

Uninsured Californians and Access to Prescription Drugs

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FROM THE DIRECTOR

I am pleased to issue *Uninsured Californians and Access to Prescription Drugs*, funded by The Pharmaceutical Research and Manufacturers of America and The Nicholas C. Petris Center on Health Care Markets & Consumer Welfare.

This report is timely because the competing propositions on the November special elections ballot, Proposition 78 and 79, as well as recent legislative proposals in California – Senate Bill 19, Assembly Bill 75– could have a significant impact on access to prescription drugs for millions of Californians.

This report updates estimates of uninsured populations and their characteristics, and reviews existing programs that are designed to improve the access of the uninsured to prescription medications. We found over 250 programs sponsored by pharmaceutical companies as well as 12 government programs that provide assistance to people in need of prescription drugs.

This report seeks to inform and improve our understanding of the issues surrounding access to prescription drugs in California.

A handwritten signature in black ink, appearing to read 'Richard M. Scheffler', is positioned above the printed name.

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Executive Summary

The use of prescription drugs can play an important role in improving health. For those without health insurance, access to prescription drugs may be limited by cost. California is currently considering a number of bills and propositions, including competing propositions on the November special election ballot, Propositions 78 and 79, as well as Senate Bill 19 and Assembly Bill 75, which address the lack of access to prescription drugs for the uninsured. To help inform the discussion of the proposed legislation, The Nicholas C. Petris Center examined various methods for defining the number of uninsured Californians and the programs, both public and private, that are available to provide assistance to those who are unable to afford prescription drugs.

We used four surveys to estimate the number of uninsured in California: the California Health Interview Survey (CHIS), the Current Population Survey (CPS), the Behavioral Risk Factor Surveillance Survey (BRFSS) and the National Survey of America's Families (NSAF). The estimates of the uninsured differed due to a number of variations between the surveys, including instrument and survey design, sample size and interviewer training. The estimated number of uninsured in California was between 4.9 and 6.5 million people in 2003. We also found important differences in the rates of uninsured by gender, age, race, income and county of residence.

We identified 255 Patient Assistance Programs (PAPs) sponsored by drug manufacturers. PAPs provide free or low cost drugs to people in need. Companies that offer PAPs have varying requirements and procedures for each program and one company may have different PAPs for the different drugs it manufactures. Our review of the programs indicates that most have income limits and insurance restrictions in order to qualify. Other criteria may include U.S. residency, medically appropriate use of drugs or treatment by U.S. licensed physician. Additionally, the length of the enrollment period, refill requirements, amount of medication shipped as well as the place medication is delivered varies by program. The number of uninsured Californians aided by these programs is conservatively estimated to be about 5%. This is considered conservative because many PAPs are open to individuals who have health insurance without prescription drug

coverage. However, we do not know how many of the uninsured are in need of prescription drugs and cannot comment on whether the level of use of PAPs is adequate.

We also reviewed twelve government programs that provide assistance to those unable to afford prescription drugs. These programs include the Veterans Administration health insurance, three state programs that provide general health assistance, six state programs that provide assistance to residents with specific medical conditions, and two types of county programs. Most of these are only available to the uninsured but also provide coverage for physician visits.

This analysis of the uninsured and the programs that provide prescription drug assistance raises other important questions. While a large number of the uninsured are not using any Patient Assistance Program, the actual number of the uninsured who need assistance paying for prescription drugs is unknown. Determining the number of people in need would help guide policymakers in the types of programs necessary, if any, to address this problem. Additionally, a more in-depth analysis of manufacturer PAPs should also be considered to determine if a more streamlined application process is possible.

Introduction

Prescription drug costs are the fastest growing sector of national health care expenditures.^{1,2,i} Rising prices for prescription drug coverage have resulted in employers passing on more of these costs to employees through increased cost sharing and/or limits on the scope of prescription drug benefits,³ which, in turn, have resulted in some Californians cutting back on necessary medications.⁴ Prescription drugs are even less available to the uninsured. According to one study, approximately 50% of uninsured working adults with at least one chronic disease did not fill one or more prescriptions because they could not afford it.⁵ Additionally, many patients who cannot afford medication often use less medication than prescribed.⁶ For the chronically ill, this can often lead to decreased health status and increased psychiatric admissions, emergency room visits and nursing home admissions.⁷ Some uninsured patients also cut back on basic necessities, like food or heat, in order to afford needed medications.⁸ In contrast, increasing adherence to drug treatment can decrease total medical care costs.^{9,10}

There are a number of bills and initiatives that have been introduced in California that attempt to address the lack of access to needed medication due to cost. There are two competing initiatives that are included on the November special election ballot. Proposition 78, promoted by drug manufacturers, seeks to reduce prescription drug costs for the uninsured by establishing a state-sponsored drug discount program for the uninsured with incomes under 300% of the Federal Poverty Level (FPL) and makes participation by drug companies voluntary. Proposition 78 would also create a single point of entry for Patient Assistance Programs (PAPs) run by drug manufacturers. Proposition 79, promoted by the advocacy group Health Access,¹¹ also proposes to provide prescription drug discounts for the uninsured and a single point of entry into manufacturer PAPs, but ties participation of drug manufacturers in the program with preferred status in Medi-Cal. Eligible participants are California residents without Medi-Cal or Healthy Families coverage and incomes below 400% of the FPL or medical expenses at or above 5% of

ⁱ Alternatively, one should note that prescription drugs were 11% of all U.S. health care expenditures in 2003. Citation: Centers for Medicare and Medicaid Services; National Health Expenditures; "Table 2: National Health Expenditures Aggregate Amounts and Average Annual Percent Change, by Type of Expenditure: Selected Calendar Years 1980-2003"; Jan 2005; <http://www.cms.hhs.gov/statistics/nhe/historical/t2.asp>; Last accessed 5/26/05

their family income. Proposition 79 also establishes a drug-purchasing program for employers. Additionally, Proposition 79 creates a Prescription Drug Advisory Board to monitor prescription drug pricing in California and allows lawsuits against pharmaceutical companies for “unjust and unreasonable profits” or “an unconscionable price” without clearly defining “unjust and unreasonable” or “unconscionable”.¹²

Moreover, there are two bills in the legislature to increase access to prescription drugs. Senate Bill 19 (Ortiz), known as “California Rx”, is a proposal forwarded by Governor Schwarzenegger, and contains the same provisions as Proposition 78. While this bill was unable to get enough votes to leave the Senate Health committee in April 2005, it is still under consideration. An alternative bill to SB 19 is Assembly Bill 75 (Frommer)ⁱⁱ, which has passed in the assembly and is now in the senate health committee. This bill contains a some of the provisions found in Proposition 79, proposing to provide prescription drug discounts for the uninsured and a single point of entry into manufacturer PAPs, but ties participation in the program by drug manufacturers with preferred status in Medi-Cal. Unlike Proposition 79, residents with incomes higher than 400% of the Federal Poverty Level are included only if out of pocket prescription drug expenditures are 5% or more of the family income or whose total out of pocket total medical expenses are 15% or more of the family income.

With a number of bills and propositions proposed to provide pharmacy assistance to low income Californians, it is important to determine who may need assistance and what is already being done to address this. To this end, our report looked at the following questions:

- How are the rates of the uninsured currently being measured?
- What are the most current estimates of the uninsured in California?
- What are the estimates of the uninsured by age, Federal Poverty Level, gender, county and race?
- What programs are currently available to help patients get necessary medications?
- What are the eligibility requirements of Patient Assistance Programs?

ⁱⁱ Introduced and coauthored by assembly members Chan (D), Bass (D), Evans (D), Gordon (D), KorteZ (D), Nava (D), Pavley (D), and Salinas (D)

- What are some features of Patient Assistance Programs (PAP) that facilitate or hinder their use?
- What are the utilization rates of PAPs in California?

Measuring the Uninsured

The number of uninsured Californians can be measured in three different ways based on the time frame used. First, the uninsured can be measured by determining the number of people who have been uninsured for the entire year. The question requires the survey respondent to think back a year ago, sometimes longer, to remember whether they had insurance at any time over the year. This methodology is vulnerable to recall bias, since survey participants may not remember health care coverage that occurred early in the year. This is the most conservative measure of the uninsured, as it will produce the smallest estimates. Second, the rate of the uninsured can be measured by counting the number of people who have been uninsured for any part of the year. Many people who are counted as uninsured using this measure are in fact uninsured for the entire year.¹³ This approach also captures people who have spells of being uninsured. However, this method of measurement is also subject to recall bias and produces the largest estimates of the uninsured. The answer to this question can be determined more precisely by asking for the number of months the participant was uninsured. Lastly, the rate of the uninsured can be measured by counting people who are currently uninsured. While this measure is not subject to recall bias, it counts people who recently acquired coverage as insured even though they may have been uninsured for most of the year. We decided to use the third approach, which estimates the number of people who are currently uninsured, because it receives the most accurate response from participants.¹⁴ Uninsured is defined as having no health insurance of any kind.

Surveys that Measure the Uninsured

We analyzed four different surveys that provide data on the number of uninsured in California: 1) the California Health Interview Survey (CHIS), 2) the Current Population Survey (CPS), 3) the Behavioral Risk Factor Surveillance System (BRFSS) and 4) the National Survey of America's Families (NSAF).ⁱⁱⁱ These surveys are difficult to compare as a number of factors vary across these surveys, including differences in sample size, survey and instrument design, and training of interviewers. The order of the questions, as well as the precise wording of each question, also influences survey responses.^{15,16} The merits of each survey along with the range of estimates from the various studies will be discussed.

1. The California Health Information Survey (CHIS) is the largest state survey on health and access to health services. It is a random digit dial telephone survey that covers California counties and includes statistically significant samples of various racial and ethnic groups in California. In 2001 the CHIS sample size was 74,930 and in 2003 the sample size was 54,580.
2. The Current Population Survey (CPS) is a national survey conducted by the U.S. Census Bureau designed to gather monthly information on earnings, employment and demographics in the United States. CPS uses a sample of households based on address with interviews conducted in person initially and later by phone (if allowed). Questions on health insurance are found in the March Supplement. The California sample size was 16,269 in 2003, 16,779 in 2002 and 16,857 in 2001.
3. The Behavioral Risk Factor Surveillance System (BRFSS) is a national survey of behaviors that are associated with premature morbidity and mortality. The Centers for Disease Control and Prevention (CDC), in cooperation with the states, conducts this survey annually. Data is

ⁱⁱⁱ We are aware of the National Health Interview Survey (NHIS) and the Survey of Income and Program Participation (SIPP) but did not use them because neither are designed to produce state estimates. Additionally CHIS has built in some of the NHIS questions. We did not use MEPS data because of the high cost and time required to access the data. More information is available from SHADAC website: <http://www.shadac.umn.edu/publications/docs/NationalSurveyData.pdf>; Last accessed 5/15/05

collected at the state level on adults eighteen and over through a random digit dial telephone survey and is designed to produce state-level estimates. The California sample size was 4,460 in 2003, 4,212 in 2002 and 4,257 in 2001.

4. The National Survey of America's Families (NSAF), conducted by the Urban Institute, is a national survey designed to look at the well being of children and adults under age 65. NSAF is a random digit dial telephone survey with in-person interviews conducted in a sample of homes without telephones. The California sample size in 2002 was 6,012.

For a more detailed analysis of the surveys see Appendix 1.

The Number of Uninsured in California

We provide estimates of the uninsured for 2003, the most current year available and begin with an overall estimate of the uninsured in California. We will then look at the uninsured by age, Federal Poverty Level (FPL), gender, county or county group, and race/ethnicity. To examine the rate of uninsured for all of California we use estimates from the CHIS and the CPS because only these two surveys included all age groups (see Table 1). In 2003, the uninsured were estimated to make up 14%-18.4% of the population, which translates into 4.9-6.5 million people in California.¹⁷

Table 1: Estimates of the Percentage of Californians Without Health Insurance, 2003				
	All Ages	Children 0-17	Adults 18-64	Adults 65+
CHIS	14.0	7.1	19.4	0.6
95%CI	(13.6-14.5)	(6.4-7.8)	(18.7-20.0)	(0.3-0.9)
CPS	18.4	12.5	23.7	n/a*
95%CI	(17.6-19.2)	(11.1-13.9)	(22.5-24.9)	
BRFSS	n/a	n/a	18.7	n/a*
95%CI			(17.1-20.4)	

Source: Petris Center (www.petris.org) analysis of AskCHIS 2.0 and BRFSS and CPS Public Use Files. CI refers to the Confidence Interval.

* Cell counts used in estimates are less than 50, yielding unreliable results.

When we analyzed the uninsured rate by age, we found that children have better coverage than adults (ages 18-64) across all the surveys (see Table 1), which is not surprising given that many state programs for the uninsured target children. The percentage of uninsured children in 2003 ranges from 7.1%-12.5%, while for adults (ages 18-64), the estimates are between 18.7%-23.7%. Seniors (ages 65+) have the highest rates of coverage (99.4%) due to Medicare coverage. For the remaining estimates in the report we consider the categories broken down by ages 0-17 and 18-64. We do not include those 65 and over in the rest of the study because seniors will soon have extremely high rates of coverage for prescription drugs with Medicare, Part D.¹⁸

Because all of the proposed legislation to provide prescription drug assistance is based on income level, we examined the number of uninsured by Federal Poverty Levels (see Table 2). Although children have lower rates of uninsurance in every income category, the trends for children and adults are identical. We consider the estimates below 200% of the FPL to be the same because the estimates for people at 100-199% of the FPL are not statistically different from those at 0-99% of the FPL. This may be due to health insurance coverage through Medi-Cal and Healthy Families. Households with incomes less than 200% of the Federal Poverty Level (FPL) are most likely to be uninsured while those with incomes greater than 300% of the FPL are the least likely to be uninsured (see Table 2).

Table 2: Estimates of the Percentage of Californians Without Health Insurance by Federal Poverty Level (FPL) and Age Group, 2003				
	0-99% FPL	100-199% FPL	200-299% FPL	300+% FPL
Children (Age 0-17)				
CHIS	12.7	11.8	6.2	1.6
95%CI	(10.5-14.8)	(10.0-13.6)	(4.6-7.8)	(1.2-2.1)
CPS	16.8	21.0	12.0	6.0
95%CI	(13.5-20.1)	(16.9-25.1)	(9.9-14.1)	(4.5-7.5)
Adults (Age 18-64)				
CHIS	39.5	34.4	22.3	7.6
95%CI	(37.3-41.6)	(32.5-36.2)	(20.5-24.2)	(7.1-8.2)
CPS	42.4	43.4	29.9	12.4
95%CI	(38.8-46.0)	(41.6-45.2)	(27.7-32.1)	(11.1-13.7)
BRFSS [†]	37.2	31.7	14.6	6.0
95%CI	(32.0-42.7)	(27.7-36.0)	(11.3-18.7)	(4.6-7.9)

Source: Petris Center (www.petris.org) analysis of AskCHIS 2.0 and BRFSS and CPS Public Use Files. CI refers to the confidence interval.

[†]BRFSS groupings for Federal Poverty Level are close approximations to the groupings used in the other surveys. For more information see Appendix 3.

We also examined whether there were differences in insurance status based on gender (see Table 3). Among children, there are no statistically significant differences in the uninsured rate by gender within the surveys. Among adults however, the estimates for men, ranging between 20%-25.5%, are higher than those for women, ranging between 17.4%-21.9% but are only statistically different in the CHIS. Men may have less coverage than women because Medi-Cal and Healthy Families provide coverage for pregnant women and families with children. The higher coverage among women may be due to the higher number of single parent households

headed by women,¹⁹ which allow for greater access to these programs. Furthermore, women may be more likely to have coverage as a dependent through a spouse.²⁰

	Children (Age 0-17)		Adults (Age 18-64)	
	Female	Male	Female	Male
CHIS	7.1	7.0	17.3	21.4
95%CI	(6.1-8.2)	(6.0-8.0)	(16.5-18.2)	(20.4-22.4)
CPS	12.2	12.8	21.9	25.5
95%CI	(9.1-15.3)	(10.8-14.8)	(19.2-24.6)	(22.0-29.0)
BRFSS	n/a	n/a	17.4	20.0
95%CI			(15.4-19.6)	(17.6-22.6)

Source: Petris Center (www.petris.org) analysis of AskCHIS 2.0 and BRFSS and CPS Public Use Files. CI refers to the confidence interval.

Appendix 2 shows the percent uninsured for each 2 county or county group in California using CHIS data.^{iv} While the rate of uninsured for the state is 14.0%, the county estimates range from 4.0% in Solano County to 16.7% in Los Angeles County.

A visual representation of the uninsured rate is shown in Figure 1, which contains a map of California with the counties differentiated from the reference county, Santa Clara. Santa Clara was chosen as the reference county because it has the lowest uninsured rate among counties with populations greater than one million. Counties are separated into three groups based on non-overlapping 90% confidence intervals: counties with uninsured rates higher than Santa Clara, counties that have similar uninsured rates to Santa Clara and counties with uninsured rates lower than Santa Clara. The Central Valley and Southern California have a large proportion of counties with the highest rates of uninsured residents. There are also pockets of high uninsured rates in the Northern Coastal and Central counties. The lowest uninsured rates are found in the Bay Area. The differences reported above do not take into account variations in income or racial/ethnic mix, factors associated with differing rates of uninsurance.

^{iv} CHIS is the only survey that allows for County level estimates

Figure 1: Differences in County Uninsured Rate



Source: Petris Center analysis of AskCHIS 2.0 based on statistically significant differences from the reference county, Santa Clara. Statistical differences are computed at the 90% confidence level.

Table 4 shows the percentage of uninsured by race/ethnicity. We used five racial/ethnic categories: Latino, Non-Latino White, Non-Latino African-American, Non-Latino Asian/Pacific Islander, and Non-Latino Other. Non-Latino Other includes people who identified as Native American, other single races and two or more races. Between 10.6%-18.2% of Latino children are uninsured, the highest rate of any group (see Table 4). Whites have the lowest estimates of uninsured children (2.8%-7.3%). African-Americans, Asian/Pacific Islanders and those in the Other category do not have statistically different numbers of uninsured.

Table 4: Estimates of the Percentage of Californians Without Health Insurance by Race/Ethnicity and Age Group, 2003					
	Latino	Non-Latino			
		White Only	African American Only	Asian or Pacific Islander	Other Race, more than one race
Children 0-17					
CHIS	10.6	2.8	6.0	7.0 ¹	n/a**
95%CI	(9.3-11.8)	(2.2-3.4)	(3.4-8.5)	(4.3-9.6)	
CPS	18.2	7.3	n/a*	n/a*	n/a*
95%CI	(15.0-21.4)	(3.2-11.4)			
Adults 18-64					
CHIS	34.1	10.5	14.3	14.9	17.7
95%CI	(32.6-35.5)	(9.9-11.2)	(12.1-16.5)	(13.4-16.5)	(15.1-20.2)
CPS	39.9	13.7	23.0	22.4	n/a*
95%CI	(33.3-46.5)	(11.1-16.3)	(12.1-33.9)	(18.6-26.2)	
BRFSS	29.1	12.4	n/a*	n/a*	n/a*
95%CI	(25.8-32.7)	(10.8-14.1)			

Source: Petris Center (www.petris.org) analysis of AskCHIS 2.0 and CHIS, BRFSS and CPS Public Use Files. CI refers to the confidence interval.

* Cell counts used in estimates are less than 50, yielding unreliable results.

** Grouping not available through either AskCHIS2.0 or Public Use File.

¹ In children, CHIS data excludes Pacific Islanders.

For adults, Whites also have the smallest percentage of uninsured with estimates ranging from 10.5%-13.7% (See Table 4). The rates of the uninsured for Latino adults are statistically higher than other groups with 29.1%-39.9% of Latinos without health care coverage. The rate of the uninsured in African-American adults is between 14.3%-23.0%. Asian and Pacific Islander adults have a rate of uninsurance between 14.9%-22.4%.²¹

How Many Patient Assistance Programs (PAPs) Exist?

PAPs provide access to necessary medications at low or no cost to eligible patients. Most PAPs are sponsored by pharmaceutical companies as part of their philanthropic activities. There are also twelve government programs that provide assistance to people who can't afford prescription drugs. The government programs include one federal program, three state programs that provide general assistance, six state programs that provide assistance for certain medical conditions and two types of county programs. Most of these are part of health plans for low income-individuals.

Information about PAPs sponsored by drug companies was compiled from data on the Partnership for Prescription Assistance website (<https://www.pparx.org>) and the NeedyMeds website (<http://www.needy meds.com>). There were some differences between the information found on these two websites and when this occurred, we combined this information in our analysis. Information on government programs that provide assistance was obtained through the Partnership for Prescription Assistance and a Google search on "Drug benefit program", "Drug benefit program California –'medicare modernization'" and "Patient Assistance Programs." The search resulted in links to manufacturers sites, fee-based sites that help patients enroll in PAPs, illness-specific sites and general information sites. Most of the sites found referenced the Partnership for Prescription Assistance website for comprehensive list of PAPs while a small number of sites referenced NeedyMeds for a larger list of PAPs.

Data Sources on Manufacturer Patient Assistance Programs (MPAPs)

The Partnership for Prescription Assistance (PPA) website is a national collaboration of pharmaceutical companies, pharmacists, patient advocates, health care providers, and community groups. The website is run by the Pharmaceutical and Research Manufacturers of America (PhRMA) and also includes a toll free number that patients can call for more information on PAPs. It is designed to help patients who need assistance purchasing brand name prescription drugs through an interactive computer program that provides information about both public and private Patient Assistance Programs. There is also a website specifically dedicated to helping Californians (RxHelpforCa.org), which refers individuals to the Partnership for Prescription Assistance website for information on individual programs. The information presented on the PPA website is managed by an independent database vendor to ensure compliance with anti-trust laws. Since participation in these programs is voluntary, there is no requirement that companies update information on this website. However, there is a system for individual PAP administrators to update this information and the database vendor checks data regularly to ensure that any program changes it becomes aware of are added to the system.²²

NeedyMeds is a non-profit organization that provides free information on PAPs. This site is very comprehensive and even includes pharmaceutical companies that do not have programs. There were more PAPs found on NeedyMeds than on the Partnership for Prescription website. NeedyMeds contacts drug manufacturers at varying intervals to update their website. Companies that do not have a PAP and state that they will never have a PAP are contacted every six to nine months. PAPs that are very active are contacted monthly to ensure that the information posted is the most current.²³ If requested by the sponsoring organization, the company or PAP contacts NeedyMeds when it makes changes to its program.

Manufacturer Patient Assistance Programs (MPAPs)

Manufacturers that offer PAPs have varying requirements and procedures for each program and one company may have a different PAP for each drug it manufactures. In addition, the drugs available, as well as the eligibility criteria for assistance can change frequently. As of May 2005, there were 255 programs sponsored by drug companies and 157 participating companies.²⁴ Only one of these programs is for generic drugs. Seventy-two companies have no PAPs.²⁵ For a list of programs as of May 2005, including phone numbers and drugs covered, see the appendix on the Petris website at www.petris.org.

There are three types of PAPs offered by pharmaceutical companies: rebate or replacement programs, discount cards and drug provision programs. Eleven PAPs are rebate programs, which provide a partial refund of the cost of prescription medications after they have been purchased. Rebate programs tend to have less stringent guidelines for eligibility. Thirteen PAPs are replacement programs, which only provide medication to the doctor or patient as a replacement for drugs already purchased. Five programs provide discount cards to patients. Most of the programs are drug provision programs, which means that drugs are distributed directly to patients or their physicians.

Some programs have costs associated with participation. Seventeen programs specify that they will provide 25%-100% coverage of medication costs. Three programs may require unspecified cost-sharing depending on the characteristics of the participant. Sixteen have specific fees associated with the program such as shipping fees or participation fees.

To begin enrollment in a MPAP, a patient or their physician must call or download an application from the web. Twenty-nine programs require a prescreening over the phone before an application is sent out. The application process generally requires the patient or their physician to fill out an application form and always requires a prescription. Programs may require proof of income, proof of insurance or a letter of denial^v along with the application form

^v A letter of denial may be required from Medi-Cal or the applicants insurance company depending on the MPAP requirements.

and prescription. Most MPAPs are for chronic diseases or high cost illnesses like cancer and may be inappropriate for those who require medication in acute, life-threatening situations.

Eligibility Criteria in Manufacturer Patient Assistance Programs (MPAPs)

Almost all MPAPs have some income limits, with only four having no income restrictions, three of which are rebate programs (see Table 5). A large number of programs do not give detailed program eligibility guidelines. For some, this is due to flexibility in determining eligibility. There are a number of programs that have flexible eligibility requirements. Fifty-six specifically allow for eligibility to be determined on a case-by-case basis. Four specify that medical expenses are considered or that the person must not be able to afford the medication. Ten programs provide help to patients with high out-of-pocket costs and nine provide assistance to underinsured patients. Underinsured is not defined. Eleven programs do not have formal guidelines. Some MPAPs have eligibility criteria but do not make them publicly available. For example, one program that does not release its eligibility requirements requires a physician to call for a prescreening where questions about the patient’s insurance and financial situation must be answered before an application is sent out.

Table 5: Flexible Enrollment Guidelines in Manufacturer Patient Assistance Programs (MPAPs)	
No income limits	4
Consideration on a case-by-case basis	56
Other expenses considered	4
Will help with out of pocket costs of drugs	10
Underinsured Patients allowed (not defined)	9
No formal guidelines	11

Source: Petris Center analysis of 255 programs from NeedyMeds & Partnership for Prescription Assistance websites
 Note: Since many programs do not give out specific information, the total will not add up to 255.

Among the various MPAPs, there were a number of eligibility requirements that were seen frequently. There are 111 programs that require applicants be U.S. residents and 17 require U.S. citizenship (see Table 6). Because 15% of all Californians are legal non-citizen immigrants –

many of whom take jobs that do not provide health insurance – this application requirement may be a barrier.²⁶ Non-citizens in this context only include people who are legal residents of the U.S. They may also not have access to certain state assistance programs.²⁷ For example, one program requires that the patient be a U.S. citizen, have a valid social security card and a yearly income below \$18,620.

Table 6: Common Eligibility Requirements in Manufacturer Patient Assistance Programs (MPAPs)	
Residency requirements:	
U.S. resident	111
U.S. citizen	17
Limits of insurance coverage:	
No insurance	34
No drug coverage	104
No coverage of medication requested	24
Reached limits of drug coverage	18
Denied coverage of medication	4
Denied Medicaid	9
Other:	
U.S. licensed Physician	14
Type of doctor specified	3
Medical criteria must be met	49
Reimbursement assistance	19
Physician, healthcare worker or doctors office must begin application process	81

Source: Petris Center analysis of 255 programs from NeedyMeds & Partnership for Prescription Assistance websites
 Note: Since many programs do not give out specific information and the categories listed are not mutually exclusive, the total will not add up to 255

Limits on insurance coverage in eligibility criteria are also variable (see Table 6). While some programs have stringent insurance status requirements, others are more lenient. Thirty-four require applicants to be uninsured and 104 stipulate patients must be without prescription drug coverage. Twenty-four require that the medication requested not be covered by existing insurance and eighteen require the applicant to have reached the insurance limits of their drug coverage. Four programs require that the applicant must already have been denied coverage for the needed drug by their insurance company. Nine programs also require denial by Medicaid (Medi-Cal in California) for consideration. This may create additional barriers for people who do not apply for Medi-Cal because they do not qualify, forcing patients to go through the Medi-Cal application process just to receive a rejection letter to apply for the manufacturer PAP, which would delay their ability to receive needed medication. For example, one such program requires a patient to have applied for and been denied by Medicaid as well as having an income below 200% of the Federal Poverty Level and no prescription drug coverage.

Fourteen programs require the applicant to have a U.S. licensed physician and three stipulate that the applicant must have a specific type of doctor. Forty-nine programs have some type of medical criteria, such as a medically appropriate use, FDA-approved use or a specific diagnosis in order to be eligible for the program. One illustration is a program that requires the patient have an FDA-approved diagnosis for the prescription requested in addition to a family income below \$30,000 and no insurance.

Nineteen MPAPs will try to find other coverage or work to get the insurance company to pay for medication before allowing the applicant to participate in their program. One program states it acts as an advocate for the patient to try to find other coverage. If this isn't possible, the company will provide the drug for free or with a co-pay depending on the patients' income. This program does not release its eligibility requirements. This type of advocacy may increase the time it takes for some patients to receive medications. Nineteen companies also specify that the program will only offer temporary assistance. The time frame is not always defined or may be based on the amount of medication received by the patient.

The enrollment process may also create a number of barriers. Eighty-one programs require that a physician, healthcare worker or doctor's office call to initiate enrollment and request an application (see Table 6), which may make it impossible for some patients to receive needed medications if their physician does not begin the enrollment process. Seventy-three programs fax out applications. For patients without access to a fax machine, this would make receiving an application difficult. Many of these programs also have a PDF that can be downloaded, but this requires Internet access and a printer, both of which may be unavailable to low-income patients. Among patients who have Internet access, some may not have the computer skills to find and download applications.

Factors Affecting the Receipt of Medication from Manufacturer Patient Assistance Programs (MPAPs)

The amount of medication shipped depends on the program (see Table 7). Forty programs provide a one-month supply and 63 provide a three-month supply, which are the most common amounts listed. A six-month supply is provided in eleven programs and four MPAPs provide enough medication for one treatment cycle. Programs that supply medication for shorter time periods may create barriers to continuing treatment if the process for receiving refills is cumbersome. The differences in the amount of medication sent between programs may be based on the addictiveness of the drug and the length of medication needed for standard treatment. The length of the enrollment period may also be affected by these factors.

Table 7: Factors Affecting the Receipt of Medication from Manufacturer Patient Assistance Programs (MPAPs)	
Quantity shipped:	
1 month supply of medication	40
3 month supply of medication	63
6 month supply of medication	11
A supply of medication needed for one treatment cycle	4
Length of enrollment period:	
12 month enrollment period	129
6 month enrollment period	16
3 month enrollment period	8
Refill requirements:	
Must reapply to MPAP for refills	35
New application or form for refill, documents* have different time limit	36
Doctor or office contacts company for refills	42
Patient contacts company for refills	25
Company contacts doctor for refills	17
Company contacts patient or automatically sends out refills	40
Delivery location:	
Medication sent to doctor's office, hospital or specific site	139
Medication can be sent to participants home	50
Patient is sent a discount card or pharmacy coupon	19
Medication can be sent to a pharmacy	11

Source: Petris Center analysis of 255 programs from NeedyMeds & Partnership for Prescription Assistance websites
 Note: Since many programs do not give out specific information and the categories listed are not mutually exclusive, the total will not add up to 255.

*Documents may include proof of income, prescription, proof of insurance or denial letter from Medi-Cal or applicant's insurance company if required by MPAP requirements.

Enrollment periods also vary by program (see Table 7), with 129 programs that have a one year enrollment period, sixteen that have a six month enrollment period, eight that have a three month enrollment period and thirty-five that require a new application for refills. Thirty-six require new forms, prescriptions or applications (without documentation) for refills. Documentation may include proof of income, a new prescription, proof of insurance or a denial letter. Shorter

enrollment periods and PAPs that require applicants to reapply for refills, may make it harder for patients to stay on a given treatment regiment.

Requirements for refills vary in PAPs as well. Of the companies that do not require patients to reapply to the PAP for refills, forty-two companies expect the physician or physician's office to contact the company for refills, twenty-five allow the patient to contact the company for refills and seventeen companies will only contact the physician for refills. Patients that must rely on their physician to receive refills may have difficulty continuing on a medication. A busy physician may forget or not have time to contact the company for the patient's refill. The patient may also be forced to schedule another appointment with the doctor to ensure that they receive a refill, which may be unaffordable to low income people without insurance. Forty programs will either contact the patient or send out automatic refills. This program feature makes it easy for patients to continue getting medications.

Additionally, the location that medication is delivered to can become a barrier to some patients. There are 139 programs that send medication to a doctor's office, hospital or specific sites (see Table 7) including clinics, hospitals, infusion sites or similar institutions. Patients may not be quickly notified when medication is received, which could delay treatment. Furthermore, the trip to the office to pick up the medication once it has arrived may be difficult for low-income patients especially if they must take time off work or do not have transportation. The addictive nature of some drugs as well as federal and state regulations on drug trafficking may prevent companies from sending these medications directly to patients. Fifty programs send the medication directly to the patient's home, eleven will send the medication to a pharmacy and nineteen will send a pharmacy card or coupon, which increases access to drugs for patients and may increase compliance with treatment. A pharmacy card allows patients to receive their medication at low or no cost directly from the pharmacy of their choice.

Utilization of Manufacturer Patient Assistance Programs (MPAPs)

We do not have information on the utilization of manufacturer Patient Assistance Programs (MPAPs) in California before 2004. It was reported that in 2004, 269,767 Californians used MPAPs.²⁸ To calculate a use rate for MPAPS among the uninsured, we assumed that all of the people helped by these programs were uninsured. While we do not have data on the number of uninsured in 2004, we assume that this number is relatively unchanged from 2003. If we use the most conservative estimate of 5.1 million uninsured, the number of people assisted through these programs represents 5% of all the uninsured in 2004.²⁹ However, since many of the programs do not require a lack of insurance for eligibility, the number of people who are eligible for PAPs is likely greater than the number of uninsured, making the estimate of uninsured receiving assistance from these programs lower than calculated. It should be noted that the calculated use rate does not measure the number of uninsured in need of assistance, which may be much lower than the number of uninsured since some may not have an illness that requires prescription drugs.

To address the low use of these programs, Rx Help for Californians was launched in March 2005. Rx help for Californians is a website and call center that helps patients access and apply for both manufacturer and state PAPs. The website and call center allow patients to get information about multiple programs at once through a series of questions about eligibility. The website also has a program that helps patients fill out forms for multiple programs at once.

Government Assistance for Prescription Drugs

There is one Federal Program, three state programs that provide general assistance, six state programs for specific medical conditions and two types of county programs that provide assistance to Californians in need of prescription drugs.

Some California residents may be eligible for benefits through the Department of Veterans Affairs (VA). Eligibility is given to individuals who have completed active military service in the Air Force, Army, Coast Guard, Marines or Navy and have not been dishonorably discharged.³⁰ A number of groups who provided military-related services during World War I and World War II have also been granted VA benefits. The VA provides comprehensive health services that include prescription drug coverage if a VA provider prescribes the medication and the drug is offered under the VA national formulary. There is a \$7 co-pay for medication that is needed to treat a condition that is not a result of military service.³¹

State Programs

There are also three large state programs available to Californians that provide general assistance to those who cannot afford prescription drugs. Participants must be California residents to receive help from state programs. Medi-Cal provides health benefits, including prescription drug coverage for low income Californians. Eligibility is variable based on income and certain types of property ownership. Pregnant women and children have various income limits based on the Federal Poverty Level (FPL) regardless of property ownership. In addition, individuals must satisfy one of the following criteria in order to qualify: be pregnant, a child under 18 years of age, parents or guardians of a minor, over 65 years of age or a person with a disability. Medi-Cal may not be available to low income adults without children. The complexity of the application process can become a barrier to enrolling patients in these state programs. In addition, adult enrollees are required to re-submit paperwork every six months in order to continue their eligibility which may make it more difficult to continue enrollment. There is also a stigma associated with Medi-Cal because of its historic link to welfare that may impede enrollment.

Access for Infants and Mothers (AIM) provides health insurance and prescription drug coverage for low-income pregnant women. Enrollment must occur before the woman is 30 weeks pregnant. Healthy Families provides health coverage for low-income children age 18 and younger who do not qualify for Medi-Cal.

There are six state programs that provide assistance to low income people with specific medical conditions. These programs are the California AIDS Drug Assistance Program, the Breast Cancer Prevention and Cancer Control Program, Family PACT,³² California Children's Services (CSS), Immunization and Tuberculosis Control, and the Genetically Handicapped Persons Program (GHPP). These programs only provide prescription drug benefits for the medical conditions specified in the program. Some of these programs include individuals who also qualify for Medi-Cal and Healthy Families.

California AIDS Drug Assistance Programs (ADAP) provides drug assistance for HIV-positive Californians over age nineteen with incomes at 400% of the FPL or less. The Breast Cancer Prevention and Cancer Control Program provides breast and cervical cancer screening for low-income women.³³ Treatment is available when cancer is detected. For certain low-income women who do not qualify for Medi-Cal, treatment is paid for by the program.

The Family PACT program provides comprehensive family planning and reproductive health services to low-income Californians. To qualify, the participant must be uninsured, a California resident, at or below 200% of the Federal Poverty Level and be at risk of becoming pregnant or causing pregnancy. This program receives 90% of its funding from the federal government through a Medicaid waiver.³⁴ Family PACT provides free prescription drugs for contraception and the treatment of sexually transmitted diseases.

The Immunization and Tuberculosis Control programs provide vaccinations and treatment for communicable diseases for low income Californians. Prescription drugs needed for the treatment of communicable diseases are provided to individuals who cannot afford these medications.³⁵

California Children's Services (CCS) provides treatment for children with specific medical conditions. Eligibility requirements include the following: California residency, ages 0 to 20, a medical condition covered by CCS and an adjusted gross family income below \$40,000 or out-of-pocket medical expenses that are more than 20% of the family income.³⁶ Some of the medical conditions covered include congenital heart disease, cerebral palsy, thyroid problems and chronic inflammatory disease. Reimbursement for treatment may come from Healthy Families or Medi-Cal for those who are eligible. Prescription drugs are only provided for the treatment of the medical conditions covered.

The Genetically Handicapped Persons Program provides health care benefits including prescription drugs for individuals with particular genetic diseases. Some of the genetic diseases covered include sickle cell anemia, cystic fibrosis, hemophilia and select metabolic disorders including Phenylketonuria (PKU). Individuals with health insurance may still be eligible and cost sharing may be required for higher income patients.³⁷

County Programs

There are two types of county programs that provide assistance to individuals that do not qualify for Medi-Cal or Healthy Families. For counties with populations less than 300,000, assistance is provided through the County Medical Services Program (CMSP). For counties with populations greater than 300,000, services are provided through the Medically Indigent Services Program (MISP).

The County Medical Services Program (CMSP) provides inpatient and outpatient care to low-income adults in thirty-four counties including prescription drug benefits.^{vi} To be eligible, individuals must be between ages 21 and 64, uninsured, in medical need with an income less

^{vi} These Counties are Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Imperial, Inyo, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Modoc, Mono, Napa, Nevada, Plumas, San Benito, Shasta, Sierra, Siskiyou, Solano, Sonoma, Sutter, Tehama, Trinity, Tuolumne and Yuba.

than 200% of the FPL and be ineligible for Medi-Cal. There are also property limits that apply. There may be cost sharing requirements for some higher income participants.³⁸

The Medically Indigent Services Program (MISP) provides inpatient, outpatient and emergency room care for uninsured residents in twenty-four counties.^{vii} The eligibility requirements as well as the services covered vary by county. Many of these programs provide prescription drug coverage.³⁹

^{vii} These Counties are Alameda, Contra Costa, Fresno, Kern, Los Angeles, Merced, Monterey, Orange, Placer, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Cruz, Stanislaus, Tulare, Ventura, and Yolo.

Summary of Findings

To examine the various estimates for the number of uninsured in California we analyzed four surveys: the California Health Interview Survey (CHIS), the Current Population Survey (CPS), the Behavioral Risk Factor Surveillance System (BRFSS) and the National Survey of America's Families (NSAF). We estimate that in 2003, between 14%-18.4% of all Californians are uninsured. Key findings include the following:

- A higher number of uninsured adults (ages 18-64) than children
- More uninsured men than women
- Higher rates of uninsured for people below 200% of the Federal Poverty Level
- A high number of uninsured Latinos when compared to other racial/ethnic groups

As of May 2005, there were 255 different Patient Assistance Programs (PAPs) sponsored by drug manufacturers that provide medication to low-income participants. Most have some income and insurance coverage limits to qualify. Participation requirements and procedures for Manufacturer Patient Assistance Programs (MPAP) may vary widely by company and may differ within companies by the drug offered in the MPAP. Some programs have more flexible guidelines than others. There are also variations in the type of programs offered; some will pay the full cost of the drugs, some a percentage of the cost, some provide discount cards and a select few will help with the cost of co-pays. Common eligibility requirements include a lack of prescription drug coverage, limited income, U.S. residency, and initiation of enrollment by a physician. MPAPs also vary by enrollment periods and refill requirements. The most common enrollment period is one year but can be as short as three months. The process for getting refills varies as well, with many programs requiring a new application for refills. Some MPAPs require the physician to contact the company for refills and in others, the company will contact the patient for refills. There is no information on the amount of drugs sent for most of the programs that require a new application for refills. If a thirty-day supply is given, a patient may be required to enroll every month.

In addition to the MPAPs, there are twelve government programs that help patients get low or no cost prescription medications. The Federal program is run through the Department of Veteran's Affairs. Three state programs provide general assistance and six state programs provide assistance to people with specific medical conditions. California counties run one of two types of programs, based on the size of the county population. Most of these programs also provide health insurance, along with prescription drug coverage.

This report provided new estimates of both the number of uninsured and specific sub-populations who may need to be targeted when addressing the need for increased access to prescription drugs. Increasing access to the uninsured, particularly for those with chronic diseases can improve health and could decrease spending by California on indigent health care.^{40,41} The disparate program requirements and procedures in both MPAPs and government programs revealed in this report indicate it may be difficult for the uninsured to receive medication under the current system. Clearly, the current legislation being considered in California is an attempt to improve on what currently exists. Finally, we hope this report encourages research in the areas listed in next section, Future Directions, in order to develop more sound policy.

Future Directions

We see a need for an in-depth study of PAPs to determine the eligibility requirements for all the programs as well as the number of people helped by these programs. This information could be used to determine whether a streamlined application or procedure could be developed. Anti-trust laws as well as U.S. Department of Justice regulations need to be considered when proposing a streamline application process as cooperation between manufacturers to produce this type of application may be prohibited under these statutes.⁴² Publicizing the existing PAPs and providing a streamlined application process would increase access to needed medications for the uninsured.

The number of uninsured is much greater than the number of people helped by PAPs. However, this does not tell us how much this gap represents unmet need. While there are a large number of people who cannot afford prescription drugs, an accurate assessment of who needs these drugs is not available. Many of the people who need medications from these programs have chronic and/or life-threatening diseases. In order to measure the unmet need, the following questions must be answered:

- What is the prevalence of chronic and life-threatening diseases in the uninsured population?
- How many of the uninsured in need of medication go without prescription drugs due to cost?
- How much do low income, uninsured individuals who may qualify for PAPs know about them?
- Are there better, more comprehensive policy options than those offered by PAPs?

Other issues that may affect utilization of these programs are patient specific factors that reduce interest in and use of PAPs. For example, some patients may view PAPs as charity and feel uncomfortable participating because of the negative connotations associated with being a “charity case”. A survey of uninsured patients in need of prescription drugs should be done to determine what factors would facilitate participation in a PAP.

Appendices

Appendix 1: Detailed Analysis of CHIS, CPS, BRFSS and NSAF

We analyzed four different surveys that provide estimates of the number of uninsured in California.^{viii} These four surveys are: the California Health Interview Survey (CHIS), the Current Population Survey (CPS), the Behavioral Risk Factor Surveillance System (BRFSS) and the National Survey of America's Families (NSAF). The merits of each survey as well as the range of estimates from the various studies will be discussed. For the technical information on data sources and how the estimates were calculated see Appendix 3.

1. The California Health Information Survey (CHIS) is the largest state survey on health and health services access. It is a random digit dial (RDD) telephone survey that covers California counties and includes statistically significant samples of various racial and ethnic groups in California. Using statistical methods, CHIS corrects for households that do not have telephones. The CHIS began in 2001 and is conducted every two years.⁴³ The CHIS sample size was 74,930 in 2001 and 54,580 in 2003. The CHIS asks questions of one adult, one adolescent and one child (by proxy) per household. The CHIS is conducted in six languages: English, Spanish, Chinese (Mandarin and Cantonese dialects), Vietnamese, Korean, and Khmer (Cambodian). The CHIS has six questions on health insurance status including whether the respondent is currently insured and the number of months covered by health insurance. Due to the large sample size of the CHIS, we are able to compare the uninsured rates of sub-populations including race/ethnicity categories and various income levels. Additionally, the CHIS estimates of people enrolled in Medicaid and Healthy Families programs match actual data on enrollment.⁴⁴ The overall unweighted response rate for the CHIS in 2001 was 43.3%.⁴⁵ This is the unweighted screener completion rate multiplied by the unweighted extended interview completion rate.⁴⁶ The unweighted response rate is not weighted for population demographics.

^{viii} We are aware of the National Health Interview Survey (NHIS) and the Survey of Income and Program Participation (SIPP) but did not use them because both are not specifically designed to produce state estimates. Additionally CHIS has built in some of the NHIS questions. We did not use MEPS data because of the high cost and time required to access the data. More information is available from SHADAC website: <http://www.shadac.umn.edu/publications/docs/NationalSurveyData.pdf>; Last accessed 5/15/05

2. The Current Population Survey (CPS) is a national survey by the U.S. Census Bureau designed to gather monthly information on earnings, employment and demographics in the United States. Questions about health insurance were added in 1980 to capture the amount of non-cash benefits of the population, which includes health insurance. While the health insurance questions were designed for a different purpose, it became clear that this question could be adapted to produce an estimate of people without health insurance.⁴⁷ Questions on health insurance are found in the March Supplement. The CPS uses a sample of households based on address with interviews conducted in person initially and later by phone (if allowed). Interviewers collect data on everyone in the household through one respondent. Uninsured is defined as a person who was “not covered by any health insurance at any time during the year”,⁴⁸ but is treated like a point in time estimate for this report.⁴⁹ The CPS provides national data on the uninsured and is used to determine funding for states’ Children’s Health Insurance Plans (SCHIP).⁵⁰ The sample size in California was 16,269 in 2003, 16,779 in 2002 and 16,857 in 2001. Bilingual interviewers are used for non-English speaking participants. The survey itself is only translated in English and Spanish and relies on the bilingual interviewer to translate the questions for participants who speak other languages. The overall unweighted response rate in the national survey was 78.4% in 2003.⁵¹

3. The Behavioral Risk Factor Surveillance System (BRFSS) is a national survey of behaviors that are associated with premature morbidity and mortality. This survey is conducted yearly by the CDC in cooperation with the states on adults ages 18 and over. Data is collected at the state level on adults eighteen and over through a RDD telephone survey and is designed to produce state level estimates. The BRFSS samples one individual per household and does not use a direct method to counter bias that may be introduced due to the exclusion of households without telephones. There are core questions that every state must use with a number of optional and state specific questions that can be added. There was one core question on health insurance in 2002 and 2003 and two core questions on health insurance in 2001.^{52,53,54} The BRFSS questions on insurance only refer to current health care coverage. The sample size in California was 4,460 in 2003, 4,212 in 2002 and 4,257 in 2001. The BRFSS is conducted in English and Spanish; people who only speak another language are excluded.⁵⁵ In 2002, the overall unweighted response rate for the BRFSS in California was 43.3%.⁵⁶

4. The National Survey of America's Families (NSAF), conducted by the Urban Institute, is a national survey designed to look at the well being of children and adults under age 65. The NSAF is a RDD telephone survey with a sample of homes without telephones conducted in 1997, 1999 and 2002. In-person interviews were conducted in households without telephones. The California sample size was 6,173 in 2002. The NSAF was conducted in English and Spanish only, households that did not speak either of these languages were considered "linguistically isolated" and were excluded.⁵⁷ The NSAF questioned up to two adults and two children (by proxy) per household. There were health insurance questions on both current coverage and coverage over the past 12 months. The NSAF was designed to allow state estimates and oversampled for incomes less than 200% of the federal poverty level.⁵⁸ In 2002, the NSAF had an overall unweighted response rate of 53.9% in the national survey.⁵⁹

Survey Differences

Because some surveys are conducted biennially, we cannot compare the estimates across all surveys for every year. This report examined data from the CHIS, CPS and BRFSS to look at differences in the uninsured estimate in 2001 and 2003. Data from the CPS, BRFSS and NSAF were used to look at differences in the uninsured estimate in 2002. The different surveys give different point estimates and sometimes even have statistically different values. We examined the data over multiple years to ensure that the patterns are similar across the various surveys (see Tables 9, 10 and 11 in Appendix 3).

When looking at the uninsured across a wide variety of categories, the BRFSS provides the lowest estimates and the CPS gives the highest estimates among adults. The CHIS gives the lowest estimates of uninsured children while the CPS produces the highest estimates of uninsured children (BRFSS excludes children). The lower estimates in the CHIS and the BRFSS could be due to different sampling methods. Both of these surveys are RDD telephone surveys, which samples households based on residential telephone numbers. Furthermore, households without telephones – which tend to have lower incomes, higher rates of unemployment and/or less education– are excluded.^{60,61} These factors are associated with higher

uninsurance rates. The results of the studies are also influenced by the way the surveys are conducted because telephone surveys have lower response rates than in-person interviews.^{62,63}

The CPS samples households based on address and performs in-person interviews, which may capture more of the uninsured than the CHIS and the BRFSS. Yet, the CPS may overestimate the rate of uninsured. Some question whether this survey actually measures a lack of insurance for the entire year. It is believed that this survey functions more like a point in time estimate, (i.e. whether the person currently has insurance).^{ix,64} The CPS is also known to underestimate the number of people enrolled in Medicaid, which may increase the count of the uninsured.^{65,66} The CPS may also overestimate uninsured rates because one survey respondent reports on the health insurance status of the entire household, which has been shown to give inaccurate results.⁶⁷ In all of the other surveys considered, the uninsured rate was measured by the number of people who do not currently have insurance. The CPS was considered as a point-in-time estimate for this report.

We believe that the CHIS produces the most accurate estimates despite its two major weaknesses: the use of telephones and the lower response rate. While other surveys may have higher response rates than the CHIS, there are a number of factors that make the CHIS a superior survey. While the use of telephones in the CHIS may make this survey vulnerable to undercounting the uninsured, the statistical methods used to correct for this have been tested.⁶⁸ Furthermore, while a low response rate can make a survey more vulnerable to non-response bias, there is no indication that this is true for the CHIS. The accurate count of the number of people enrolled in Medi-Cal, based on actual enrollment data provide convincing evidence that the CHIS may indeed produce more accurate estimates on other questions of health insurance.

The CHIS, BRFSS and NSAF measurements related to health are much more likely to be accurate than the CPS because they were designed to study health effects. A number of the CHIS questions, particularly the ones related to health insurance were taken from the National

^{ix} When CPS data was compared to Survey of Income and Program Participation (SIPP) and Medical Expenditure Panel Survey (MEPS) data, the number of uninsured in CPS most resembled the point in time estimates of the other surveys. SIPP and MEPS measured the uninsured three ways: uninsured the entire year, uninsured at any time during the year and currently uninsured.

Health Interview Survey, which has been well tested and studied. Furthermore, the CHIS is also the only survey that was written and tested in six languages, which helps to ensure that non-English speakers are included. While the CPS does conduct interviews in languages other than English and Spanish, the survey translation will vary according to the translator. The CHIS is also the only survey of sufficient sample size and oversampling to get statistically reliable estimates on differences in the rate of the uninsured in both counties and among Native Americans. Finally, the sample size in the CHIS is three times larger than the CPS, the next largest survey and ten times higher than BRFSS. This large sample size increases the precision of the estimate. This precision, combined with the other strengths of the CHIS, makes it a good survey choice for California data on the uninsured.

Appendix 2: CHIS Estimates Of The Uninsured By County, 2003

County or county group	%	95% C.I.
Alameda	11.8	(10.2 - 13.3)
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	12.4	(8.5 - 16.2)
Butte	11.7	(8.9 - 14.5)
Tehama, Glenn, Colusa	14.4	(10.7 - 18.1)
Contra Costa	8.0	(5.7 - 10.3)
Humboldt, Del Norte	15.5	(12.2 - 18.9)
El Dorado	10.3	(7.3 - 13.3)
Fresno	15.4	(12.1 - 18.7)
Imperial	14.8	(11.7 - 17.9)
Kern	14.6	(11.3 - 17.8)
Kings	11.2	(8.3 - 14.0)
Mendocino, Lake	11.4	(8.3 - 14.6)
Siskiyou, Lassen, Trinity, Modoc	11.2	(8.0 - 14.4)
Los Angeles	16.7	(15.8 - 17.5)
Madera	16.3	(12.4 - 20.1)
Marin	5.0	(2.8 - 7.3)
Merced	16.6	(13.1 - 20.2)
Monterey, San Benito	15.2	(11.8 - 18.5)
Napa	11.6	(7.9 - 15.3)
Nevada, Plumas, Sierra	13.7	(9.8 - 17.7)
Orange	16.5	(14.3 - 18.7)
Placer	6.0	(3.5 - 8.5)
Riverside	16.6	(14.1 - 19.1)
Sacramento	10.1	(7.7 - 12.6)
San Bernardino	14.8	(12.5 - 17.1)
San Diego	14.8	(12.9 - 16.7)
San Francisco	10.8	(8.4 - 13.2)
San Joaquin	12.3	(8.8 - 15.9)
San Luis Obispo	11.4	(8.1 - 14.6)
San Mateo	10.4	(7.1 - 13.7)
Santa Barbara	12.5	(8.5 - 16.4)
Santa Clara	9.5	(7.6 - 11.4)
Santa Cruz	12.3	(8.9 - 15.7)
Shasta	13.1	(9.7 - 16.4)
Solano	4.0	(1.7 - 6.2)
Sonoma	8.3	(5.3 - 11.3)
Stanislaus	14.3	(11.0 - 17.7)
Sutter, Yuba	14.1	(10.5 - 17.6)
Tulare	15.5	(12.3 - 18.8)
Ventura	12.4	(8.8 - 16.1)
Yolo	9.2	(5.9 - 12.5)
All	14.0	(13.6 - 14.5)

Source: Petris Center (www.petris.org) analysis of AskCHIS 2.0. CI refers to the confidence interval.

Appendix 3: Technical Information on Calculated Values

This technical appendix describes the various methods used to generate the estimates for each study and their confidence intervals. The methodology used to capture the data and create the estimates and their confidence intervals are discussed for each study. Finally, tables that show the estimates for the uninsured by age, federal poverty level, gender and race/ethnicity are presented for years 2001 and 2002.

California Health Interview Survey (CHIS)

All but four of the estimates for the California Health Interview Survey were determined using AskCHIS 2.0. The CHIS is a collaborative project between the UCLA Center for Health Policy Research, the California Department of Health Services, and the Public Health Institute.⁶⁹

The four estimates (two in 2001 and two in 2003) for the categories of “Non-Latino, Other Race(s)” and “Non-Latino, Asian or Pacific Islander” were created using the Public Use Files for Adults in 2001 and 2003. For children, this category was not computed, as the Public Use Files are divided for the 0-17 age group into two files, Child and Adolescent. The estimates and confidence intervals for adults were computed using STATA, version 9.⁷⁰ Variance estimates were calculated using jackknife methodology as outlined in CHIS documentation⁷¹ and the STATA 9 manual.⁷² The online CHIS documentation, dated 02/08/2005 as of this writing, is prior to the release of STATA 9 and therefore recommends downloading of an add-on module to perform the jackknife method. However, this is not necessary with STATA 9 as it contains modules to allow for the use of replicate weights.

Race/ethnicity categories for the CHIS data followed the Department of Finance definitions. We were not able to calculate the race/ethnicity estimates and confidence intervals for the “Non-Latino, Other Race(s)” category because we were unable to combine some of the race categories offered in CHIS. The Department of Finance definition for race/ethnicity was chosen because it separated Latinos from Non-Latinos in its racial/ethnic categories. However, directly analyzing

the Public Use File was necessary in order to calculate the confidence interval for this estimate because there is no way to recode the race categories using AskCHIS 2.0.

The CHIS data is available for years 2001 and 2003. Through its interactive site, CHIS provides 95% confidence intervals with estimates, but does not include cell count information. CHIS does note where the cell count is below 50, which indicates that results are not statistically valid.

The Current Population Survey (CPS)^{73,74,75,76}

Estimates for the Current Population Survey, come from the Annual Social and Economic Supplement of the CPS, also known as the March Supplement. The data for years 2001-2003 were downloaded using Data Ferret, a publicly available search tool.⁷⁷

Estimates for the rates of uninsured for years 2001-2003 were calculated for the entire California population, then broken down by age groups for children (0-17 years old), adults (18-64 years old) and seniors (65 years and older). The child and adult groups were further broken down by sex, poverty level and race/ethnicity. After retrieving the data, we created an indicator variable for whether or not a respondent had health insurance. Methodology for this algorithm is publicly available via the Bureau of Labor Statistics CPS homepage.⁷⁸

The CPS changed their race/ethnicity categories in 2002 from 4 categories (“White,” “Black,” “Asian/Pacific Islander,” and “American Indian/ Alaskan Native”) to 21 categories, including “White Only”, “Black Only”, “Asian Only”, “Alaskan native/ American Indian Only”, “Hawaiian/Pacific Islander Only”, plus 15 other single race/ethnicity and multiple race/ethnicity categories. For our 2002 and 2003 groupings we combined the “Asian Only” and “Hawaiian/Pacific Islander” race/ethnicity categories together for comparability with the other surveys for those years.

We separated respondents who indicated Hispanic ethnicity, regardless of which race they indicated and renamed the group “Latino” to match the Department of Finance race/ethnic naming conventions used in the CHIS. For the respondents who indicated Non-Hispanic

ethnicity in their surveys, we used the race categories listed above. We renamed the group termed “Black” to “African American”, again to match the Department of Finance race/ethnic naming conventions used in the CHIS. In years 2002 and 2003, the “Native American” and “Alaskan Natives” were also included in “Non-Latino, Other Race(s).”

The Census does not include the Indian Health Service (IHS) in its definition of insured. Therefore, if a respondent indicated that they only had IHS for health coverage, they were considered uninsured. This accounts for a negligible difference in the estimates. Including it in year 2001 accounted for a 0.1% decrease in the overall number of uninsured. It is likely that the estimate for “Non-Latino, Other Race(s)” is overestimated for the CPS in year 2001 because that was the year that the survey included only 4 race categories, one of which was “American Indian/Alaskan Native.” This group completely accounts for the “Non-Latino, Other Race(s)” race category in Table 3 for year 2001.

We were able to duplicate the estimated values for the uninsured produced by the Census Department using their Source and Accuracy documentation.⁷⁹ The CPS standard errors are calculated as follows:

Using the formula for estimating standard errors of percentages,⁸⁰ and choosing values of ‘b’ from Tables 2 and 5⁸¹ in the section labeled “Non-income Characteristics” for the row labeled “Health Insurance,” standard errors can be calculated with the following information: the estimate, the weighted number of people in the populations of interest, the value of ‘b’ from the tables and the state weight factor. State weights are not included in the documentation. To retrieve state weights, contact The Poverty and Health Statistics Branch, Housing and Household Economic Statistics Division, U.S. Census Bureau.⁸²

The time factor for all b values for years 2001-2003 is equal to 1.00. However, when calculating standard errors other than percentages, or for other years, a time factor constant must also be multiplied by b.⁸³ The state weight factor is 1.63 for California so that all b values are multiplied by this constant. The final formula for the standard error for health insurance estimate is the following:

$$se_{x,p} = \sqrt{\frac{1.63b}{x} p(100 - p)}$$

where p is the estimated percentage and x is the weighted number of people in the population of interest.

After finding the standard error of the estimate, the confidence interval calculation follows standard confidence interval methods. A 95% confidence level was used for this report.

National Survey of Americas Families (NSAF)

Estimates from the National Survey of America’s Families were determined using information from the Urban Institute website.⁸⁴ For this study, only 2002 NSAF data was used.⁸⁵ All estimates, cell counts and standard errors were determined using the interactive web tool.⁸⁶ All estimates were generated using California weights. Adequate cell counts are determined by controlling for the population of interest and running inquiries twice—once with the control, once without. Confidence intervals at the 95% level were calculated using standard errors provided by the website tool.

Behavioral Risk Factor Surveillance Survey (BRFSS)

Estimates from the Behavior Risk Factor Surveillance system were found using the Public Use file datasets downloaded from the Centers for Disease Control and Prevention (CDC).⁸⁷ The uninsured variable was created by counting those who answered “no” to the question “Do you have health care coverage ...”⁸⁸ with “refused” or “don’t know/not sure” eliminated. Point estimates and cell counts do not match official CDC Prevalence Data estimates because of the age groupings. When age is restricted to 18-64, the estimate is greater than the Prevalence Data presented by the CDC. When we include the 65 and over age group, our figures match CDC Prevalence Data. The poverty level cutoffs for the BRFSS estimates were based on household income variables and approximate poverty level cutoffs for 100%, 200% and 300% of the FPL. While the actual cutoffs only approximate family poverty level values, the pattern of the

estimates of uninsured follow those of the other surveys. Specifically, as income increases, so does the rate of health insurance.

Confidence intervals were calculated at the 95% level using primary sampling unit and stratum data from the public use file. Like the CPS, BRFSS data was available for years 2001-2003. The confidence intervals for the BRFSS were created in STATA⁸⁹ using primary sampling data available on the public use file. The intervals are skewed for several estimated values. This is due to the methodology employed by STATA. As the cell counts decrease and the estimated value approaches the null, the degree of skew increases. STATA's default is to skew toward 0.5, away from the null, unlike other statistical analysis packages, which tend to skew toward the null.⁹⁰

Tables

Table 8: Variables Used For Generating Estimates of Uninsured

Table 9: Percentage of Californians Without Health Insurance in 2002 & 2001

Table 10: Percentage of Adults, Ages 18-64, Without Health Insurance by Sex, Federal Poverty Level and Race/Ethnicity in 2002 & 2001

Table 11: Percentage of Children, ages 0-17, Without Health Insurance by Sex, Federal Poverty Level and Race/Ethnicity, in 2002 & 2001

Table 8: Variables Used For Generating Estimates of Uninsured	
Study	Variable
CHIS	“Currently insured” via AskCHIS, Health Insurance Coverage variable list
CPS	Generated at Petris Center
BRFSS	HLTHPLAN
NSAF	UCURNINS

Table 9: Percentage of Californians Without Health Insurance in 2002 & 2001						
	2002			2001		
	CPS	BRFSS	NSAF	CPS	BRFSS	CHIS
All Ages	18.2%	n/a	n/a	19.5%	n/a	14.6%
95%CI	(17.4-19.0)			(18.6-20.4)		(14.2-15.0)
Children, Ages 0-17	14.0%	n/a	11.7%	15.1%	n/a	9.4%
95%CI	(12.6-15.4)		(11.1-12.3)	(13.6-16.6)		(8.7-10.0)
Adults, Ages 18-64	22.7%	18.0%	21.6%	24.2%	17.3%	19.2%
95%CI	(21.6-23.8)	(16.3-19.7)	(20.8-22.4)	(23.0-25.4)	(15.8-18.9)	(18.6-19.8)
Adults, Age 65+	n/a*	n/a*	n/a	n/a*	n/a*	0.8%
95%CI						(0.4-1.3)

CI refers to the confidence interval.

*Cell counts are too small to give reliable estimates and confidence intervals.

Table 10: Percentage of Adults, Ages 18-64, Without Health Insurance by Sex, Federal Poverty Level and Race/Ethnicity in 2002 & 2001						
	2002			2001		
	CPS	BRFSS	NSAF	CPS	BRFSS	CHIS
Sex						
Male	24.9%	19.7%	24.2%	26.0%	18.0%	20.7%
95%CI	(23.2-26.6)	(17.2-22.4)	(23.4-25.0)	(24.3-27.7)	(15.7-20.6)	(19.9-21.6)
Female	20.4%	16.2%	19.0%	22.3%	16.5%	17.7%
95%CI	(18.8-22.0)	(14.2-18.4)	(18.2-19.8)	(20.7-23.9)	(14.6-18.7)	(17.0-18.4)
Federal Poverty Level †						
0-99%	46.7%	36.5%	47.9%	48.3%	38.9%	39.4%
95%CI	(42.6-50.8)	(30.9-42.5)	(46.9-48.9)	(44.2-52.4)	(33.8-44.3)	(37.5-41.2)
100-199%	40.2%	28.7%	37.0%	41.7%	26.2%	33.9%
95%CI	(36.9-43.5)	(24.8-33.0)	(36.1-37.9)	(38.4-45.0)	(22.5-30.2)	(32.3-35.4)
200-299%	26.0%	14.7%	28.6%	27.4%	14.6%	19.4%
95%CI	(23.0-29.0)	(11.4-18.8)	(27.7-29.5)	(24.3-30.5)	(11.3-18.8)	(17.9-20.9)
300+%	11.7%	5.4%	9.3%	12.9%	5.2%	7.5%
95%CI	(10.5-12.9)	(4.1-7.2)	(8.7-9.9)	(11.6-14.2)	(3.9-6.9)	(7.0-8.0)
Race/Ethnicity						
Latino	38.0%	32.1%	39.6%	39.1%	31.3%	34.1%
95%CI	(35.2-40.8)	(28.5-35.9)	(38.6-40.6)	(36.4-41.8)	(27.7-35.1)	(32.8-35.3)
Non-Latino, White	13.5%	9.8%	10.9%	14.0%	10.0%	10.5%
95%CI	(12.2-14.8)	(8.4-11.3)	(10.3-11.5)	(12.6-15.4)	(8.6-11.7)	(10.0-11.1)
Non-Latino, African Amer.	16.8%	n/a*	n/a*	n/a*	n/a*	12.6%
95%CI	(11.7-21.9)					(10.7-14.6)
Non-Latino, Asian/PI	22.1%	n/a*	n/a*	n/a*	n/a*	17.9%
95%CI	(18.3-25.9)					(16.3-19.4)
Non-Latino, Other Race(s)	n/a*	n/a*	n/a*	n/a*	n/a* ¹	15.8%
						(13.5-18.1)

CI refers to the confidence interval.

*Cell counts are too small to give reliable estimates and their confidence intervals.

¹This group actually categorized as “American Indian/Alaskan Native” for this year for this study.

† The Federal Poverty Level (FPL) estimates for BRFSS do not match the other studies. The categories are approximately 0-133% FPL, 134%-233% FPL, 234%-333% FPL and above 334% FPL.

Table 11: Percentage of Children, ages 0-17, Without Health Insurance by Sex, Federal Poverty Level and Race/Ethnicity, in 2002 & 2001				
	2002		2001	
	CPS	NSAF	CPS	CHIS
Sex				
Male	14.3%	11.0%	14.4%	9.1%
95%CI	(12.3-16.3)	(10.4-11.6)	(12.4-16.4)	(8.2-10.0)
Female	13.7%	12.3%	15.8%	9.6%
95%CI	(11.7-15.7)	(11.7-12.9)	(13.7-17.9)	(8.7-10.6)
Poverty Level				
0-99%	22.8%	17.8%	24.8%	18.1%
95%CI	(18.9-26.7)	(17.1-18.5)	(20.5-29.1)	(16.0-20.1)
100-199%	20.8%	20.2%	20.3%	14.2%
95%CI	(17.3-24.3)	(19.4-21.0)	(17.0-23.6)	(12.7-15.7)
200-299%	13.5%	n/a*	15.3%	8.3%
95%CI	(10.0-17.0)		(12.0-18.6)	(6.9-9.8)
300+%	6.1%	n/a*	7.4%	2.1%
95%CI	(4.5-7.7)		(5.7-9.1)	(1.7-2.6)
Race/Ethnicity				
Latino	19.9%	20.2%	20.8%	15.8%
95%CI	(16.9-22.9)	(19.4-21.0)	(17.9-23.7)	(14.6-17.1)
Non-Latino, White	8.0%	4.3%	7.2%	3.9%
95%CI	(6.1-9.9)	(3.9-4.7)	(5.4-9.0)	(3.3-4.5)
Non-Latino, African Amer.	16.0%	n/a*	n/a*	3.5%
95%CI	(9.2-22.8)			(1.9-5.1)
Non-Latino, Asian/PI	n/a*	n/a*	n/a*	5.2%
95%CI				(3.8-6.5)
Non-Latino, Other Race(s)	n/a*	n/a*	13.3% †	n/a**
95%CI			(8.3-18.3)	

CI refers to the confidence interval.

*Cell counts are too small to give reliable estimates and their confidence intervals

† This group is actually categorized as “American Indian/Alaskan Native” for 2001 in CPS.

**This group not available through either AskCHIS 2.0 or Public Use File.

References and Notes

- ¹ Heffler S, Smith S, Keehan S, Clemens MK, Won G, Zezza M; “Health spending projections for 2002-2012”; Health Affairs; 2003 Jan-Jun; Suppl Web Exclusives:W3-54-65
- ² Table 2: National Health Expenditures Aggregate Amounts and Average Annual Percent Change, by Type of Expenditure: Selected Calendar Years 1980-2003; Centers for Medicare and Medicaid Services; <http://www.cms.hhs.gov/statistics/nhe/historical/t2.asp>; Last accessed 5/24/05
- ³ “Causes and cures: A stakeholders perspective on rising prescription drug costs in California” April 2001, California Healthcare Foundation <http://www.chcf.org/topics/view.cfm?itemID=12657> Last accessed 4/28/05
- ⁴ Adams AS, Soumerai SB, Ross-Degnan D; “The case for a Medicare drug coverage benefit: a critical review of the empirical evidence”; Annual Review of Public Health; 2001; 22:49-61
- ⁵ Reed M, Hargraves JL; “Prescription drug access disparities among working-age Americans”; Issue Brief for the Center for Studying Health System Change; Dec 2003;(73): 1-4
- ⁶ Piette JD, Heisler M, Wagner TH; “Cost-related medication underuse among chronically ill adults: the treatments people forgo, how often, and who is at risk”; American Journal of Public Health; Oct 2004; 94 (10):1782-7
- ⁷ Ibid
- ⁸ Piette JD, Heisler M; “Problems due to medications costs among VA and non-VA patients with chronic conditions”; American Journal of Managed Care; 10 (11); 861-868
- ⁹ Soumerai SB, McLaughlin TJ, Ross-Degnan D, Casteris CS, Bollini P; “Effects of a limit on Medicaid drug-reimbursement benefits on the use of psychotropic agents and acute mental health services by patients with schizophrenia”; New England Journal of Medicine; Sep 1994; 331(10):650-5
- ¹⁰ Nyman JA, Martinson MS, Nelson D, Nugent S, Collins D, Wittes J, Fye CL, Wilt TJ, Robins SJ, Bloomfield Rubins H; “Cost-effectiveness of gemfibrozil for coronary heart disease patients with low levels of high-density lipoprotein cholesterol: the Department of Veterans Affairs High-Density Lipoprotein Cholesterol Intervention Trial”; Archives of Internal Medicine; Jan 2002;162(2):177-82
- ¹¹ California Healthline; “Status of Proposed Ballot Measures Addressing Prescription Drug Costs Examined”; California Healthcare Foundation. <http://www.californiahealthline.org/index.cfm?Action=dspItem&itemID=109764#>; Last accessed 3/23/05
- ¹² Ballot Initiative; “Cheaper Prescription Drugs for California Act (Cal Rx Plus)”; <http://www.health-access.org/docs/OURX/CalRx%20Ballot%20Tex.pdf>; Last accessed 5/9/05
- ¹³ ER Brown, N Ponce, T Rice, SA Lavarreda; “The State of Health Insurance in California: Long-Term and Intermittent Lack of Health Insurance Coverage”; Los Angeles, CA; UCLA Center for Health Policy Research; 2003
- ¹⁴ The Current Population Survey was treated as a point in time estimate for this study. For more details see Appendix 1
- ¹⁵ Call KT; “Measuring Health Insurance Coverage in Surveys”; SHADAC Survey Guideline Series; May 2003; <http://www.shadac.umn.edu/collecting/collateral/HealthInsurance.pdf>; Last accessed 5/11/05
- ¹⁶ Feldman J, Schur C, Berk M, Kintal S; “Memorandum on data guide: Analysis results for understanding survey estimates of California’s uninsured and Medi-Cal populations”; California Healthcare Foundation; Jan 2004; <http://www.chcf.org/documents/insurance/CPSDataGuideMemo.pdf>; Last accessed 5/1/05
- ¹⁷ Population in 2003 is based on the California Department of Finance population estimates. For more information visit <http://www.dof.ca.gov/HTML/DEMOGRAP/HistE-4.htm>. Last accessed 5/10/05
- ¹⁸ Additionally, in BRFSS and CPS, the values were so low that a statistically significant estimate was not possible due to the smaller sample sizes of these surveys. With such low uninsurance rates for seniors, further breakdowns do not produce statistically significant results.
- ¹⁹ 74% of all single parent households in California are headed by women. Petris Center analysis of 2002 Census summary File 1, P18 for California. “Detailed Tables P18. HOUSEHOLD SIZE, HOUSEHOLD TYPE, AND PRESENCE OF OWN CHILDREN [19] - Universe: Households”; http://factfinder.census.gov/servlet/DTTable?_bm=y&-context=dt&-ds_name=DEC_2000_SF1_U&-mt_name=DEC_2000_SF1_U_P018&-CONTEXT=dt&-tree_id=4001&-all_geo_types=N&-geo_id=04000US06&-search_results=01000US&-format=&-lang=en; Last accessed 5/27/05
- ²⁰ Fact Sheet; “Women’s Health Insurance Coverage” June 2004; The Henry J. Kaiser Family Foundation; Last accessed 6/22/05

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- ²¹ While statistical differences between racial/ethnic groups in adults may vary by survey, Latinos consistently have higher uninsured rates (based on non-overlapping confidence intervals) relative to every other group.
- ²² Personal communication with Timothy Lawrence of PhRMA.
- ²³ Personal communication with Rich Sagall of NeedyMeds
- ²⁴ See Web appendix on Petris Center website at www.Petris.org
- ²⁵ Data from NeedyMeds Manual
- ²⁶ California Health and Human Services Agency; THE CALIFORNIA HEALTH CARE OPTIONS PROJECT: Status update; March 2002; <http://statecoverage.net/statereports/ca21.pdf>; Last accessed 4/27/05
- ²⁷ From 2003 the CHIS data
- ²⁸ Personal Communication with Christian Clymer of PhRMA on 4/11/05.
- ²⁹ Population in 2003 is based on the California Department of Finance population estimates. For more information visit <http://www.dof.ca.gov/HTML/DEMOGRAP/HistE-4.htm>. Last accessed 5/10/05.
- ³⁰ VA Health Care Eligibility; U.S Department of Veterans Affairs; <http://www.va.gov/healtheligibility/home/hecmmain.asp>; Last accessed 5/25/05
- ³¹ Outpatient Prescription Copayments; Health Benefits Eligibility; U.S. Department of Veteran Affairs; http://www.va.gov/healtheligibility/costs/outpatient_prescription_copayments.asp; Last accessed 5/25/05
- ³² Family PACT means Family Planning, Access, Care and Treatment.
- ³³ Wulsin Jr. L, Long P, Hickey M, Ishimaru K; “A summary of health care financing for low income individuals in California, 1998 to 2003”; Insure the Uninsured Project (ITUP); Jan 2004; <http://itup.org/Reports/Statewide/OverviewofCA98-03.pdf>; Last accessed 3/29/05
- ³⁴ “Fact sheet on Family PACT: An overview”; California Department of Health Services; <http://www.dhs.ca.gov/pcfh/ofp/Documents/PDF/FamPact/FPoverview.pdf>; Last accessed 5/26/05
- ³⁵ California Department of Health Services; Division of Communicable Disease Control; “Communicable Disease Control in California, 2000 (DCDC Annual Report)”; http://www.dhs.ca.gov/ps/dcdc/pdf/CDC2000_Document.pdf; Last accessed 5/26/05
- ³⁶ Child Medical Services Branch; California Children’s Services (CCS); <http://www.dhs.ca.gov/pcfh/cms/ccs/>; Last accessed 5/26/05
- ³⁷ California Department of Health Services; “Genetically Handicapped Person Program”; July 2000; <http://www.dhs.ca.gov/PCFH/cms/ghpp/pdf/ghppbrochure.pdf>; Last accessed 5/26/05
- ³⁸ “Summary CMSP Eligibility”; County Medical Services Program, CMSP Governing Board; <http://www.dhs.ca.gov/publications/forms/pdf/cmspin02.pdf>; Last accessed 5/26/05
- ³⁹ “A brief overview of County programs for Medically Indigent Adults in the State of California”; Issues and Victories, San Diego Organizing Project; http://www.sdop.net/issues_CMS.htm; Last accessed 5/26/05
- ⁴⁰ Soumerai SB, McLaughlin TJ, Ross-Degnan D, Casteris CS, Bollini P; “Effects of a limit on Medicaid drug-reimbursement benefits on the use of psychotropic agents and acute mental health services by patients with schizophrenia”; New England Journal of Medicine; Sep 1994; 331(10):650-5
- ⁴¹ Nyman JA, Martinson MS, Nelson D, Nugent S, Collins D, Wittes J, Fye CL, Wilt TJ, Robins SJ, Bloomfield Rubins H; “Cost-effectiveness of gemfibrozil for coronary heart disease patients with low levels of high-density lipoprotein cholesterol: the Department of Veterans Affairs High-Density Lipoprotein Cholesterol Intervention Trial”; Archives of Internal Medicine; Jan 2002; 162(2):177-82
- ⁴² Pear R; “National Briefing, Science and Health: Low cost drug program”; New York Times; Apr 6, 2005
- ⁴³ “About the California Health Interview Survey”; California Health Interview Survey; <http://www.chis.ucla.edu/about.html>; Last accessed 6/23/05
- ⁴⁴ Ta VM, Wulsin Jr. L; “A summary of health care financing for low income individuals in California, 1998 to 2005”; Insure the Uninsured Project (ITUP); Feb 2005; <http://itup.org/Reports/Statewide/OverviewofCA98-05.pdf>; Last accessed 3/29/05
- ⁴⁵ “The CHIS 2001 Sample: Response Rate and Representativeness”- Technical Paper #1; December 2003; http://www.chis.ucla.edu/pdf/2001_response_representativeness.pdf; Last accessed 5/9/05
- ⁴⁶ For definitions and more information about how this is calculated see “The CHIS 2001 sample: Response rate and representativeness”; December 2003; http://www.chis.ucla.edu/pdf/2001_response_representativeness.pdf; Last accessed 5/9/05
- ⁴⁷ Nelson CT, Mills RJ; “The March CPS health insurance verification question and its effect on estimates of the uninsured”; <http://www.census.gov/hhes/hlthins/verif.html>; Last accessed 3/21/05

-
- ⁴⁸ DeNavas-Walt C, Proctor BD, Mills RJ; “Income, Poverty, and Health Insurance Coverage in the United States: 2003”; U.S. Census Bureau; Current Population Reports, P60-226; U.S. Government Printing Office; Washington, DC; 2004
- ⁴⁹ A CBO Paper; “How many people lack health insurance and for how long?”; May 2003; The Congress of the United States; Congressional Budget Office; <http://www.cbo.gov/ftpdocs/42xx/doc4210/05-12-Uninsured.pdf>; ; Last accessed 5/1/05
- ⁵⁰ State Health Access Data Assistance Center (SHADAC); “A state perspective on national survey data on the uninsured”; <http://www.shadac.umn.edu/publications/docs/NationalSurveyData.pdf>; Last accessed 5/1/05
- ⁵¹ This number is calculated by the Petris Center based on data found in “Source and accuracy of estimates for income, poverty and health insurance coverage in the United States: 2003”; http://www.census.gov/hhes/income/p60_226sa.pdf; Last accessed 5/9/05
- ⁵² 2003 BRFSS; “Behavioral Risk Factor Surveillance System State Questionnaire”; December 2002; V 1.5; 2003 Survey Questions; <http://www.cdc.gov/brfss/questionnaires/pdf-ques/2003brfss.pdf>; Last accessed 5/24/05
- ⁵³ 2002 BRFSS; Behavioral Risk Factor Surveillance System”; 2002 Survey Questions; <http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf>; Last access 5/24/05
- ⁵⁴ 2002 BRFSS; Behavioral Risk Factor Surveillance System”; 2002 Survey Questions; <http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf>; Last access 5/24/05
- ⁵⁵ Powell-Griner E; “Uses and limitations of the Behavioral Risk Factor Surveillance System data”; American Statistical Association 1998 Proceedings of the Section on Survey Research Methods; Alexandria, VA: ASA; 1998: 219-223
- ⁵⁶ “The CHIS 2001 Sample: Response Rate and Representativeness”- Technical Paper #1; December 2003; http://www.chis.ucla.edu/pdf/2001_response_representativeness.pdf; Last accessed 5/9/05
- ⁵⁷ Abi-Habib N, Safir A, and Triplett T; “No. 1: NSAF Survey Methods and Data Reliability”; Sept 2004; http://www.urban.org/UploadedPDF/900733_2002_Methodology_1.pdf; Last accessed 5/6/05
- ⁵⁸ Kenney G, Zuckerman S, Rajan S, Brennan N, Holahan J; “The National Survey of America's Families: an overview of the health policy component”; Inquiry; 1999 Fall; 36(3): 353-62.
- ⁵⁹ Brick JM, Ferraro D, Strickler T, Rauch C; “Report #8: 2002 NSAF response rates”; December, 2003; http://www.urban.org/UploadedPDF/900692_2002_Methodology_8.pdf; Last accessed 5/9/05
- ⁶⁰ “State-Specific Prevalence of Lapses in Health-Care-Insurance Coverage -- United States, 1995”; MMWR; 1998; 47(04); 73-77; <http://www.cdc.gov/mmwr/preview/mmwrhtml/00051349.htm>; Last accessed 3/29/05
- ⁶¹ State Health Access Data Assistance Center; “Variation in Health Insurance Coverage Surveys: Behavioral Risk Factor Survey vs. Current Population Survey”; May 2004; http://www.shadac.umn.edu/events/CTUW2005_BRFSSvsCPS.pdf; Last accessed 5/1/05
- ⁶² Ibid
- ⁶³ Feldman J, Schur C, Berk M, Kintal S; “Memorandum on data guide: Analysis results for understanding survey estimates of California’s uninsured and Medi-Cal populations”; California Healthcare Foundation; Jan 2004; <http://www.chcf.org/documents/insurance/CPSDataGuideMemo.pdf>; Last accessed 5/1/05
- ⁶⁴ “How many people lack insurance and for how long?”; Congressional Budget Office; May 2003; <http://www.cbo.gov/ftpdocs/42xx/doc4210/05-12-Uninsured.pdf>; Last accessed 3/28/05
- ⁶⁵ Fronstin P; “Counting the uninsured: A comparison of national surveys”; Employee Benefit Research Institute (EBRI); Sep 2000
- ⁶⁶ “Do National surveys overestimate the number of uninsured? Findings from the Medicaid undercount experiment in Minnesota”; Issue Brief #9/Jan 2004; <http://www.shadac.umn.edu/publications/issuebriefs/IssueBrief9.pdf>; Last accessed 3/21/05
- ⁶⁷ Schur CL, Feldman JJ, Kintala S, Berk ML; “California’s uninsured and Medi-Cal populations: A policy guide to estimates”; Jan 2004; California Healthcare Foundation; <http://www.chcf.org/documents/insurance/CPSDataGuide.pdf>; Last accessed 5/6/05
- ⁶⁸ California Health Interview Survey; “CHIS 2001 Methodology Series: Report 5 – Weighting and Variance Estimation”; Los Angeles, CA: UCLA Center for Health Policy Research; 2002
- ⁶⁹ <http://chis.ucla.edu/main/default.asp>
- ⁷⁰ Stata Corporation; “Stata Statistical Software: Release 9”; College Station, TX; StataCorp LP; 2005
- ⁷¹ California Health Interview Survey; “Weighting and Estimation of Variance in the CHIS Public Use Files”; http://chis.ucla.edu/pdf/weighting_var_chis_020705.pdf; Last accessed 5/1/05
- ⁷² “STATA Survey Data Reference Manual Release 9”; Stata Press, Stata Corporation; College Station, TX; 2003: pp58-64.

-
- ⁷³ DeNavas-Walt C, Proctor BD, Mills RJ; “Income, Poverty, and Health Insurance Coverage in the United States: 2003”; U.S. Census Bureau; Current Population Reports, P60-226; U.S. Government Printing Office; Washington, DC; 2004
- ⁷⁴ “Technical Paper 63RV: Current Population Survey – Design and Methodology”; U.S. Census Bureau; U.S. Department of Commerce; March 2003; <http://www.census.gov/prod/2002pubs/tp63rv.pdf>; Last accessed 5/1/05
- ⁷⁵ “Source and Accuracy of the Data for the March 1997 Current Population Survey Microdata File: 1997”; U.S. Census Bureau
- ⁷⁶ “Current Population Survey Table Creator, for the Annual Social and Economic Supplement”; U.S. Census Bureau Website http://www.census.gov/hhes/www/cpssc/cps_table_creator.html; Last accessed 5/1/05
- ⁷⁷ CPS March Supplement; Public Use Files, years 2002-2004 (covers years 2001-2003, respectively); <http://ferret.bls.census.gov/cgi-bin/ferret>; Last accessed 5/1/05
- ⁷⁸ Technical Paper 63RV: Current Population Survey – Design and Methodology, U.S. Census Bureau, U.S. Department of Commerce, March 2003. <http://www.census.gov/prod/2002pubs/tp63rv.pdf>
- ⁷⁹ “Source and Accuracy of Estimates for Income, Poverty, and Health Insurance Coverage in the United States: 2003” U.S. Census Bureau; http://www.census.gov/hhes/income/p60_226sa.pdf; Last accessed 5/1/05
- ⁸⁰ Ibid., page 7.
- ⁸¹ Ibid., pages 6 and 9 respectively.
- ⁸² Phone: 301-763-3213
- ⁸³ Table 3, “Source and Accuracy of Estimates for Income, Poverty, and Health Insurance Coverage in the United States: 2003” U.S. Census Bureau; page 7; http://www.census.gov/hhes/income/p60_226sa.pdf; Last accessed 5/1/05
- ⁸⁴ <http://www.urban.org/Content/Research/NewFederalism/NSAF/Overview/NSAFOverview.htm>; Last accessed 5/1/05
- ⁸⁵ Data for 1999 and 1997 are available, but not relevant to this study.
- ⁸⁶ <http://anfdata.urban.org/sdaweb/analysis.cfm>; Last accessed 5/1/05
- ⁸⁷ Behavioral Risk Factor Surveillance System Survey Data; Atlanta, Georgia; U.S. Department of Health and Human Services; Centers for Disease Control and Prevention 2001-2003
- ⁸⁸ Centers for Disease Control and Prevention; “Behavioral Risk Factor Surveillance System Survey Questionnaire”; Atlanta, Georgia; U.S. Department of Health and Human Services; Centers for Disease Control and Prevention, 2001-2003.
- ⁸⁹ Stata Corporation; “Stata Statistical Software: Release 9”; College Station, TX; StataCorp LP; 2005
- ⁹⁰ “STATA Survey Data Reference Manual Release 8”; Stata Press; Stata Corporation; College Station, TX; 2003: pp 65-68.