success of California's Family PACT (Planning, Access, Care and Treatment) Program, which provides family-planning services to uninsured men and women with incomes up to 200% of the FPL and serves over 1 million people per year. According to our analyses, the 2000 Women's Contraceptive Equity Act, which mandates that prescription drug benefits include contraceptives, does not appear to have resulted in an increase in women's use of private insurance to cover contraception. Through increased awareness of the Contraceptive Equity Act, promotion of Family PACT services, and education about new contraceptive options, the prevalence of unintended pregnancy in the state may continue to decline.

Compared to findings from the National Survey of Family Growth (NSFG) from 1995, we find similar levels of total contraceptive use in California [21]. Overall, in both California and the nation as a whole, 40% of women of reproductive age are using a reversible method of contraception. California women are more likely than women throughout the country to be using IUCs (4% vs. 1%) and injectables (6% vs. 3%) and California women are less likely to be using withdrawal (0.5% vs. 3%). Among all contraceptive methods, tubal ligation rates are lower in California than in the rest of the country. Among women age 40–44, 19% have been sterilized in California, compared to 36% throughout the United States. Differences in the age of the survey population and in the wording of questions makes direct comparison between those not at risk of unintended pregnancy and those at risk but not using contraception difficult.

5. Conclusion

Our findings from the CWHS show that unintended pregnancy is a substantial social and public health concern in California. Almost half (49%) of sexually active women between 18 and 44 are at risk for unintended pregnancy, and 9% are not currently using contraception. The highest rates of contraceptive nonuse are among S/SE Asian women, foreign-born women and women who do not have education past high school. Nearly half of women at risk who are not using a contraceptive method report contraceptive method-related reasons, such as concern about side effects and dislike of birth control methods. Even women who report current contraceptive use may experience unintended pregnancy due to contraceptive failure and inconsistent use; over 5% of contraceptive users report they have gone without birth control in the past year specifically due to a lack of money or difficulty with appointments.

Race/ethnicity, education, nationality and income significantly affect contraceptive method use, compliance and access in California. In order to decrease the incidence of unintended pregnancy in California, further research on the causes of disparities in method use and dedicated resources to increase access to and education about contraceptives are needed.

Note

1. The total fertility rate for the state is 2.26 children per woman; State of California, Department of Finance, Demographic Research Unit, Historical and Projected Births by County, 1970–2001, with Births by Age of Mother and Fertility Rates, Sacramento, CA, August 2002; the total fertility rate for foreign-born California women is 2.79; personal communication, Hans P. Johnson, Public Policy Institute of California.

Acknowledgments

This research was supported in part by funds from the California Program on Access to Care (CPAC), California Policy Research Center, University of California, grant number 02GT15. The views and opinions expressed do not necessarily represent those of The Regents of the University of California, CPAC, its advisory board, or any State or County executive agency represented thereon.

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