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The Unprotected: Characteristics of Older Adults Who Did Not Receive Their Annual Influenza Immunization

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California ADULT Immunization Coalition



theUnprotected

[findings from 2001 California Health Survey]

**Characteristics of
Older Adults Who
Did Not Receive
Their Annual
Influenza
Immunization**





Dear Reader,

The California Adult Immunization Coalition (CAIC) is pleased to present our report entitled, "The Unprotected: Characteristics of Older Adults in California Who Did Not Receive Their Annual Influenza Immunization." Using data from the 2001 California Health Interview Survey (CHIS), the report assesses influenza immunization rates at the state, regional, and county level. We have selected key variables such as age, gender, race/ethnicity, perceived health status, and the presence of a common chronic condition to help us better understand who is not getting immunized.

We believe this information will help adult immunization stakeholders develop collaborative, evidence-based strategies to improve immunization rates, particularly among high-risk adults and adults with limited access to preventive care. This report is the first of a series developed to improve influenza immunization rates among older adults in California. Influenza is the largest preventable cause of mortality among older adults in our society and the CAIC is dedicated to achieving the highest possible immunization rates against this disease. For more information about the CAIC, please see page 35 of this report or refer to our website: <http://www.immunizeCAadults.org>.

California Adult Immunization Coalition

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executive summary

The Centers for Disease Control and Prevention (CDC) estimate that influenza causes 36,000 deaths in the United States every year, and results in direct medical care costs of over \$4.6 billion annually. Influenza and pneumonia are responsible for 8,800 deaths per year in California alone, making it the sixth leading cause of death among adults in the state, yet the illnesses are largely preventable by immunization.

The California Adult Immunization Coalition (CAIC) is comprised of more than 20 organizations across California who are working together to increase immunization rates for influenza and pneumonia in adults. The CAIC analyzed influenza vaccination rates in California using data from the 2001 California Health Information Survey (CHIS), and compared the results to the national Healthy People 2010 goals for adult immunization. The national goals specify that 90% of older adults (age 65 and over) should be immunized against influenza annually by the year 2010 (i.e., less than 10% should remain unimmunized).

To deepen our understanding of this important public health issue, the CAIC has added several specific questions concerning adult immunizations to the 2003 CHIS survey. Results of this most recent survey will be available next year. Increasing California's adult immunization rates to reach the national goal requires the persistent efforts of multiple sectors including vaccine suppliers, health departments, and individual health clinics and health providers' offices.

Brief Summary of Key Findings

- 32.6% of older adults (age 65 and over) in California for whom annual flu shots are recommended did not get immunized in 2001.
- Immunization rates among older adults varied by region; rates were found to be lowest in the Los Angeles region (63.9%) and highest in the Sacramento region (77.0%). However, no regions in California came close to meeting the national goal that 90% of older adults be immunized against influenza.
- Although there was a strong age-related trend for the elderly to get an influenza immunization, 27% remained unimmunized even among people aged 75 years and over.
- Among the state's racial and ethnic groups, Latinos (46%) and African Americans (47%) over the age of 65 were almost twice as likely to go unimmunized when compared with Asians (27%) and Whites (28%) in the same age group.
- Persons with a "medical home" (a regular place to get medical care) were more than twice as likely to get immunized compared to those who did not have a usual source of care.
- The more often an individual saw the doctor, the more likely he or she was to get a flu shot, however, large numbers of people with regular access to care were still unimmunized.
- Patients covered by Medicare were immunized more often than those who were not covered; in the Medicare-covered group 32.7% were not immunized.
- There were no differences found in immunization rates between women and men.

Recommendations

- Clinic-based reminder/recall programs to bring patients into the office for an annual vaccination prior to the influenza season should be implemented.
- Physician/staff reminder systems and pre-printed orders should be employed to increase opportunities to vaccinate patients during office visits.
- Continue and strengthen efforts to increase immunization rates in African-American and Latino older adults.
- Promote the importance of having a "medical home" for older adults.
- Continue and strengthen health education efforts to encourage all Medicare beneficiaries to actively seek an annual influenza immunization.



background

The Problem: Influenza morbidity and mortality in adults, the devastating effects of influenza.

8,814 older Californians lost their lives in 2000 due to vaccine-preventable influenza and pneumonia, making it the sixth leading cause of death among adults in the state (Center for Health Statistics, Department of Health Services, 2000 Vital Statistics of California, 2000). Every year, more than 114,000 people in the United States are hospitalized and 36,000 people die because of influenza or pneumonia. During most influenza seasons, 10% to 20% of the nation's population is infected with influenza resulting in direct medical costs (hospitalization, doctor office visits, medications, etc.) estimated at \$4.6 billion per year. Individuals with chronic medical conditions, especially chronic respiratory diseases, have a greatly increased risk of hospitalization and death from influenza. Despite all these facts, immunization rates for older adults in California remain low.

Many factors contribute to low immunization rates among California's older adult population, including a lack of awareness, lack of implementation of evidence-based intervention by vaccination, financial crises in state and local governments, and a rapidly growing older adult population. During this period of fluctuating births and improving survivorship, the elderly population in California is projected to grow from 14% in 1990 to 22% in 2030.

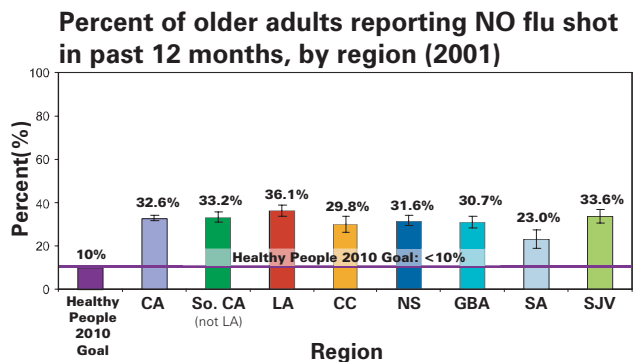
The National Healthy People 2010 goals call for 90% coverage for both influenza and pneumococcal vaccination for individuals aged 65 years and older. Yet, according to the 1999 Behavioral Risk Factor Surveillance System, influenza vaccination coverage was only 72% and pneumococcal vaccination coverage was only 57% in California. The 2001 California Health Interview Survey (CHIS) revealed that only 67% of all respondents 65 years or older reported receiving a flu shot in the past 12 months. In some racial/ethnic populations, the statewide rate was as low as 52%.

CA=California, So.CA=Southern California (excluding Los Angeles), LA=Los Angeles, CC=Central Coast, NS=Northern & Sierra, GBA=Greater Bay Area, SA=Sacramento Area, SJV=San Joaquin Valley

The Solution: Improve Adult Immunization Rates

Influenza vaccination can reduce the risk of hospitalization due to influenza-related complications in elderly populations by 60% to 70%, and reduce the risk of death by 85%. Despite the fact that the influenza vaccine saves lives and is cost-effective, thousands of at-risk adults in California remain unimmunized. According to a report recently published by Lumetra (formerly CMRI, the quality improvement organization for Medicare), it would cost an estimated \$9 million to vaccinate California's additional 880,000 Medicare beneficiaries against influenza to reach the National Healthy People 2010 goal of 90% immunized. Approximately 3,300 pneumonia-related hospitalizations would be prevented, saving \$87 million in direct hospital costs. While California is on track towards achieving disease reduction objectives for most vaccine-preventable diseases, influenza continues to pose a great challenge.

Centers for Disease Control and Prevention. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2001;50 (No. RR-04):1-46.



how to use this report

The information contained in this report can be viewed as establishing a baseline for future efforts to improve immunization rates among older adults who did not receive an annual influenza immunization in California. County and regional rates for the same age group are provided for comparison.

Communities, counties, regions, and state organizations/agencies may use this information to develop collaborative strategies to reduce racial/ethnic disparities and improve influenza immunization rates, particularly among at-risk older adults and those who have limited access to preventive care. The detailed data provide an opportunity to target efforts and resources at the regional level, where the need is greatest.

For more information about CHIS, please see page 36 of this report or refer and/or to the CHIS website:

<http://www.chis.ucla.edu/main/default.asp>

methods

A total of 10,994 CHIS survey participants age 65 and older were asked if they received a flu shot during the past 12 months. We analyzed the characteristics of older adults who responded "no" to this question.

We report and compare these data at the state level, and at seven regional levels designated in the CHIS Survey (see table on next page). The following demographic characteristics are included in this analysis:

- Age
- Gender
- Race/ethnicity
- Presence of certain co-morbidities, including asthma, diabetes, and/or heart disease
- Access to a usual source of health care ("medical home")
- Frequency of visits to health care provider in the past year
- Self-perceived health status
- Enrollment in Medicare

Confidence Intervals

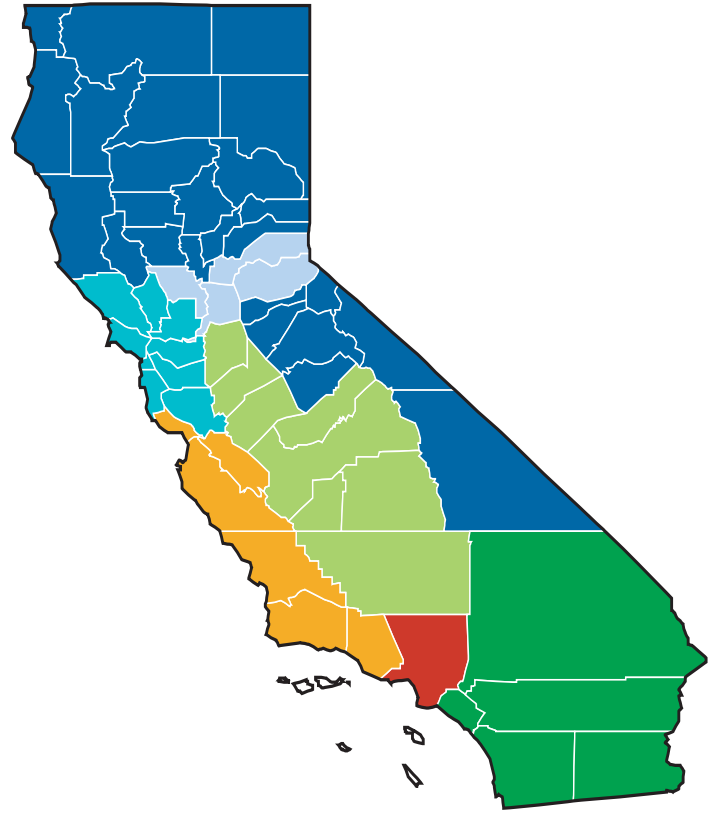
Each of the data tables provide an arithmetic mean for the population-based data with confidence intervals indicating the range within which the true mean falls with 95% confidence. (Please refer to the regional data tables in the back of the report for more information on the actual confidence interval data.)

California Health Interview Survey

For more information on CHIS, please refer to page 36 of this report.

Seven CHIS Geographic Regions in California

- Northern/Sierra**
- Greater Bay Area**
- Sacramento Area**
- San Joaquin Valley**
- Central Coast**
- Los Angeles**
- Southern California**
(excluding LA County)



Description of the CHIS regions and corresponding sample size for 65+ population

Region	Counties	Sample Size	Est. N ⁺
Northern/Sierra	Butte, Colusa, Glenn, Shasta, Sutter, Tehama, Yuba, Humboldt, Del Norte, Siskiyou, Lassen, Mendocino, Lake, Nevada, Plumas, Sierra, Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine, Trinity, Modoc	605	189,000
Greater Bay Area	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma	2,309	720,000
Sacramento Area	Sacramento, Yolo, Placer, El Dorado	626	194,000
San Joaquin Valley	Fresno, San Joaquin, Tulare, Kings, Kern, Stanislaus, Merced, Madera	1,000	311,000
Central Coast	Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, Ventura, San Benito	714	223,000
Los Angeles	Los Angeles	2,825	880,000
Southern California (excluding LA County)	Imperial, Orange, Riverside, San Bernadino, San Diego	2,924	910,000

⁺Using carefully defined weights and calculations, AskCHIS produces an estimate for the total number of people represented by the sample size.

data and analysis of select indicators/variables

Percent of older adults reporting NO FLU SHOT in past 12 months by:

- A. Age Group
- B. Gender
- C. Race/Ethnicity
- D. Perceived Health Status
- E. Frequency of visits to Primary Care Provider (PCP) in past 12 months
- F. Chronic Disease (Asthma, Diabetes, Heart Disease)
- G. Presence of Usual Source of Care
- H. Medicare enrollment

A. Age group

CHIS Question

What is your age now, please?

Significance

The risk of influenza-related complications and death increases with age.

Key Findings

Overall, the percentage of unimmunized adults aged 65-69 years is higher than other age groups.

The older the age group, the lower the percentage of unimmunized individuals (statistically significant difference).

Regional data show a similar trend except for the Sacramento area, where the 75 years and over age group showed a much lower percent of unimmunized individuals than the other age groups.

Additionally, in the Sacramento region, fewer individuals in the 65-69 years age group reported they had not received a flu shot than did the 70-74 years age group.

Interpretation

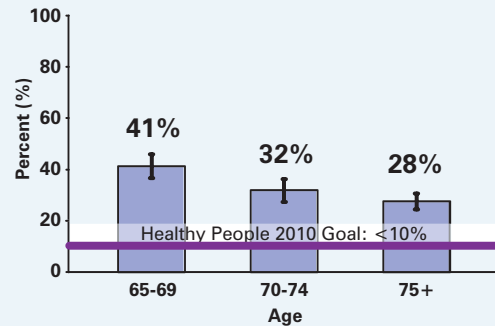
Immunization rates increased with age, even among adults over 65 years of age, which may be a reflection of poorer overall health status and/or greater frequency of doctor visits. (See page 15)

Recommendation

Additional efforts should target adults aged 65-69 years to encourage an annual flu shot.

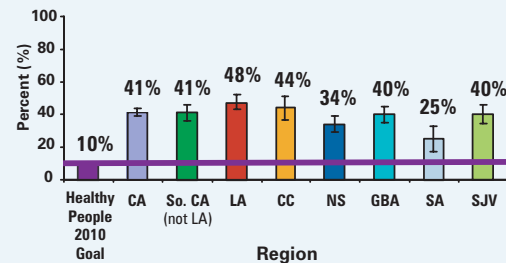
Statewide Data

Percent of older adults reporting NO FLU SHOT in past 12 months by age group, California 2001

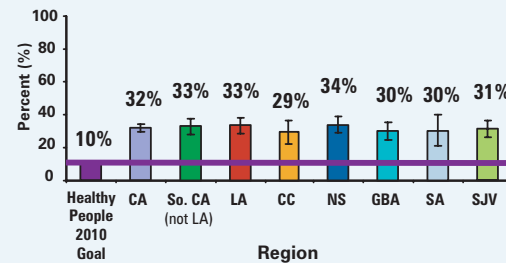


Regional Comparisons

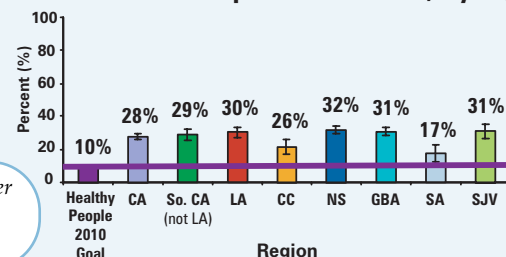
Percent of older adults Ages 65-69 reporting NO FLU SHOT in past 12 months, by region



Percent of older adults Ages 70-74 reporting NO FLU SHOT in past 12 months, by region



Percent of older adults Ages 75+ reporting NO FLU SHOT in past 12 months, by region



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Region Specific Data (Please refer to region specific graphs and data tables in the back of this report.)

B. Gender

CHIS Question

And are you male or female?

Significance

Research in other areas of health care has sometimes shown that women tend to take better care of their health compared to men, and thus may be more likely to obtain preventive care.

Key Findings

The overall percentage of unimmunized older adults was similar for both males and females.

Regional data were similar to the overall data, indicating no gender-specific differences in immunization rates.

Interpretation

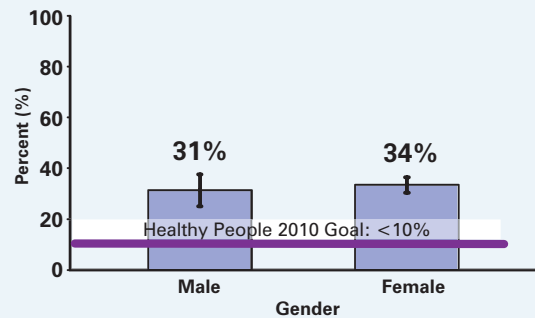
Women and men are at equal risk of being unvaccinated.

Recommendation

Interventions to improve immunization rates in older adults do not need to focus on gender.

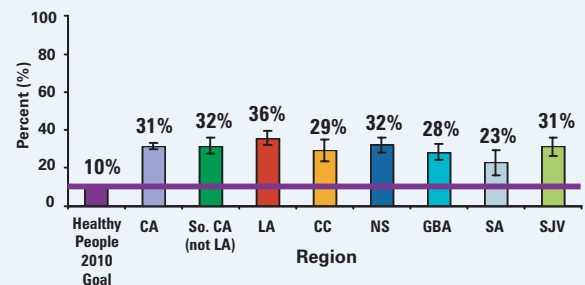
Statewide Data

Percent of older adults reporting NO FLU SHOT in past 12 months by gender, California 2001

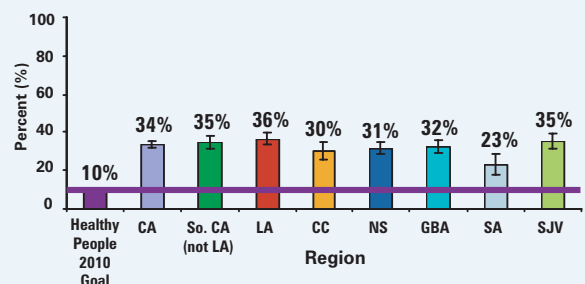


Regional Comparisons

Percent of older adults reporting NO FLU SHOT in past 12 months, by male gender and region



Percent of older adults reporting NO FLU SHOT in past 12 months, by female gender and region



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Region Specific Data (Please refer to region specific graphs and data tables in the back of this report.)

C. Race/Ethnicity

CHIS Question

Are you of Latino or Hispanic origin?

And please tell me which one or MORE of the following (you) would use to describe yourself. Would you describe yourself as Native Hawaiian, Other Pacific Islander, American Indian, Alaska Native, Asian, Black, African American or White?

Significance

Research and surveillance studies have reported significant racial/ethnic disparities related to immunization rates among older adults. These differences should be identified and addressed in order to improve immunization rates across the entire population.

Key Findings

Although racial/ethnic data were insufficient to determine immunization rates for certain groups in some regions, in general older Latino and African-American adults were significantly less likely to get flu shots when compared to older adults in other racial/ethnic groups.

Interpretation

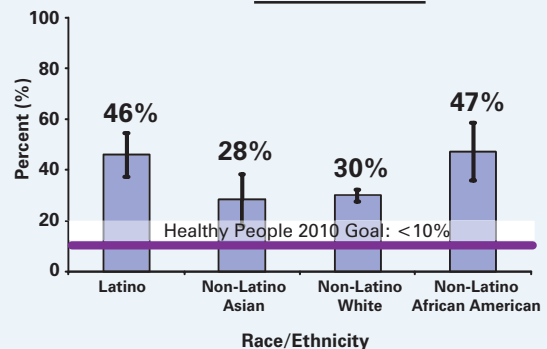
In regions where estimates of immunization rates are available (San Joaquin Valley, Greater Bay Area counties, Central Coast, Los Angeles, and Southern California excluding LA), older Latino and African-American adults were significantly less likely to get flu shots when compared to older adults in other racial/ethnic groups. Due to small sample sizes in certain regions, the confidence intervals were very wide, indicating that the actual rates might differ significantly from these findings. Although racial/ethnic immunization rates were not available in many regions, the trends seen at the state and national levels (African-American and Latino older adults reporting no flu shot more frequently than other racial/ethnic groups) are likely to be reflected in most regions.

Recommendation

Continue and strengthen efforts to increase immunization rates in African-American and Latino older adults.

Statewide Data

Percent of older adults reporting NO FLU SHOT in past 12 months by race/ethnicity, California 2001



Region Specific Data (Please refer to region specific graphs and data tables in the back of this report.)

D. Perceived Health Status

CHIS Question

In general, would (you) say your health is excellent, very good, good, fair or poor?

Significance

Studies have shown that individuals who perceive their health to be excellent to very good are less likely to seek preventive care.

Individuals with perceived poor health status may have a condition that further increases their risk of serious complications from influenza.

Key Findings

Self-perception of health status did not directly impact the likelihood that an older adult would receive an annual influenza vaccination.

Interpretation

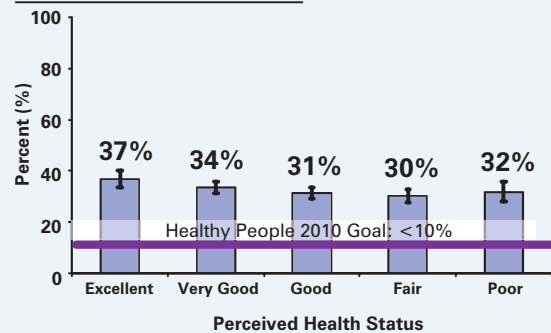
Older adults with perceived "poor health status" are as likely to not receive a flu shot as those with perceived "excellent health status," even though it may be more critical that they receive one.

Recommendation

Whether people perceive their health status as poor or good, they are equally likely to be unimmunized, and overall immunization rates need to be improved.

Statewide Data

Percent of older adults reporting NO FLU SHOT in past 12 months by perceived health status, California 2001



Region Specific Data (Please refer to region specific graphs and data tables in the back of this report.)

E. Frequency of visits

to Primary Care Provider (PCP) in past 12 months

CHIS Question

During the past 12 months, how many times have you seen a medical doctor?

Significance

Each time an older adult accesses the health care system, the treating physician (or health care provider) should assess the status and provision of routinely recommended preventive care.

Several studies suggest that a recommendation by a primary care provider (such as physician or nurse practitioner) is one of the most important factors for receiving a flu shot and that more visits to a PCP increase the likelihood of vaccination over the course of a year.

Key Findings

Individuals with one or fewer physician visits in the past twelve months were less likely to be vaccinated compared to individuals with two or more physician visits in the past twelve months.

In various regions, up to 42.5% of older adults remained unvaccinated despite their having seen a physician multiple times in the prior twelve months. Interventions such as physician/staff reminder systems and pre-printed orders are extremely important in helping reduce missed vaccination opportunities.

Interpretation

The fewer visits an older adult makes to their health care provider, the less likely it is that he/she will get immunized.

Recommendation

Implement reminder/recall programs to bring patients into the office during the influenza season.

Promote reduction of missed opportunities to vaccinate, by using physician/staff reminder systems and pre-printed orders in provider offices.

Statewide Data

Percent of older adults reporting NO FLU SHOT in past 12 months by number of doctor visits, California 2001



Region Specific Data (Please refer to region specific graphs and data tables in the back of this report.)

F. Chronic Disease (Asthma, Diabetes, Heart Disease)

CHIS Question

Has your doctor ever told you that you have asthma?

Other than during pregnancy, has your doctor ever told you that you have diabetes or sugar diabetes?

Has a doctor ever told you that you have any kind of heart disease?

Significance

Older adults with chronic diseases, (co-morbidities) such as asthma, diabetes, and heart disease, are more likely to experience mortality and morbidity from influenza compared to those without these chronic conditions, and are recommended to receive a flu shot annually, regardless of their age.

Key Findings

On a statewide level, older adults with these three chronic conditions are more likely (statistically significant) to receive a flu shot than older adults not diagnosed with these conditions.

The percentage of older adults reporting no flu shot is comparable among all three prevalent chronic conditions.

Older adults with chronic diseases are more likely than others to receive a flu shot, but flu vaccination rates are still inadequate in the population with chronic diseases.

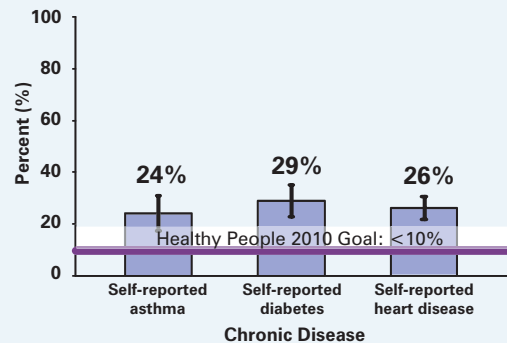
Recommendation

Implement reminder/recall programs to bring all patients, and especially those with a chronic condition, into the office during the influenza season.

Aggressively promote reduction of missed opportunities to vaccinate by using physician/staff reminder systems and pre-printed orders in provider offices.

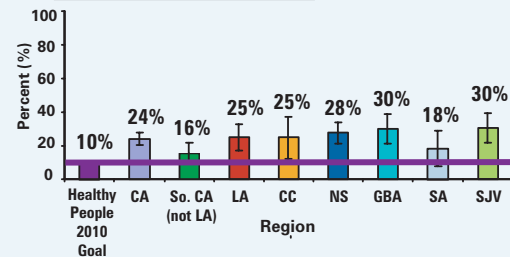
Statewide Data

Percent of older adults reporting NO FLU SHOT in past 12 months by chronic disease status, California 2001

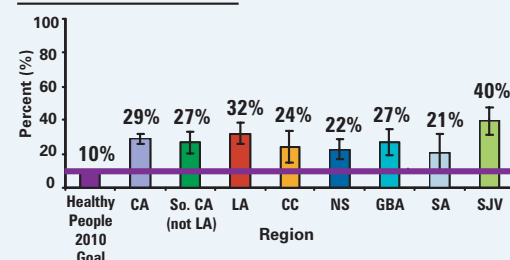


Regional Comparisons

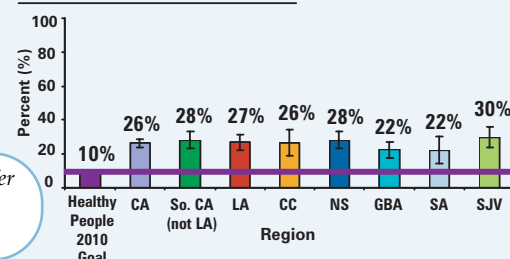
Percent of older adults reporting NO FLU SHOT in past 12 months, by self-reported asthma and region



Percent of older adults reporting NO FLU SHOT in past 12 months, by self-reported diabetes and region



Percent of older adults reporting NO FLU SHOT in past 12 months, by self-reported heart disease and region



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Region Specific Data (Please refer to region specific graphs and data tables in the back of this report.)

G. Presence of Usual Source of Care

CHIS Question

Is there a place you usually go when you are sick or need advice about your health?

Significance

Having a usual source of care (a "medical home") may increase the likelihood that an older adult will receive preventive care, such as an annual influenza vaccination.

Not having a usual source of care is an important risk factor for not receiving an influenza vaccination.

Key Findings

All regions were similar in this regard. People who reported having a usual source of care were more than twice as likely to get immunized when compared to those who reported not having a usual source of care.

Interpretation

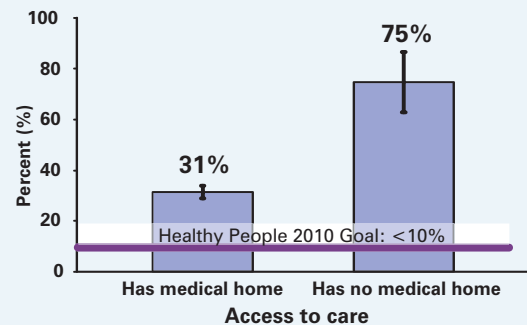
Usual source of care increases the likelihood of receiving an influenza immunization for older adults.

Recommendation

Promote a usual source of care, or "medical home," for all older adults and continue to decrease missed opportunities.

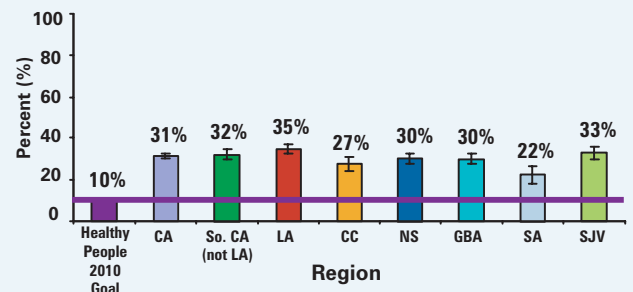
Statewide Data

Percent of older adults NO FLU SHOT in past 12 months by access to care, California 2001

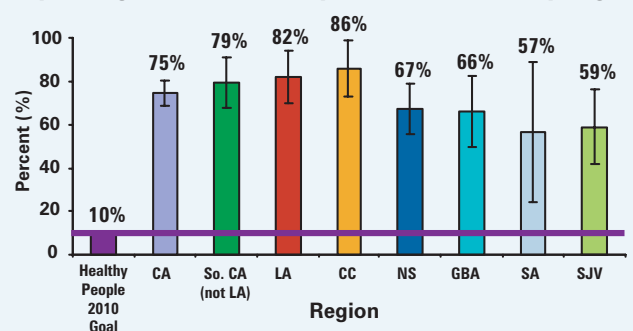


Regional Comparisons

Percent of older adults with a medical home reporting NO flu shot in past 12 months, by region



Percent of older adults with no medical home reporting NO flu shot in past 12 months, by region



CA=California, So.CA=Southern California (excluding Los Angeles), LA=Los Angeles, CC=Central Coast, NS=Northern & Sierra, GBA=Greater Bay Area, SA=Sacramento Area, SJV=San Joaquin Valley

Region Specific Data (Please refer to region specific graphs and data tables in the back of this report.)

H. Medicare Enrollment

CHIS Question

Are you covered by Medicare? (This includes Medicare managed care plans.)

Significance

Flu shots are covered through Medicare Part B. This means that if a physician accepts Medicare assignment there is no charge for the flu shot. Physicians cannot charge patients who have Medicare/MediCal or patients in Medicare managed care plans.

Key Findings

Older adults covered by Medicare are more likely to receive a flu shot compared to those who reported that they are not covered by Medicare. This difference is not statistically significant.

Interpretation

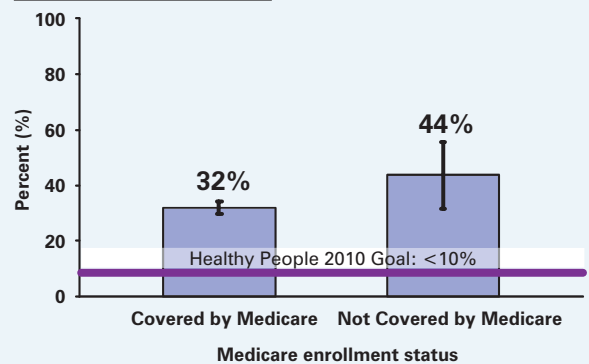
Medicare coverage may increase the likelihood of receiving flu immunization.

Recommendation

Continue efforts to encourage Medicare beneficiaries to seek annual influenza immunization.

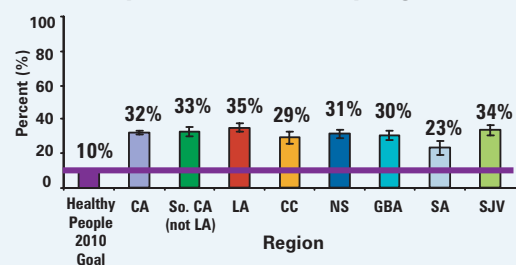
Statewide Data

Percent of older adults reporting NO FLU SHOT in past 12 months by Medicare enrollment-California, 2001

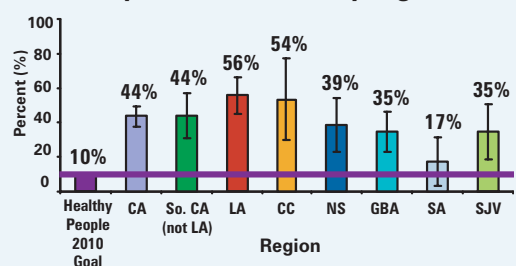


Regional Comparisons

Percent of older adults indicating Medicare coverage reporting NO FLU SHOT in past 12 months, by region

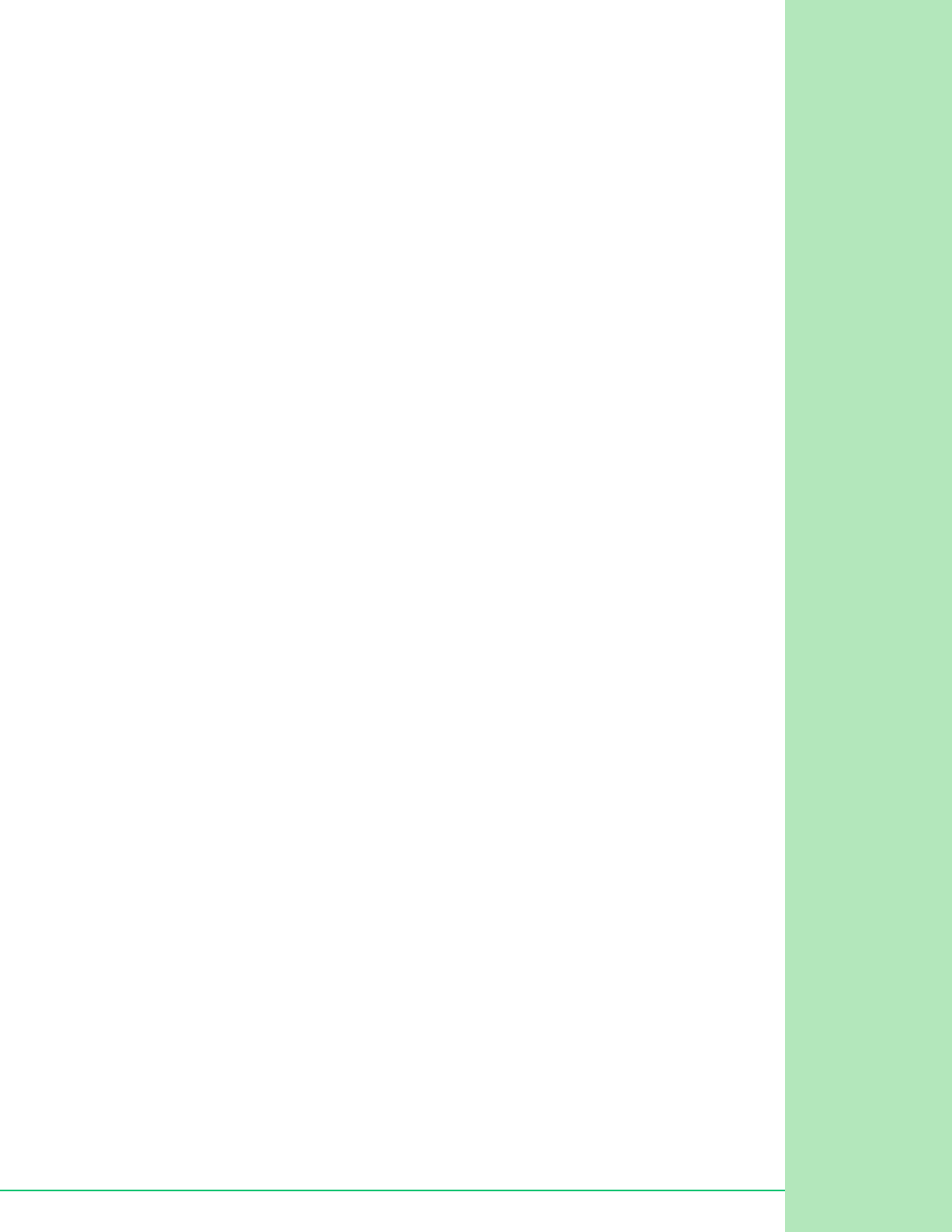


Percent of older adults indicating no Medicare coverage reporting NO FLU SHOT in past 12 months, by region



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Region Specific Data (Please refer to region specific graphs and data tables in the back of this report.)



regional data tables for selected variables

1. Southern California
(excluding Los Angeles)
2. Central Coast
3. Los Angeles County
4. Northern & Sierra
5. Greater Bay Area
6. Sacramento Area
7. San joaquin Valley

Southern California Counties [2001]

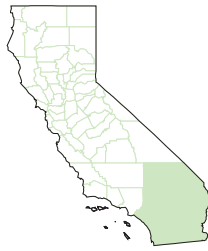
**Regional data table for Southern California Counties (excluding LA County)*
Percent of older adults reporting no flu shot by selected variable**

	California % (95% CI) [‡]	Southern California Counties (excluding Los Angeles) % (95% CI) [‡]
Overall percent reporting no flu shot in past 12 months	32.6% (31.4%-33.7%)	33.2% (30.7%-35.8%)
Age:		
65-69 yrs	41.4% (39.1%-43.8%)	41.2% (35.9%-46.5%)
70-74 yrs	31.9% (29.6%-34.2%)	32.8% (28.0%-37.6%)
75+	27.6% (26.0%-29.2%)	28.8% (25.3%-32.4%)
Gender:		
Male	31.3% (29.5%-33.2%)	31.6% (27.5%-35.6%)
Female	33.5% (32.0%-35.0%)	34.5% (31.2%-37.7%)
Race/ethnicity:		
Latino	46.0% (41.7%-50.4%)	50.7% (41.4%-60.0%)
Non-Latino Asian	28.2% (23.2%-33.3%)	22.0%** (6.9%-37.2%)
Non-Latino White	30.0% (28.8%-31.2%)	31.0% (28.3%-33.7%)
Non-Latino African-American	47.2% (41.6%-52.8%)	52.4% (34.7%-70.2%)
Perceived health status:		
Excellent	36.8% (33.6%-40.0%)	37.4% (30.6%-44.1%)
Very good	33.6% (31.4%-35.8%)	37.2% (32.3%-42.0%)
Good	31.4% (29.3%-33.5%)	30.5% (26.0%-34.9%)
Fair	30.2% (27.6%-32.8%)	30.4% (24.5%-36.3%)
Poor	31.9% (27.9%-36.0%)	27.2% (18.2%-36.2%)
Frequency of primary care provider visits in past 12 months:		
0	63.9% (58.7%-69.0%)	69.9% (59.7%-80.1%)
1	40.9% (37.6%-44.2%)	40.9% (33.5%-48.4%)
2	33.3% (30.4%-36.1%)	33.4% (27.1%-39.6%)
3	30.5% (27.5%-33.6%)	30.3% (24.0%-36.6%)
4	27.2% (24.3%-30.0%)	27.5% (21.0%-34.0%)
5	31.9% (27.1%-36.7%)	31.2% (21.1%-41.3%)
6	28.3% (24.5%-32.2%)	29.9% (21.0%-38.8%)
7-8	25.0% (20.3%-29.8%)	22.1% (12.3%-31.9%)
9-12	24.5% (21.1%-28.0%)	24.8% (17.6%-32.1%)
13-24	23.0% (17.5%-28.4%)	28.1% (13.7%-42.4%)
25+	20.3% (13.6%-27.1%)	24.9%** (9.0%-40.9%)
Chronic disease status:		
Self-reported asthma	24.0% (20.6%-27.4%)	15.7% (9.8%-21.6%)
Self-reported diabetes	28.9% (25.8%-32.0%)	26.8% (20.5%-33.1%)
Self-reported heart disease	26.1% (23.9%-28.3%)	27.9% (23.0%-32.8%)
Access to care:		
Usual source of care	31.3% (30.1%-32.5%)	31.9% (29.4%-34.5%)
No usual source of care	74.7% (68.7%-80.7%)	79.4% (68.0%-90.7%)
Medicare enrollment status:		
Covered by Medicare	32.0% (29.7%-34.3%)	32.7% (30.1%-35.3%)
Not covered by Medicare	43.6% (31.5%-55.7%)	44.1% (30.8%-57.4%)

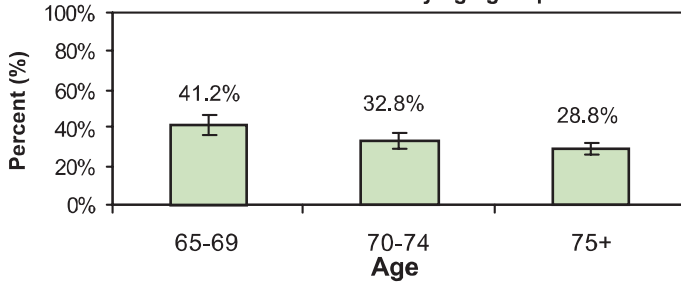
*This table includes data from Imperial, Orange, Riverside, San Bernardino, and San Diego Counties.

**statistically unstable due to small sample size

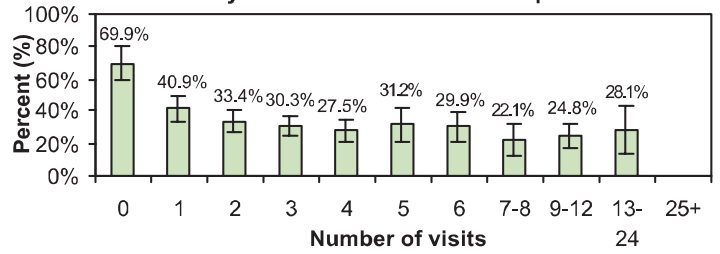
‡95% Confidence Interval



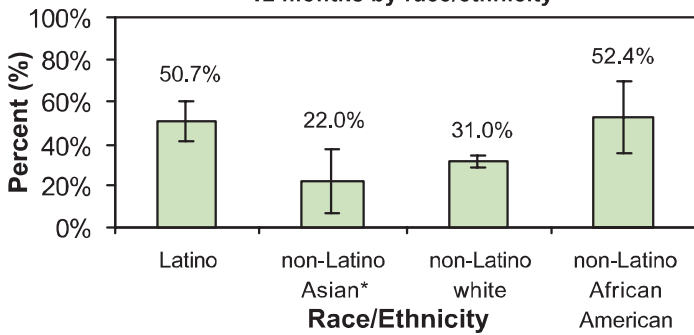
Percent of older adults reporting NO flu shot in past 12 months by age group



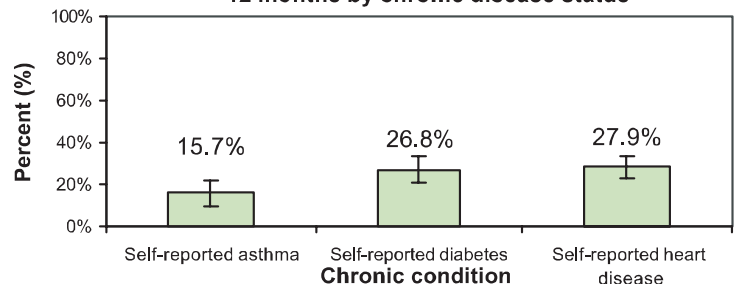
Percent of older adults reporting NO flu shot in past 12 months by number of doctor visits in past 12 months



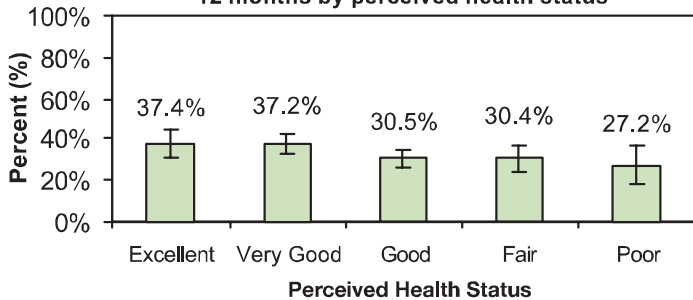
Percent of older adults reporting NO flu shot in past 12 months by race/ethnicity



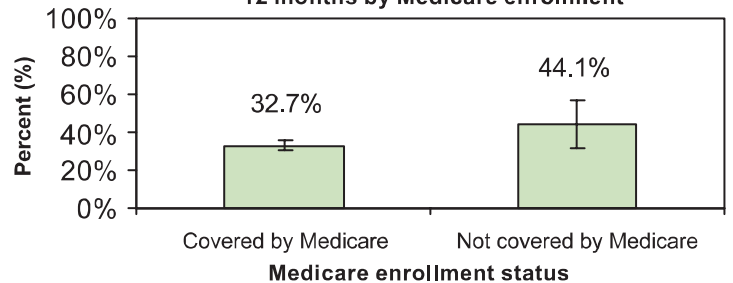
Percent of older adults reporting NO flu shot in past 12 months by chronic disease status



Percent of older adults reporting NO flu shot in past 12 months by perceived health status



Percent of older adults reporting NO flu shot in past 12 months by Medicare enrollment



*insufficient sample size

Central Coast Counties [2001]

**Regional data table for Central Coast Counties
Percent of older adults reporting no flu shot by selected variable**

	California % (95% CI) ^a	Central Coast Counties % (95% CI) ^a
Overall percent reporting no flu shot in past 12 months	32.6% (31.4%-33.7%)	29.8% (26.2%-33.4%)
Age:		
65-69 yrs	41.4% (39.1%-43.8%)	44.0% (36.6%-51.3%)
70-74 yrs	31.9% (29.6%-34.2%)	29.3% (22.1%-36.5%)
75+	27.6% (26.0%-29.2%)	21.5% (17.1%-26.0%)
Gender:		
Male	31.3% (29.5%-33.2%)	29.3% (23.7%-35.0%)
Female	33.5% (32.0%-35.0%)	30.2% (25.6%-34.9%)
Race/ethnicity:		
Latino	46.0% (41.7%-50.4%)	41.3% (26.6%-55.9%)
Non-Latino Asian	28.2% (23.2%-33.3%)	68.1% (46.0%-90.2%)
Non-Latino White	30.0% (28.8%-31.2%)	26.2% (22.7%-29.7%)
Non-Latino African-American	47.2% (41.6%-52.8%)	68.9%** (30.7%-100.0%)
Perceived health status:		
Excellent	36.8% (33.6%-40.0%)	39.3% (29.6%-48.9%)
Very good	33.6% (31.4%-35.8%)	31.8% (25.2%-28.4%)
Good	31.4% (29.3%-33.5%)	26.2% (20.2%-32.3%)
Fair	30.2% (27.6%-32.8%)	27.6% (18.7%-36.6%)
Poor	31.9% (27.9%-36.0%)	24.0% (12.3%-35.7%)
Frequency of primary care provider visits in past 12 months:		
0	63.9% (58.7%-69.0%)	64.7% (50.3%-79.1%)
1	40.9% (37.6%-44.2%)	37.9% (28.3%-47.6%)
2	33.3% (30.4%-36.1%)	28.9% (20.9%-37.0%)
3	30.5% (27.5%-33.6%)	33.1% (23.3%-43.0%)
4	27.2% (24.3%-30.0%)	18.8% (10.8%-26.9%)
5	31.9% (27.1%-36.7%)	16.3%** (4.9%-27.7%)
6	28.3% (24.5%-32.2%)	25.9% (15.0%-36.7%)
7-8	25.0% (20.3%-29.8%)	21.9%** (4.1%-39.7%)
9-12	24.5% (21.1%-28.0%)	17.4% (7.9%-26.9%)
13-24	23.0% (17.5%-28.4%)	22.1% (2.2%-42.0%)
25+	20.3% (13.6%-27.1%)	—
Chronic disease status:		
Self-reported asthma	24.0% (20.6%-27.4%)	24.6% (12.1%-37.2%)
Self-reported diabetes	28.9% (25.8%-32.0%)	24.2% (15.1%-33.3%)
Self-reported heart disease	26.1% (23.9%-28.3%)	26.2% (18.5%-33.9%)
Access to care:		
Usual source of care	31.3% (30.1%-32.5%)	27.4% (23.9% - 31.0%)
No usual source of care	74.7% (68.7%-80.7%)	85.9% (69.3 ñ 100.0%)
Medicare enrollment status:		
Covered by Medicare	32.0% (29.7%-34.3%)	29.1% (25.5%-32.7%)
Not covered by Medicare	43.6% (31.5%-55.7%)	53.5% (29.6%-77.5%)

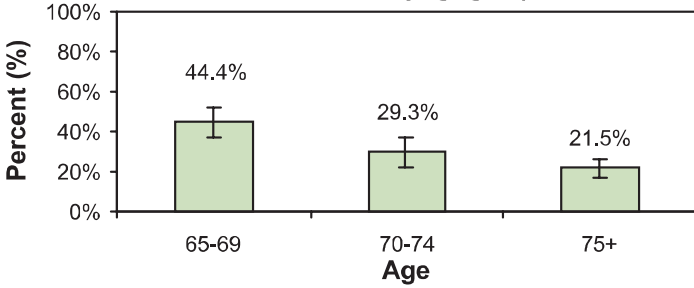
* This table includes data from Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, Ventura, and San Benito Counties.

**statistically unstable due to small sample size

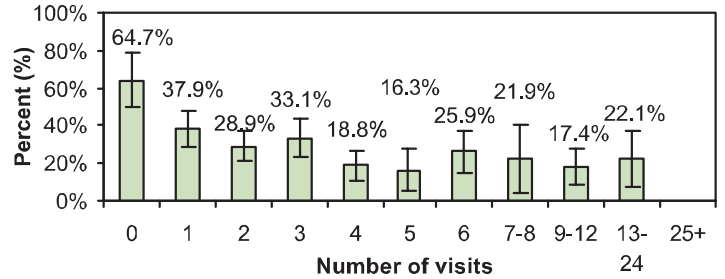
^a95% Confidence Intervals



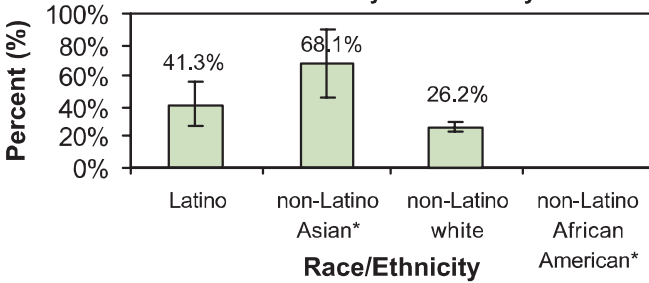
Percent of older adults reporting NO flu shot in past 12 months by age group



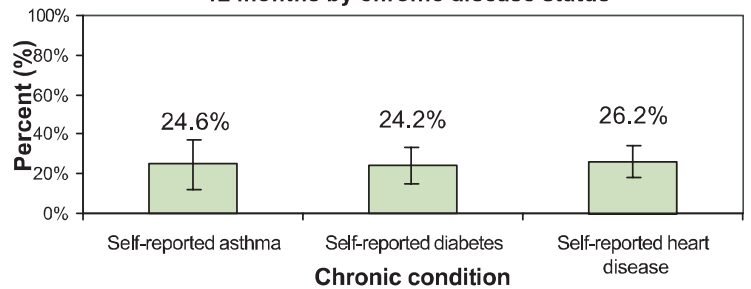
Percent of older adults reporting NO flu shot in past 12 months by number of doctor visits in past 12 months



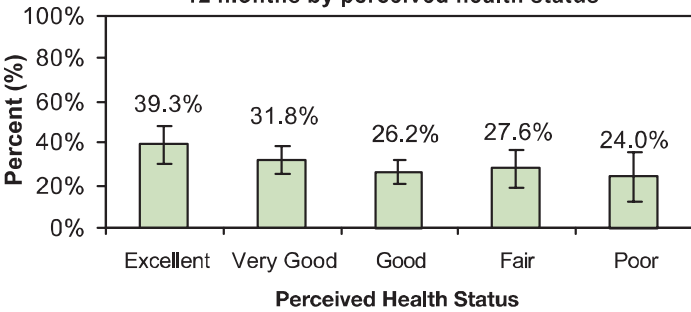
Percent of older adults reporting NO flu shot in past 12 months by race/ethnicity



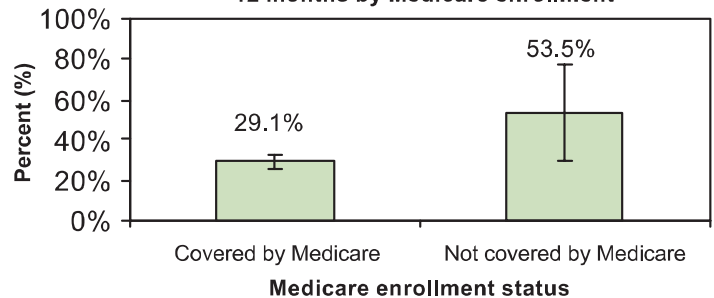
Percent of older adults reporting NO flu shot in past 12 months by chronic disease status



Percent of older adults reporting NO flu shot in past 12 months by perceived health status



Percent of older adults reporting NO flu shot in past 12 months by Medicare enrollment



*insufficient sample size

Los Angeles County [2001]

Regional data table for Los Angeles County Percent of older adults reporting no flu shot by selected variable

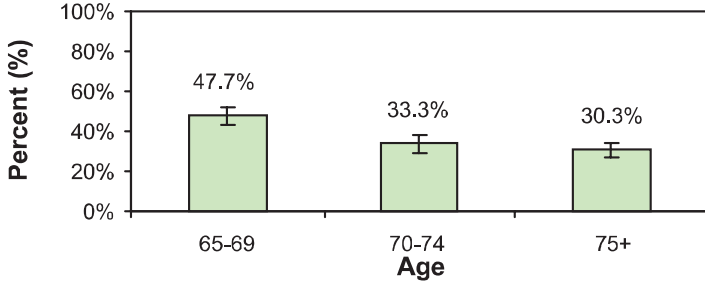
	California % (95% CI) ^u	Los Angeles County % (95% CI) ^u
Overall percent reporting no flu shot in past 12 months	32.6% (31.4%-33.7%)	36.1% (33.6%-38.5%)
Age:		
65-69 yrs	41.4% (39.1%-43.8%)	47.7% (42.8%-52.5%)
70-74 yrs	31.9% (29.6%-34.2%)	33.3% (28.6%-38.1%)
75+	27.6% (26.0%-29.2%)	30.3% (27.0%-33.6%)
Gender:		
Male	31.3% (29.5%-33.2%)	35.6% (31.8%-39.5%)
Female	33.5% (32.0%-35.0%)	36.4% (33.3%-39.5%)
Race/ethnicity:		
Latino	46.0% (41.7%-50.4%)	48.0% (40.9%-55.1%)
Non-Latino Asian	28.2% (23.2%-33.3%)	26.1% (18.3%-33.8%)
Non-Latino White	30.0% (28.8%-31.2%)	32.3% (29.5%-35.1%)
Non-Latino African-American	47.2% (41.6%-52.8%)	49.8% (42.3%-57.3%)
Perceived health status:		
Excellent	36.8% (33.6%-40.0%)	39.1% (32.2%-46.0%)
Very good	33.6% (31.4%-35.8%)	36.2% (31.6%-40.7%)
Good	31.4% (29.3%-33.5%)	36.3% (32.0%-40.6%)
Fair	30.2% (27.6%-32.8%)	34.1% (28.7%-39.4%)
Poor	31.9% (27.9%-36.0%)	35.7% (27.0%-44.3%)
Frequency of primary care provider visits in past 12 months:		
0	63.9% (58.7%-69.0%)	78.2% (69.9%-86.4%)
1	40.9% (37.6%-44.2%)	49.1% (41.8%-56.3%)
2	33.3% (30.4%-36.1%)	39.9% (33.4%-46.3%)
3	30.5% (27.5%-33.6%)	34.1% (27.4%-40.8%)
4	27.2% (24.3%-30.0%)	27.8% (22.3%-33.2%)
5	31.9% (27.1%-36.7%)	42.5% (31.0%-54.0%)
6	28.3% (24.5%-32.2%)	30.6% (23.1%-38.1%)
7-8	25.0% (20.3%-29.8%)	29.8% (19.2%-40.4%)
9-12	24.5% (21.1%-28.0%)	25.4% (19.0%-31.8%)
13-24	23.0% (17.5%-28.4%)	22.0% (13.1%-31.1%)
25+	20.3% (13.6%-27.1%)	5.6%** (0.1%-11.2%)
Chronic disease status:		
Self-reported asthma	24.0% (20.6%-27.4%)	25.0% (17.4%-32.6%)
Self-reported diabetes	28.9% (25.8%-32.0%)	32.0% (25.7%-38.3%)
Self-reported heart disease	26.1% (23.9%-28.3%)	26.8% (22.1%-31.5%)
Access to care:		
Usual source of care	31.3% (30.1%-32.5%)	34.6% (32.2%-37.0%)
No usual source of care	74.7% (68.7%-80.7%)	82.1% (70.0%-94.2%)
Medicare enrollment status:		
Covered by Medicare	32.0% (29.7%-34.3%)	34.9% (32.4%-37.3%)
Not covered by Medicare	43.6% (31.5%-55.7%)	56.0% (45.3%-66.7%)

**statistically unstable

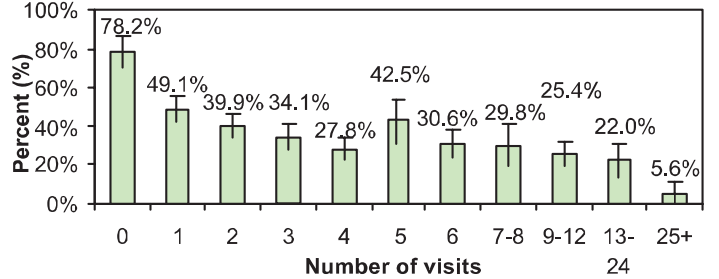
^u95% Confidence Intervals



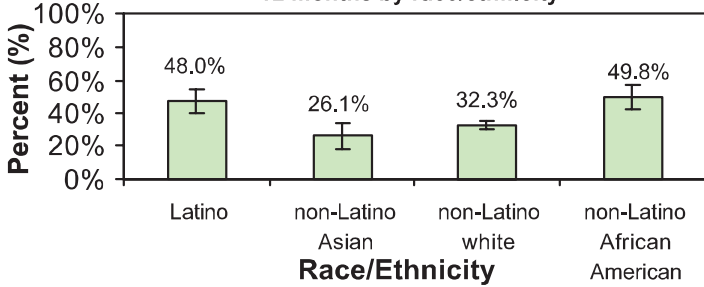
Percent of older adults reporting NO flu shot in past 12 months by age group



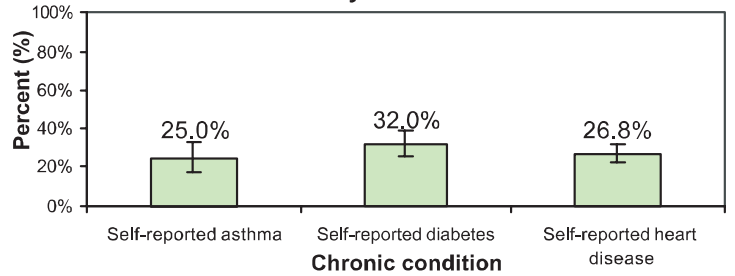
Percent of older adults reporting NO flu shot in past 12 months by number of doctor visits in past 12 months



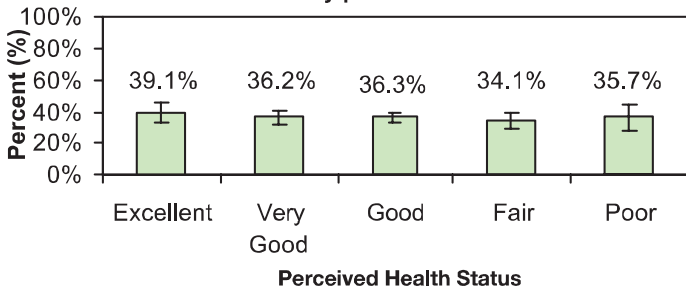
Percent of older adults reporting NO flu shot in past 12 months by race/ethnicity



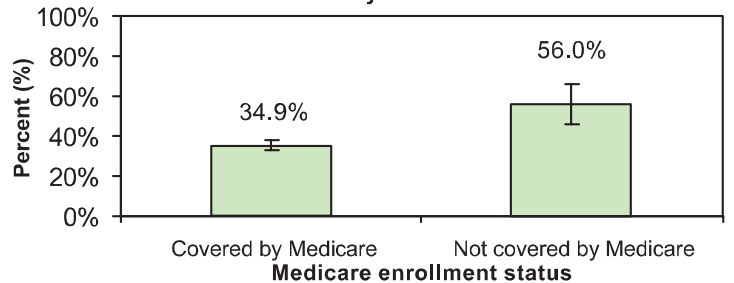
Percent of older adults reporting NO flu shot in past 12 months by chronic disease status



Percent of older adults reporting NO flu shot in past 12 months by perceived health status



Percent of older adults reporting NO flu shot in past 12 months by Medicare enrollment



*insufficient sample size

Northern Sierra Counties [2001]

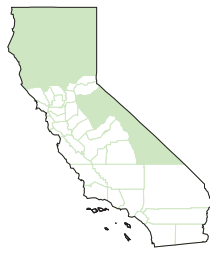
Regional data table for Northern Sierra Counties*
Percent of older adults reporting no flu shot by selected variable

	California % (95% CI) ^a	Northern & Sierra Counties % (95% CI) ^a
Overall percent reporting no flu shot in past 12 months	32.6% (31.4%-33.7%)	31.6% (29.2%-34.0%)
Age:		
65-69 yrs	41.4% (39.1%-43.8%)	33.8% (29.0%-38.5%)
70-74 yrs	31.9% (29.6%-34.2%)	33.8% (29.2%-38.5%)
75+	27.6% (26.0%-29.2%)	28.8% (25.3%-32.3%)
Gender:		
Male	31.3% (29.5%-33.2%)	31.9% (28.1%-35.8%)
Female	33.5% (32.0%-35.0%)	31.4% (28.3%-34.4%)
Race/ethnicity:		
Latino	46.0% (41.7%-50.4%)	36.4% (18.8%-53.9%)
Non-Latino Asian	28.2% (23.2%-33.3%)	15.4%** (0.0-32.2%)
Non-Latino White	30.0% (28.8%-31.2%)	31.4% (28.9%-33.9%)
Non-Latino African-American	47.2% (41.6%-52.8%)	45.9%** (12.3%-79.5%)
Perceived health status:		
Excellent	36.8% (33.6%-40.0%)	42.2% (34.7%-49.8%)
Very good	33.6% (31.4%-35.8%)	35.5% (30.8%-40.3%)
Good	31.4% (29.3%-33.5%)	27.3% (23.1%-31.5%)
Fair	30.2% (27.6%-32.8%)	27.8% (22.6%-33.0%)
Poor	31.9% (27.9%-36.0%)	28.8% (21.3%-36.3%)
Frequency of primary care provider visits in past 12 months:		
0	63.9% (58.7%-69.0%)	61.6% (52.1%-71.0%)
1	40.9% (37.6%-44.2%)	35.0% (28.9%-41.2%)
2	33.3% (30.4%-36.1%)	33.5% (27.7%-39.4%)
3	30.5% (27.5%-33.6%)	32.5% (25.6%-39.4%)
4	27.2% (24.3%-30.0%)	23.2% (17.4%-29.1%)
5	31.9% (27.1%-36.7%)	30.9% (21.5%-40.4%)
6	28.3% (24.5%-32.2%)	25.0% (17.7%-32.3%)
7-8	25.0% (20.3%-29.8%)	16.1% (7.9%-24.3%)
9-12	24.5% (21.1%-28.0%)	26.6% (18.9%-34.2%)
13-24	23.0% (17.5%-28.4%)	20.4% (9.7%-31.0%)
25+	20.3% (13.6%-27.1%)	-----
Chronic disease status:		
Self-reported asthma	24.0% (20.6%-27.4%)	27.5% (21.1%-33.8%)
Self-reported diabetes	28.9% (25.8%-32.0%)	22.7% (17.1%-28.4%)
Self-reported heart disease	26.1% (23.9%-28.3%)	27.9% (23.1%-32.6%)
Access to care:		
Usual source of care	31.3% (30.1%-32.5%)	30.0% (27.6%-32.4%)
No usual source of care	74.7% (68.7%-80.7%)	31.6% (29.2%-34.0%)
Medicare enrollment status:		
Covered by Medicare	32.0% (29.7%-34.3%)	31.4% (28.9%-33.8%)
Not covered by Medicare	43.6% (31.5%-55.7%)	38.6% (22.5%-54.7%)

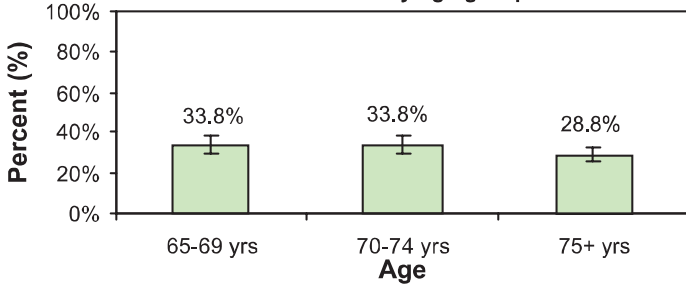
* This table includes data from Butte, Colusa, Glenn, Shasta, Sutter, Tehama, Yuba, Humboldt, Del Norte, Siskiyou, Lassen, Mendocino, Lake, Nevada, Plumas, Sierra, Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine, Trinity, and Modoc Counties

**statistically unstable due to small sample size

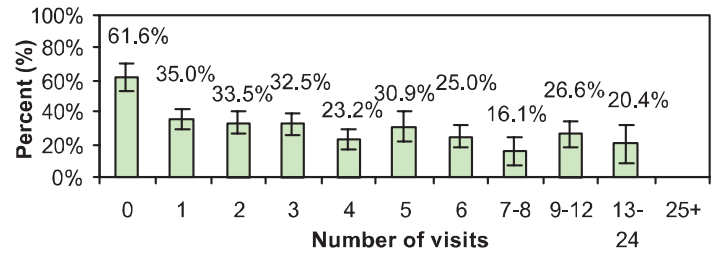
^a 95% Confidence Intervals



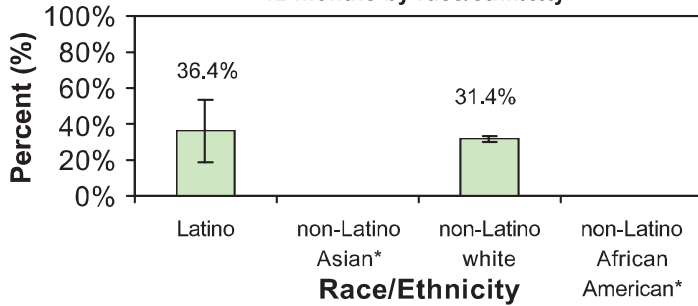
Percent of older adults reporting NO flu shot in past 12 months by age group



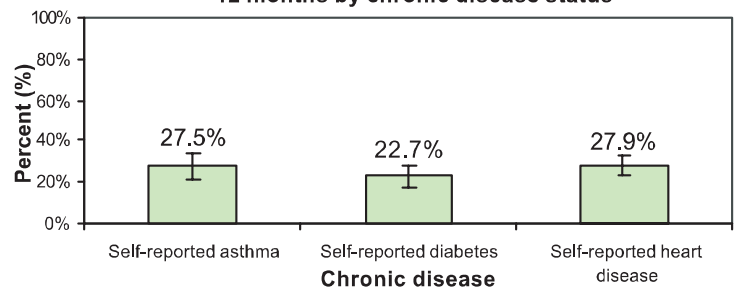
Percent of older adults reporting NO flu shot in past 12 months by number of doctor visits in past 12 months



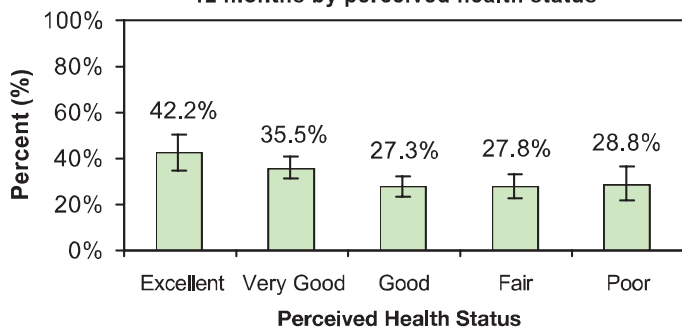
Percent of older adults reporting NO flu shot in past 12 months by race/ethnicity



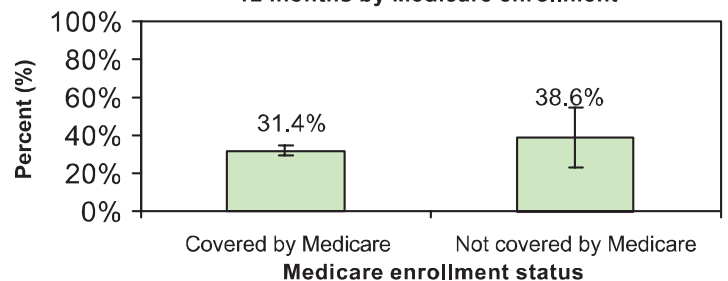
Percent of older adults reporting NO flu shot in past 12 months by chronic disease status



Percent of older adults reporting NO flu shot in past 12 months by perceived health status



Percent of older adults reporting NO flu shot in past 12 months by Medicare enrollment



*insufficient sample size

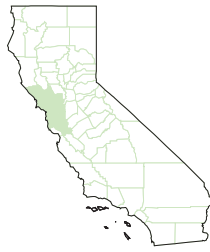
Greater Bay Area Counties [2001]

Regional data table for Greater Bay Area Counties*
Percent of older adults reporting no flu shot by selected variable

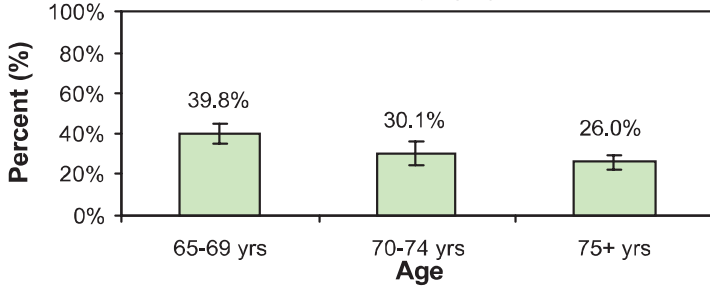
	California % (95% CI) ^a	Greater Bay Area Counties % (95% CI) ^a
Overall percent reporting no flu shot in past 12 months	32.6% (31.4%-33.7%)	30.7% (28.1%-33.2%)
Age:		
65-69 yrs	41.4% (39.1%-43.8%)	39.8% (34.6%-45.0%)
70-74 yrs	31.9% (29.6%-34.2%)	30.1% (24.7%-35.4%)
75+	27.6% (26.0%-29.2%)	26.0% (22.5%-29.5%)
Gender:		
Male	31.3% (29.5%-33.2%)	28.3% (24.2%-32.4%)
Female	33.5% (32.0%-35.0%)	32.4% (29.1%-35.7%)
Race/ethnicity:		
Latino	46.0% (41.7%-50.4%)	39.0% (26.8%-51.3%)
Non-Latino Asian	28.2% (23.2%-33.3%)	33.9% (25.1%-42.7%)
Non-Latino White	30.0% (28.8%-31.2%)	28.9% (26.2%-31.6%)
Non-Latino African-American	47.2% (41.6%-52.8%)	35.8% (24.6%-47.0%)
Perceived health status:		
Excellent	36.8% (33.6%-40.0%)	32.9% (26.5%-39.3%)
Very good	33.6% (31.4%-35.8%)	30.5% (25.6%-35.5%)
Good	31.4% (29.3%-33.5%)	30.2% (25.4%-35.0%)
Fair	30.2% (27.6%-32.8%)	28.3% (22.7%-24.0%)
Poor	31.9% (27.9%-36.0%)	32.7% (23.0%-42.4%)
Frequency of primary care provider visits in past 12 months:		
0	63.9% (58.7%-69.0%)	47.2% (33.8%-60.6%)
1	40.9% (37.6%-44.2%)	38.5% (31.7%-45.4%)
2	33.3% (30.4%-36.1%)	31.9% (26.0%-37.8%)
3	30.5% (27.5%-33.6%)	27.4% (20.5%-34.3%)
4	27.2% (24.3%-30.0%)	29.0% (22.3%-35.8%)
5	31.9% (27.1%-36.7%)	25.4% (15.0%-35.9%)
6	28.3% (24.5%-32.2%)	24.0% (15.3%-32.6%)
7-8	25.0% (20.3%-29.8%)	24.0% (13.9%-34.1%)
9-12	24.5% (21.1%-28.0%)	24.9% (16.0%-33.8%)
13-24	23.0% (17.5%-28.4%)	21.1% (9.2%-33.0%)
25+	20.3% (13.6%-27.1%)	28.8% (12.5%-45.1%)
Chronic disease status:		
Self-reported asthma	24.0% (20.6%-27.4%)	29.7% (21.0%-38.5%)
Self-reported diabetes	28.9% (25.8%-32.0%)	26.9% (19.4%-34.3%)
Self-reported heart disease	26.1% (23.9%-28.3%)	22.3% (17.6%-27.0%)
Access to care:		
Usual source of care	31.3% (30.1%-32.5%)	29.9% (27.3%-32.5%)
No usual source of care	74.7% (68.7%-80.7%)	66.1% (49.8%-82.4%)
Medicare enrollment status:		
Covered by Medicare	32.0% (29.7%-34.3%)	30.4% (27.8%-33.0%)
Not covered by Medicare	43.6% (31.5%-55.7%)	34.6% (22.7%-46.6%)

* This table includes data from Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

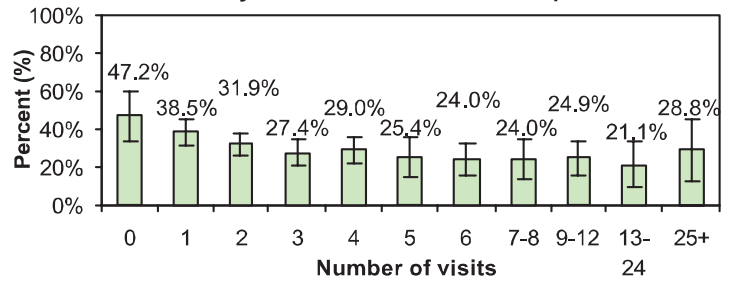
^a 95% Confidence Intervals



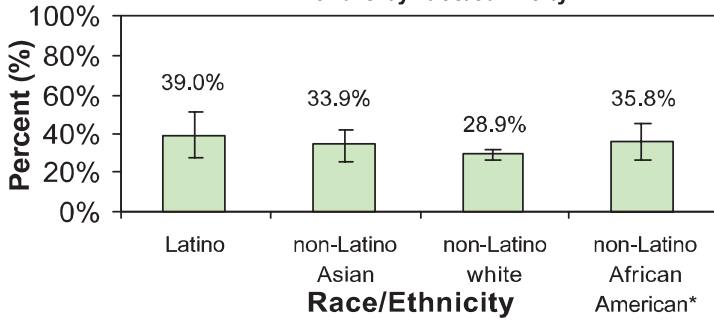
Percent of older adults reporting NO flu shot in past 12 months by age group



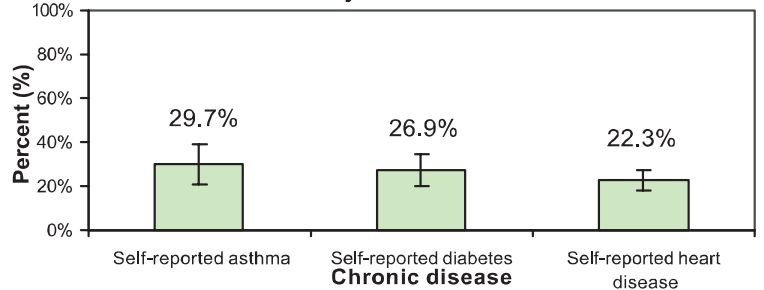
Percent of older adults reporting NO flu shot in past 12 months by number of doctor visits in past 12 months



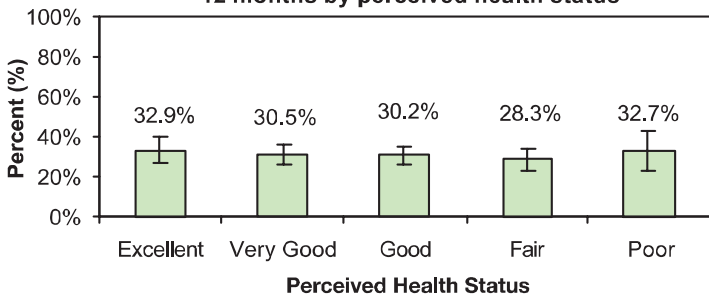
Percent of older adults reporting NO flu shot in past 12 months by race/ethnicity



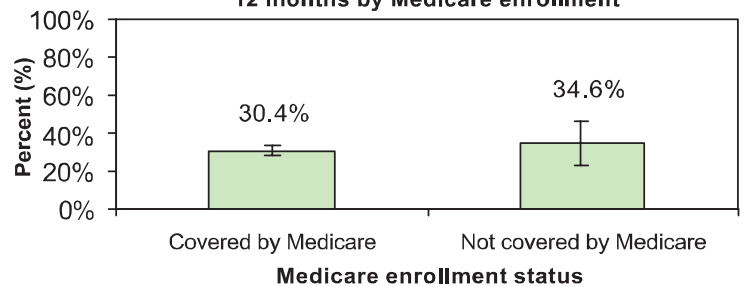
Percent of older adults reporting NO flu shot in past 12 months by chronic disease status



Percent of older adults reporting NO flu shot in past 12 months by perceived health status



Percent of older adults reporting NO flu shot in past 12 months by Medicare enrollment



*insufficient sample size

Sacramento Area Counties [2001]

Regional data table for Sacramento Area Counties*
Percent of older adults reporting no flu shot by selected variable

	California % (95% CI) ^a	Sacramento Area Counties % (95% CI) ^a
Overall percent reporting no flu shot in past 12 months	32.6% (31.4%-33.7%)	23.0% (18.9%-27.0%)
Age:		
65-69 yrs	41.4% (39.1%-43.8%)	25.1% (17.4%-32.8%)
70-74 yrs	31.9% (29.6%-34.2%)	30.2% (20.9%-39.5%)
75+	27.6% (26.0%-29.2%)	17.4% (12.4%-22.4%)
Gender:		
Male	31.3% (29.5%-33.2%)	22.8% (16.5%-29.0%)
Female	33.5% (32.0%-35.0%)	23.1% (17.8%-28.5%)
Race/ethnicity:		
Latino	46.0% (41.7%-50.4%)	26.2%** (7.5%-44.9%)
Non-Latino Asian	28.2% (23.2%-33.3%)	—
Non-Latino White	30.0% (28.8%-31.2%)	22.8% (18.5%-27.1%)
Non-Latino African-American	47.2% (41.6%-52.8%)	43.3%** (17.1%-69.5%)
Perceived health status:		
Excellent	36.8% (33.6%-40.0%)	29.5% (18.4%-40.6%)
Very good	33.6% (31.4%-35.8%)	19.2% (12.0%-26.4%)
Good	31.4% (29.3%-33.5%)	18.7% (12.4%-25.1%)
Fair	30.2% (27.6%-32.8%)	27.8% (17.3%-38.3%)
Poor	31.9% (27.9%-36.0%)	33.4% (16.3%-50.6%)
Frequency of primary care provider visits in past 12 months:		
0	63.9% (58.7%-69.0%)	39.2% (20.5%-57.8%)
1	40.9% (37.6%-44.2%)	28.1% (16.2%-40.0%)
2	33.3% (30.4%-36.1%)	19.2% (10.7%-27.6%)
3	30.5% (27.5%-33.6%)	18.9% (10.5%-27.4%)
4	27.2% (24.3%-30.0%)	27.6% (15.9%-39.2%)
5	31.9% (27.1%-36.7%)	28.5%** (9.9%-47.1%)
6	28.3% (24.5%-32.2%)	31.3%** (12.2%-50.3%)
7-8	25.0% (20.3%-29.8%)	23.3%** (8.2%-38.4%)
9-12	24.5% (21.1%-28.0%)	15.0% (2.5%-27.5%)
13-24	23.0% (17.5%-28.4%)	8.6%* (0-20.7%)
25+	20.3% (13.6%-27.1%)	—
Chronic disease status:		
Self-reported asthma	24.0% (20.6%-27.4%)	18.0% (7.5%-28.5%)
Self-reported diabetes	28.9% (25.8%-32.0%)	21.1% (10.4%-31.9%)
Self-reported heart disease	26.1% (23.9%-28.3%)	22.2% (14.3%-30.0%)
Access to care:		
Usual source of care	31.3% (30.1%-32.5%)	22.4% (18.3%-26.4%)
No usual source of care	74.7% (68.7%-80.7%)	56.8% (24.4%-89.2%)
Medicare enrollment status:		
Covered by Medicare	32.0% (29.7%-34.3%)	23.1% (19.0%-27.3%)
Not covered by Medicare	43.6% (31.5%-55.7%)	17.3%** (3.1%-31.4%)

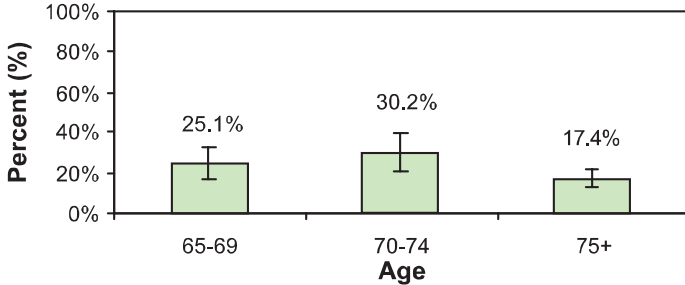
* This table includes data from Sacramento, Yolo, Placer, and El Dorado Counties.

**statistically unstable due to small sample size

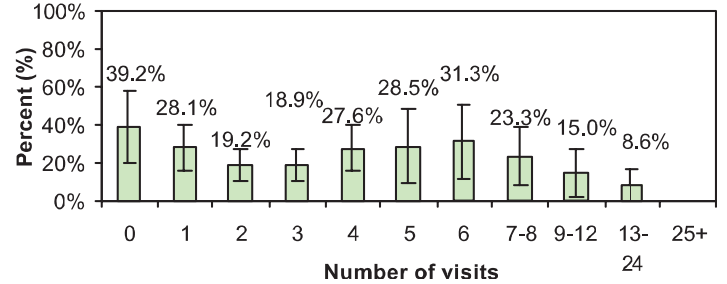
^a95% Confidence Intervals



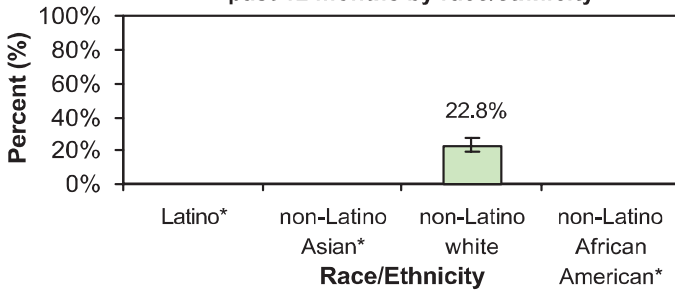
Percent of older adults reporting NO flu shot in past 12 months by age group



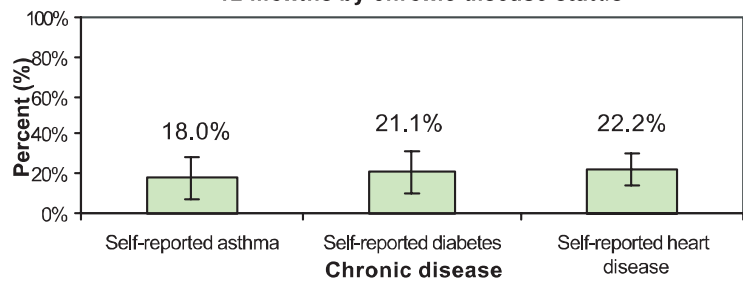
Percent of older adults reporting NO flu shot in past 12 months by number of doctor visits in past 12 months



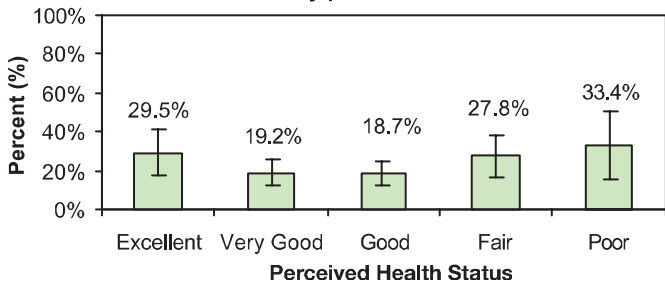
Percent of older adults reporting NO flu shot in past 12 months by race/ethnicity



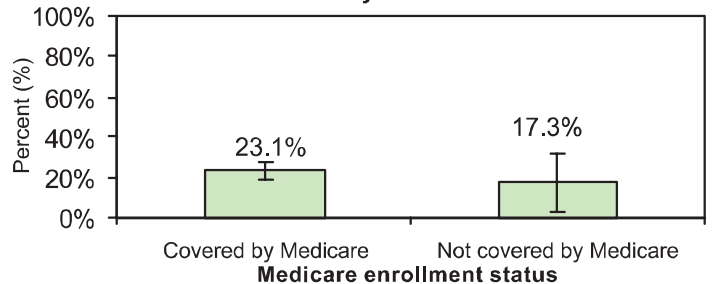
Percent of older adults reporting NO flu shot in past 12 months by chronic disease status



Percent of older adults reporting NO flu shot in past 12 months by perceived health status



Percent of older adults reporting NO flu shot in past 12 months by Medicare enrollment



*insufficient sample size

San Joaquin Valley Counties [2001]

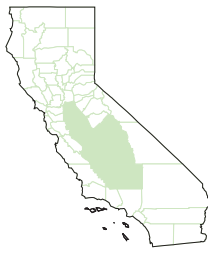
Regional data table for San Joaquin Valley Counties*
Percent of older adults reporting no flu shot by selected variable

	California % (95% CI) ^o	San Joaquin Valley Counties % (95% CI) ^o
Overall percent reporting no flu shot in past 12 months	32.6% (31.4%-33.7%)	33.6% (30.6%-36.6%)
Age:		
65-69 yrs	41.4% (39.1%-43.8%)	40.2% (34.2%-46.3%)
70-74 yrs	31.9% (29.6%-34.2%)	31.2% (25.9%-36.6%)
75+	27.6% (26.0%-29.2%)	30.8% (26.4%-35.2%)
Gender:		
Male	31.3% (29.5%-33.2%)	31.3% (26.5%-36.1%)
Female	33.5% (32.0%-35.0%)	35.3% (31.4%-39.1%)
Race/ethnicity:		
Latino	46.0% (41.7%-50.4%)	44.6% (34.6%-54.6%)
Non-Latino Asian	28.2% (23.2%-33.3%)	21.3%** (6.3%-36.3%)
Non-Latino White	30.0% (28.8%-31.2%)	31.1% (27.8%-34.3%)
Non-Latino African-American	47.2% (41.6%-52.8%)	64.0% (44.9%-83.1%)
Perceived health status:		
Excellent	36.8% (33.6%-40.0%)	39.2% (30.1%-48.4%)
Very good	33.6% (31.4%-35.8%)	33.4% (27.6%-39.2%)
Good	31.4% (29.3%-33.5%)	36.0% (30.4%-41.6%)
Fair	30.2% (27.6%-32.8%)	26.1% (20.1%-32.1%)
Poor	31.9% (27.9%-36.0%)	36.2% (26.7%-45.7%)
Frequency of primary care provider visits in past 12 months:		
0	63.9% (58.7%-69.0%)	61.3% (47.3%-75.2%)
1	40.9% (37.6%-44.2%)	41.8% (33.4%-50.2%)
2	33.3% (30.4%-36.1%)	31.3% (23.6%-39.0%)
3	30.5% (27.5%-33.6%)	33.6% (24.4%-42.8%)
4	27.2% (24.3%-30.0%)	27.8% (20.8%-34.7%)
5	31.9% (27.1%-36.7%)	34.9% (23.6%-46.2%)
6	28.3% (24.5%-32.2%)	28.5% (19.3%-37.7%)
7-8	25.0% (20.3%-29.8%)	32.3% (18.5%-46.1%)
9-12	24.5% (21.1%-28.0%)	29.1% (20.2%-38.0%)
13-24	23.0% (17.5%-28.4%)	28.8% (13.6%-43.9%)
25+	20.3% (13.6%-27.1%)	42.5% (21.0%-64.0%)
Chronic disease status:		
Self-reported asthma	24.0% (20.6%-27.4%)	30.3% (21.4%-39.3%)
Self-reported diabetes	28.9% (25.8%-32.0%)	39.5% (31.3%-47.7%)
Self-reported heart disease	26.1% (23.9%-28.3%)	29.7% (23.9%-35.5%)
Access to care:		
Usual source of care	31.3% (30.1%-32.5%)	32.7% (29.7%-35.7%)
No usual source of care	74.7% (68.7%-80.7%)	59.2% (41.9%-76.5%)
Medicare enrollment status:		
Covered by Medicare	32.0% (29.7%-34.3%)	33.5% (30.5%-36.6%)
Not covered by Medicare	43.6% (31.5%-55.7%)	34.7% (18.5%-50.9%)

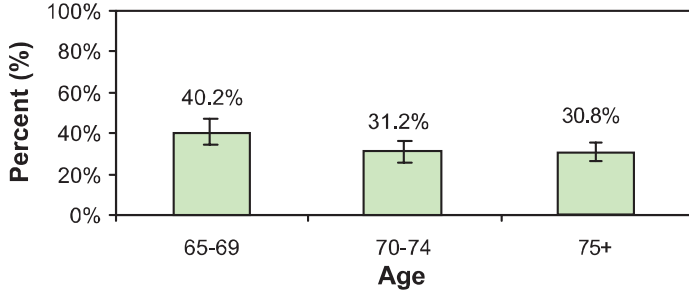
* This table includes data from Fresno, San Joaquin, Tulare, Kings, Kern, Stanislaus, Merced, and Madera Counties.

**statistically unstable due to small sample size

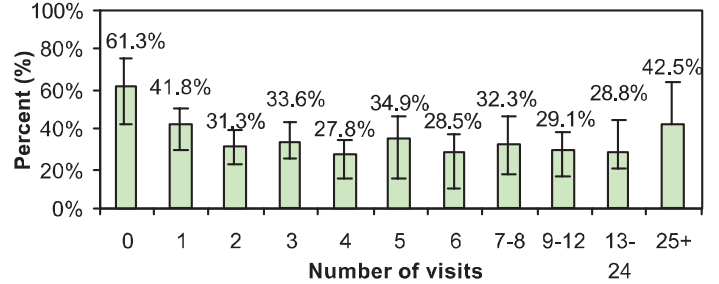
^o 95% Confidence Intervals



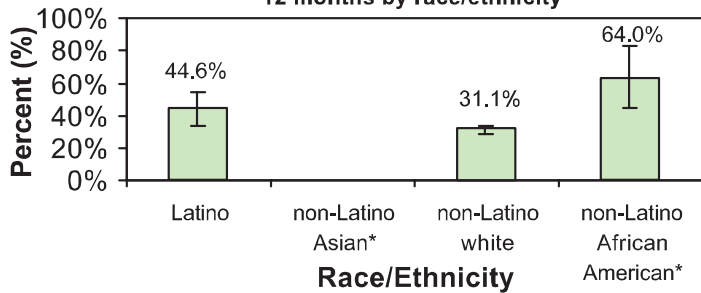
Percent of older adults reporting NO flu shot in past 12 months by age group



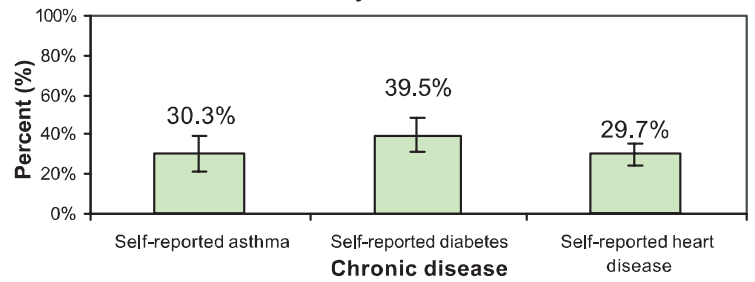
Percent of older adults reporting NO flu shot by number of doctor visits in past 12 months



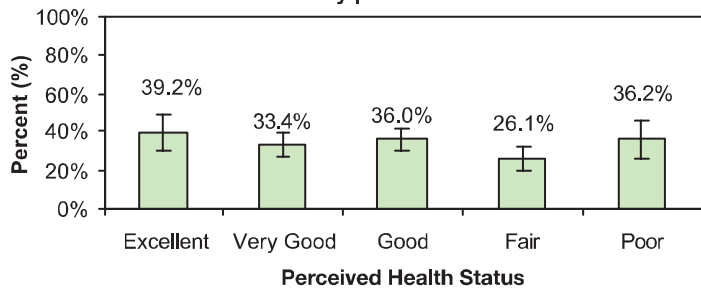
Percent of older adults reporting NO flu shot in past 12 months by race/ethnicity



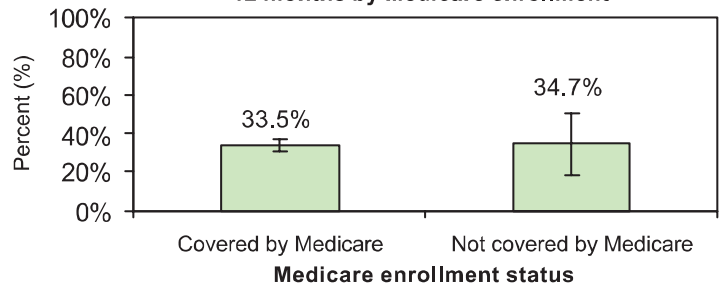
Percent of older adults reporting NO flu shot in past 12 months by chronic disease status



Percent of older adults reporting NO flu shot in past 12 months by perceived health status



Percent of older adults reporting NO flu shot in past 12 months by Medicare enrollment



*insufficient sample size

about the CAIC

The California Adult Immunization Coalition (CAIC):

Established in June 2002, the CAIC represents over 20 organizations committed to developing a long-term, strategic, and integrated effort to improve adult immunization rates for adults who are underserved, at risk and/or have limited access to preventive care services in California. Prior to its inception, all of the member organizations of the CAIC were implementing strategies to improve adult immunization rates, individually or with a limited number of partners. CAIC promotes collaboration of a broader group of leaders/organizations from medicine, public health, and the community to improve adult immunization rates. This coalition approach is highly attractive, given the challenges to improving and sustaining adult immunization rates, which include the following:

- Low adult immunization rates in California.
- High morbidity associated with vaccine preventable diseases among adults in California.
- Recent vaccine shortages, and
- Limited financial resources and technical expertise available to individual organizations to promote and support a statewide effort.

The CAIC mission is to build and support cross-sector (medicine, public health, community) collaboration that results in improved adult immunization rates, particularly the rates among high-risk adults and of those adults who have limited access to preventive care.

Over the past two years, the CAIC Steering Committee has met numerous times and has several important accomplishments. These include the development of a framework for an organizational structure of the CAIC, including the creation of work groups on Quality Improvement, Communications, Vaccine Distribution, and Payment and Policy that will function interdependently and address the

many challenges and opportunities associated with improving adult immunization rates. Members of the CAIC were responsible for the development, implementation and evaluation of the 2001, 2002, 2003 and 2004 California Adult Immunization Summits. The 2004 Summit, held in Sacramento on April 26, 2004, was attended by over 150 cross sector (medicine, public health and community) adult immunization professionals. It featured nationally renowned authorities from the Mayo Clinic and the CDC, and included interactive sessions focused on issues such as Hepatitis B, strategies to improve adult immunization rates among African Americans, and improving immunization rates among health-care workers in long-term care facilities. Feedback collected via the Summit evaluation revealed that participants thought the content of each session was highly relevant to their work/professional development, that they were likely to use the content/learnings from the Summit in the near future, and that the overall quality of the plenary, keynote, breakout and roundtable discussions was excellent.

The CAIC steering committee also coordinated media messages and strategies between multiple organizations regarding the influenza vaccine, and developed three additional adult vaccine related questions for inclusion in the 2003 California Health Interview Survey. The workgroups have developed draft plans to implement and evaluate evidence-based strategies that are designed to support local, regional, and statewide efforts to improve immunization rates and reduce the disparities that exist among adults who are at increased risk and/or have limited access to preventive care. These areas of work include, but are not limited to, improving access to and use of influenza vaccine by patients, residents, and staff in acute and long term care facilities; improving access to and use of immunization-related surveillance data; and the provision of technical support and resources to new and existing local/regional adult immunization coalitions. The development of this publication is another excellent example of how this collaborative effort can lead to the joining of resources, interests, and expertise to educate immunization stakeholders, and increase the awareness of the gaps and opportunities to improve immunization rates among older adults in California. For more information on the CAIC please refer to our website:

<http://www.immunizeCAadults.org>.

what is CHIS

The **California Health Interview Survey (CHIS)**, started in 2001, is a comprehensive source of information on the health of California's population. CHIS generates data every two years from a telephone survey of households drawn from every county in California. CHIS is the largest health survey conducted in any single state and one of the largest health surveys in the United States. CHIS gives health planners, policy makers, local and county governments, advocacy organizations, media, and communities a detailed picture of the health status,

health-related behaviors, access to and use of health care services by Californians. The CHIS sampling framework and questionnaire (translated into multiple languages) are designed to represent California's ethnically and geographically diverse population.

CHIS is a collaborative project of the UCLA Center for Health Policy Research, the California Department of Health Services, and the Public Health Institute. Funding for CHIS comes from state and federal agencies, and private foundations.

Resources

Centers for Disease Control - National Immunization Program ("NIP")

(800) 232-2522 (English)

(800) 232-0233 (Spanish)

(800) 243-7889 (TTY)

Voice and FAX Information System:

(800) 232-3228

<http://www.cdc.gov/nip>

The NIP website offers numerous publications and reports including materials targeted at older adults, a booklet on best practices for influenza vaccination campaigns and a Powerpoint health education program on Hepatitis B.

The NIP's Advisory Committee on Immunization Practices (ACIP), which publishes national recommendations for use of vaccines, are also available at this site.

Health professionals can obtain a copy of the CDC's CD-ROM program entitled, "Immunization Works," featuring information from the ACIP, AFIX, CASA, immunization schedules, and more. Health Professionals can also receive a free electronic subscription to the Morbidity and Mortality Weekly Report (MMWR) at www.cdc.gov/subscribe.html.

The Guide to Community Preventive Services, MMWR, June 18, 1999, Vol. 48/No. RR-8 can be found at <http://web.health.gov/communityguide/>. Health professionals can get immunization questions answered by CDC experts via e-mail at nipinfo@cdc.gov.

Immunization Action Coalition (IAC)

1573 Selby Ave. St Paul, MN 55104

FAX: (651) 646-9131

<http://www.immunize.org>

The IAC offers numerous adult immunization materials including brochures and fact sheets for patients, screening questionnaires, posters and immunization guidelines. Many of these publications are available in multiple languages. They also offer a 12 page semiannual publication entitled, "Vaccinate Adults!" that is designed to help keep health professionals current on issues related to all U.S. – recommended vaccinations for adults. You can access the IAC's Directory of National Immunization Resources via this website. The Directory is a 50-page guide with immunization resources from government, professional and non-profit organizations, and private industry. A membership donation is requested but not required.

Resources

**National Coalition for Adult Immunization
(NCAI) and National Partnership for
Immunizations**

4733 Bethesda Ave., Suite 750
Bethesda, MD 20814
Phone: (301) 656-0003
FAX: (301) 907-0878
<http://www.nfid.org/ncai/>

The NCAI is supported by the National Foundation for Infectious Diseases (NFID). The NCAI offers many adult immunization materials including brochures, fact sheets, an adult immunization resource guide, posters, booklets, adult immunization schedule, and guidelines for adult immunization, including some materials in Spanish. They also offer the Model Programs Initiative Guide – a guide that was designed to aid state and local coalitions in building and sustaining their adult immunization coalitions. NFID also offers their Resource Guide for Adult and Adolescent Immunization at this site.

National Network for Immunization Information
<http://www.immunizationinfo.org>

Patient education brochures, posters and videos.

100% Immunization Campaign
<http://www.immunizeseniors.org/website/index.htm>

The primary goal of the 100% Immunization Campaign is to ensure that all older adults are immunized against influenza and pneumococcal disease, including residents of nursing facilities and assisted living environments. The Immunization Resource Manual is one of the key initiatives of the 100% Immunization Campaign. It contains a variety of immunization reference information to educate health professionals, long-term care facility staff, and older adults about immunization issues.

American Lung Association
(800) 586-4872 – call this number and you will be connected to your local chapter
<http://www.lungsusa.org/>

The ALA offers brochures, posters and other materials about influenza and pneumococcal disease.

**California Department of Health Services –
Immunization Branch**
<http://www.dhs.cahwnet.gov/ps/dc/dc/izgroup>

This site offers educational information for families and health care providers including California Adult Immunization Recommendations. Statistics on 2001 Immunization levels in childcare and school-aged populations are also available.

Acknowledgements

The CAIC recognizes and thanks the following CAIC members for their significant contributions to the preparation of this report:

- Patricia G. Porter, RN, MPH, CHES (Integrating Medicine and Public Health (IMAP) Program [Institute for Health and Aging, UCSF and the CA DHS/Chronic Disease and Injury Control Branch])
- Nisha Gandhi, MPH (CA DHS/Immunization Branch)
- Howard Backer, MD, MPH (CA DHS/Immunization Branch) and
- Julia Heinzerling, MPH (Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center/Immunize LA Kids Program).

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- Ron P. Bangasser, MD (Redlands Medical Group, California Medical Association)
- Ron Chapman, MD MPH (Solano County Health and Social Services)
- Amy Pine, MPH (San Francisco Department of Public Health)
- Maureen Rafferty, MPA (CA DHS/Immunization Branch)
- Barry M. Straube, MD (Centers for Medicare & Medicaid Services, Region IX)

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Questions about this report?

If you have questions about the content of this report, please contact:

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