



**CENTER ON SOCIAL DISPARITIES IN HEALTH**  
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# Medical provider promotion of oral health and women's receipt of dental care during pregnancy

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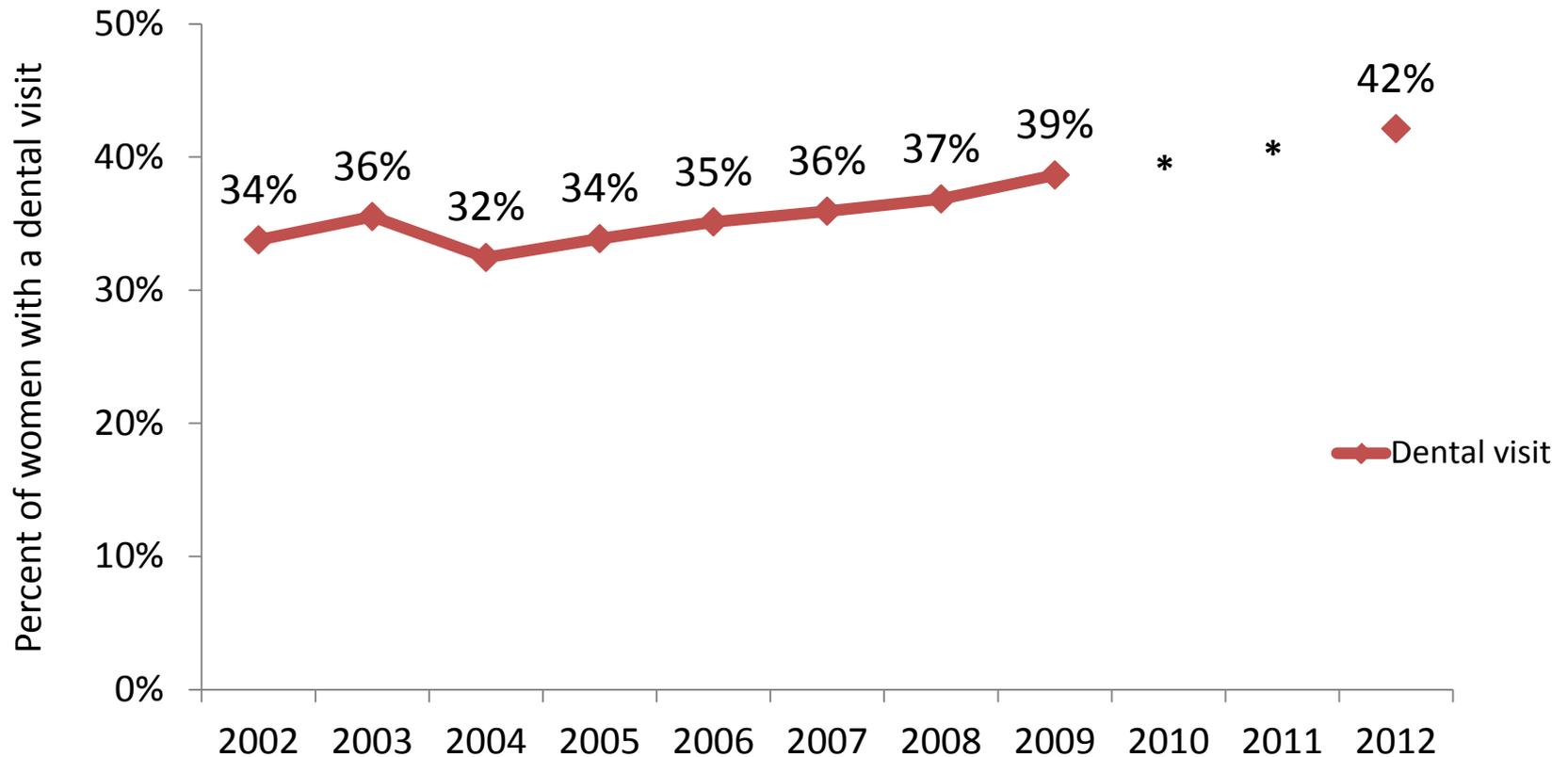
# Importance of oral health during pregnancy

- Higher rates of gingival inflammation/infection
- Periodontal disease associated with poor birth outcomes
  - Intervention studies have not shown improvements in birth outcomes
- Linked to future oral health status of her infant

# Importance of oral health care during pregnancy

- Oral health care during pregnancy is highly beneficial
- All pregnant women should receive at least one preventive oral health care visit
  - Pregnancy is a teachable moment
  - Prevent negative impact of dental disease and gingival infection

# California women's use of oral health care during pregnancy increased from 2002 to 2012



Data source: Maternal and Infant Health Assessment (MIHA) 2002-2012. Percentages are weighted to represent all women with a live birth in California.

\*Data for dental visit were not available for 2010-2011.

## **Role of the provider**

- **Promotion of oral health from dental and other providers can increase use of care**
- **Many providers lack understanding about safety and impact of oral health care during pregnancy**
- **Guidelines released in California and other states promote oral health care during pregnancy**
- **Little known about whether medical providers promote oral health during pregnancy**

# Research questions

- **Was there a change in medical provider promotion of oral health and receipt of oral health care during pregnancy between 2009 and 2012?**
  - **What subgroups were more likely to experience changes in oral health promotion by their providers?**
- **Are women whose medical providers promoted oral health during pregnancy more likely to seek care during pregnancy?**

## Data source

- **Maternal and Infant Health Assessment (MIHA) 2009 (n=3,105) and 2012 (n=6,810)**
  - **Diverse, population-based survey of women with a live birth in California**
    - **Participants pregnant during 2008/2009 and 2011/2012**
  - **Mail survey conducted in English/Spanish, with telephone follow-up to non-respondents**
  - **Unweighted response rates of 70%**
  - **Stratified sample weighted to represent delivery population**

## Data source

- **MIHA is a collaborative effort of:**
  - **Maternal, Child and Adolescent Health and WIC Programs of the Center for Family Health, California Department of Public Health**
  - **Center on Social Disparities in Health at the University of California, San Francisco**
- **Website: [www.cdph.ca.gov/MIHA](http://www.cdph.ca.gov/MIHA)**

## MIHA survey questions (2009, 2012)

- During your most recent pregnancy, did a medical doctor, nurse or other health care worker talk with you about the health of your teeth and gums? Y/N
- During your most recent pregnancy, did a medical doctor, nurse or other health care worker suggest that you go to see a dentist? Y/N
- During your most recent pregnancy, did you visit a dentist, dental clinic, or get dental care at any other health clinic? Y/N

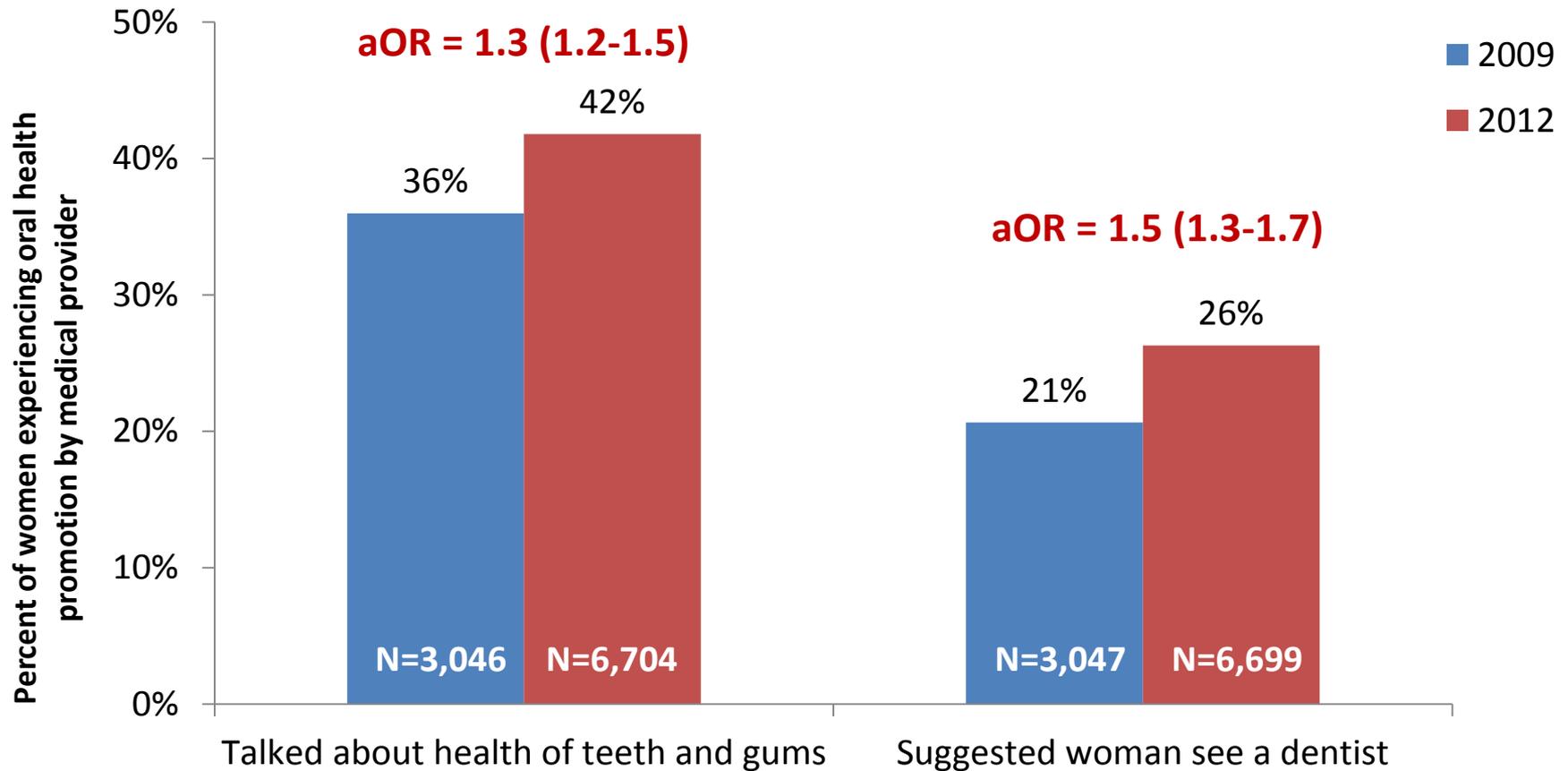
# Maternal characteristics related to oral health care

- **Income, WIC eligibility status, maternal education**
- **Race/ethnicity/nativity, language spoken at home**
- **Age, marital status, parity**
- **Pre-pregnancy and prenatal insurance, prenatal care initiation**
- **Smoking during pregnancy**

# Analysis

- **Prevalence of medical provider promotion of oral health and receipt of oral health visit in 2009 and 2012**
- **Logistic regression: change in provider promotion of oral health/receipt of visit between 2009 and 2012**
  - **Unadjusted, adjusted for maternal characteristics**
  - **Stratified by maternal characteristics**
- **Logistic regression: association of provider oral health promotion with receipt of an oral health visit, adjusting for maternal characteristics and year**

## Change in medical provider promotion of oral health from 2009 to 2012



Odds ratios adjusted for income, WIC status, race/ethnicity, education, language, age, marital status, parity, PNC insurance, insurance before pregnancy, PNC initiation and smoking.

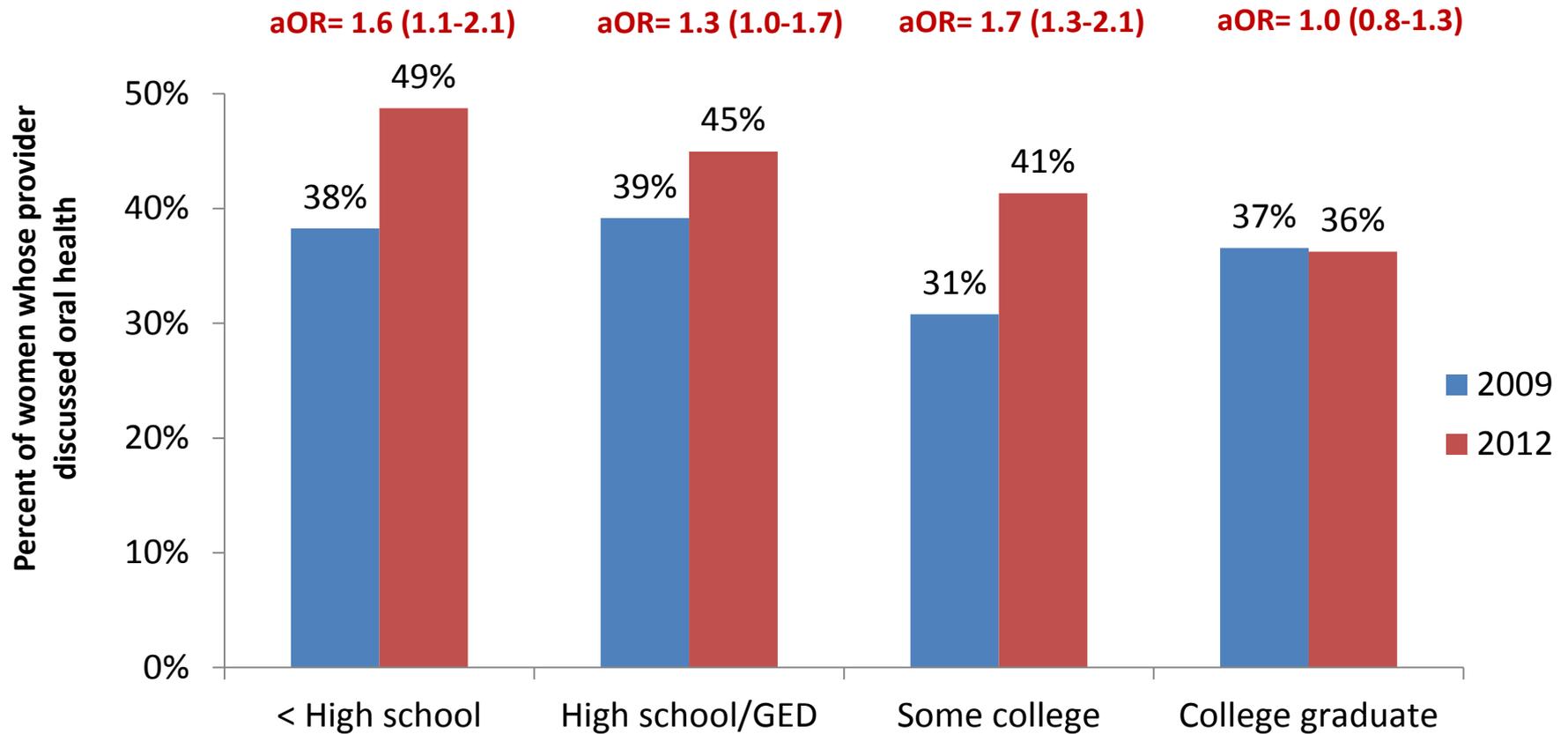
# Stratified Models: Change in medical provider promotion of oral health from 2009 to 2012 among subgroups of women

- Income
- WIC eligibility status
- Maternal education<sup>a</sup>
- Race/ethnicity/nativity
- Language spoken at home<sup>b</sup>
- Age<sup>b</sup>
- Marital status
- Parity
- Pre-pregnancy insurance
- Prenatal insurance<sup>a,b</sup>
- Prenatal care initiation
- Smoking during pregnancy

a: Model for provider discussed teeth and gums, p-value for interaction of year\*subgroup < 0.05

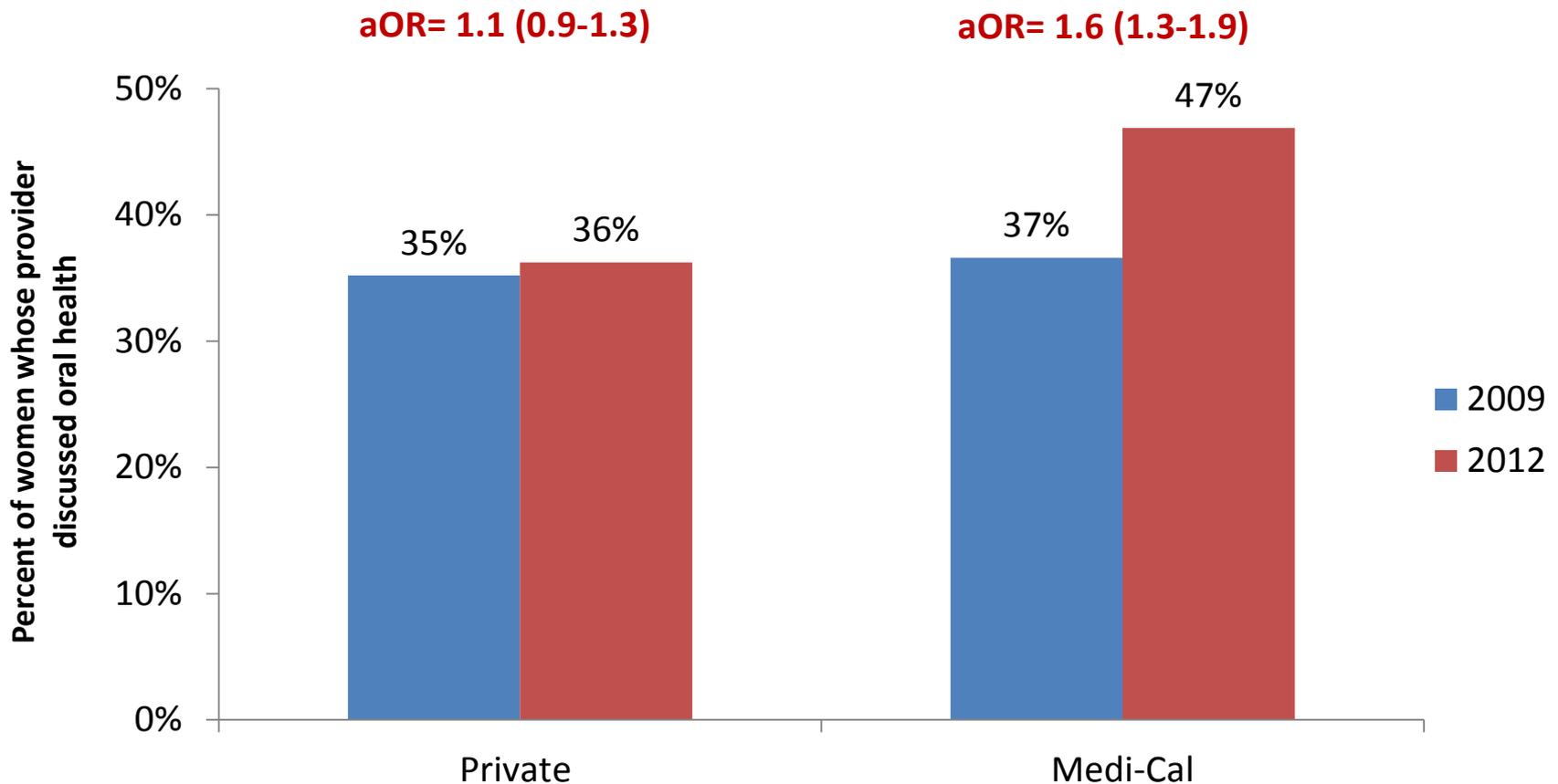
b: Model for provider suggested seeing a dentist, p-value for interaction of year\*subgroup < 0.05

## Change in provider discussion of oral health from 2009 to 2012, by maternal education



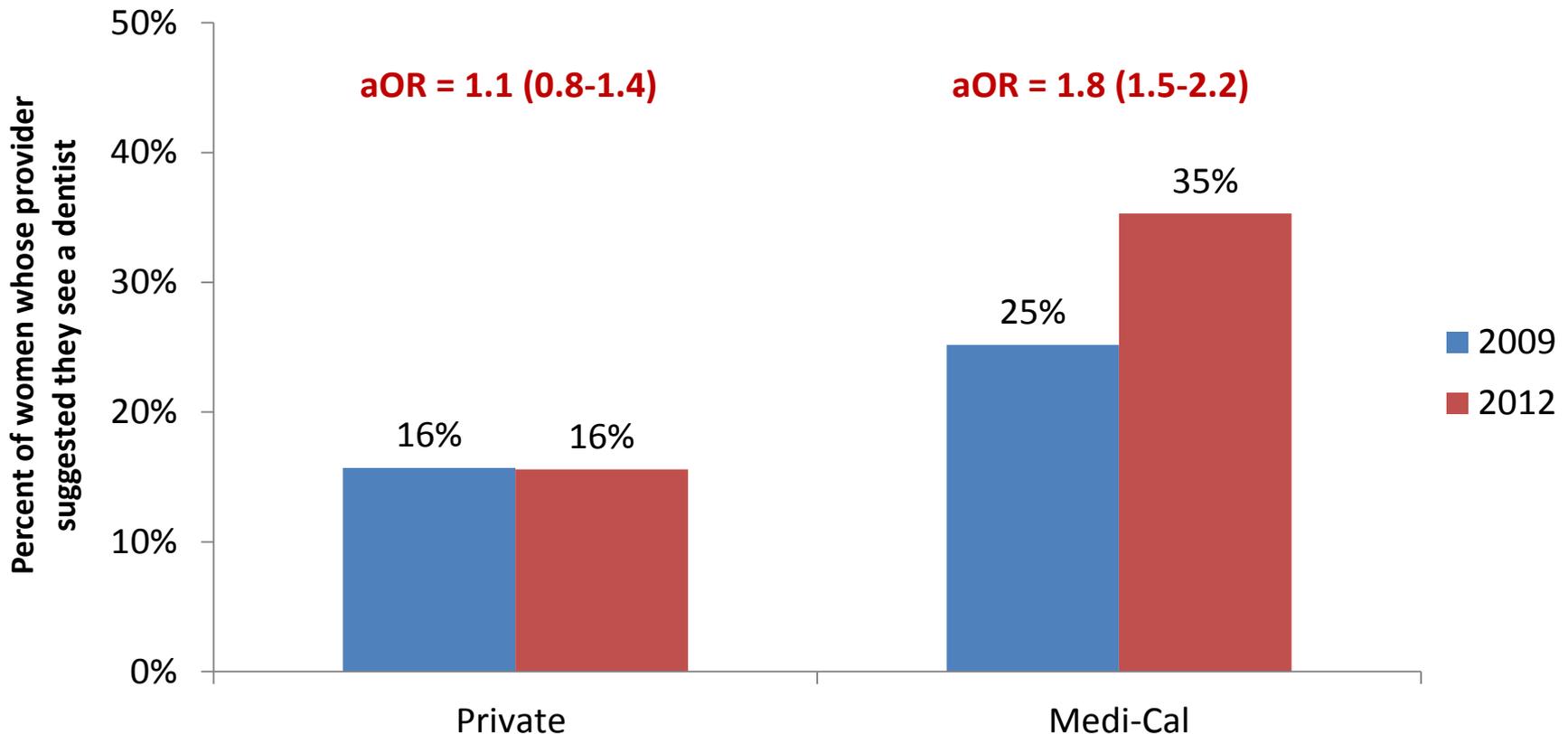
Odds ratios adjusted for income, WIC status, race/ethnicity, language, age, marital status, parity, insurance before pregnancy, prenatal insurance, PNC initiation and smoking. P-value for interaction of year\*maternal education = 0.02.

## Change in provider discussion of oral health from 2009 to 2012, by PNC insurance type



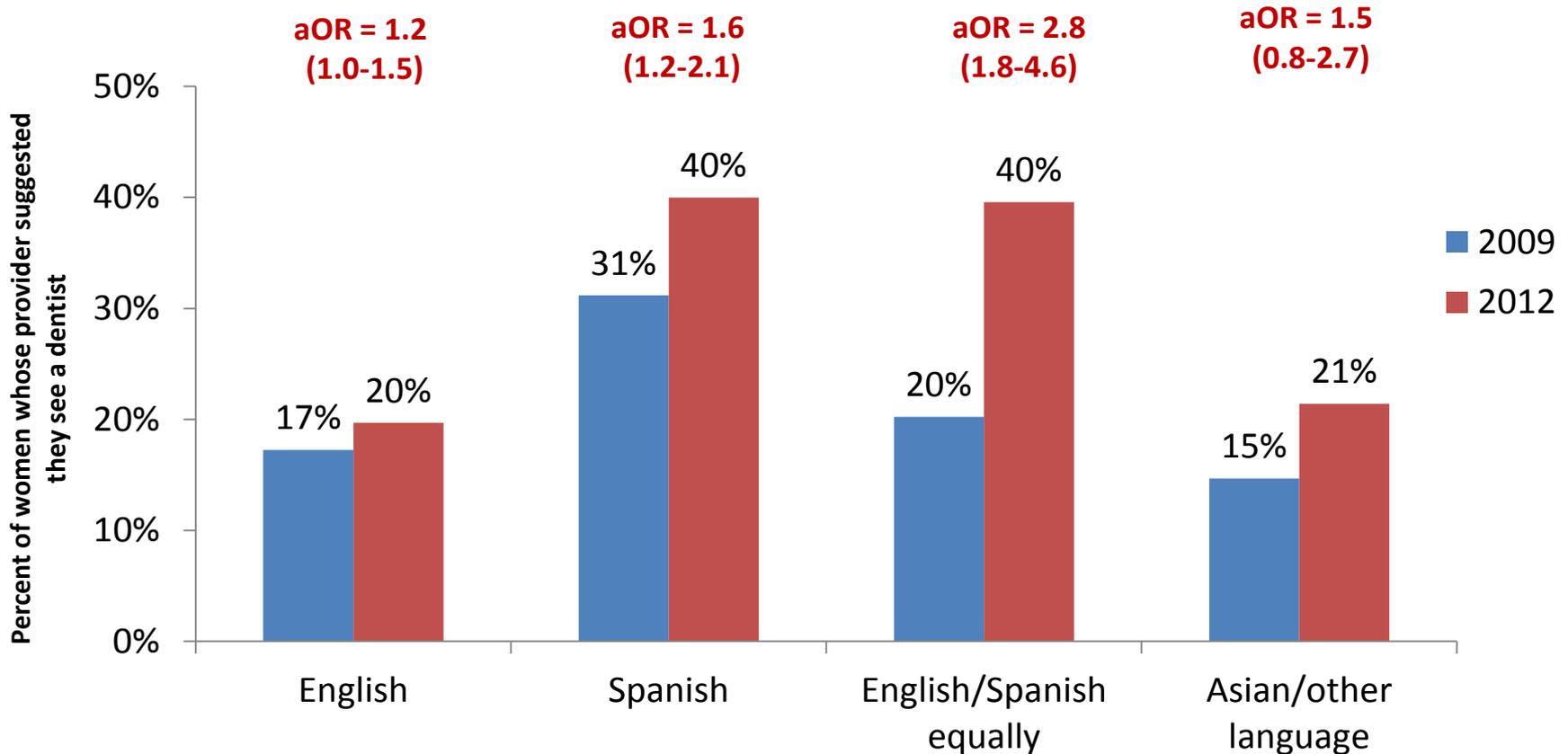
Odds ratios adjusted for income, WIC status, race/ethnicity, education, language, age, marital status, parity, insurance before pregnancy, PNC initiation and smoking. P-value for interaction of year\*PNC insurance = 0.03.

## Change in provider suggestion of dental visit from 2009 to 2012, by PNC insurance type



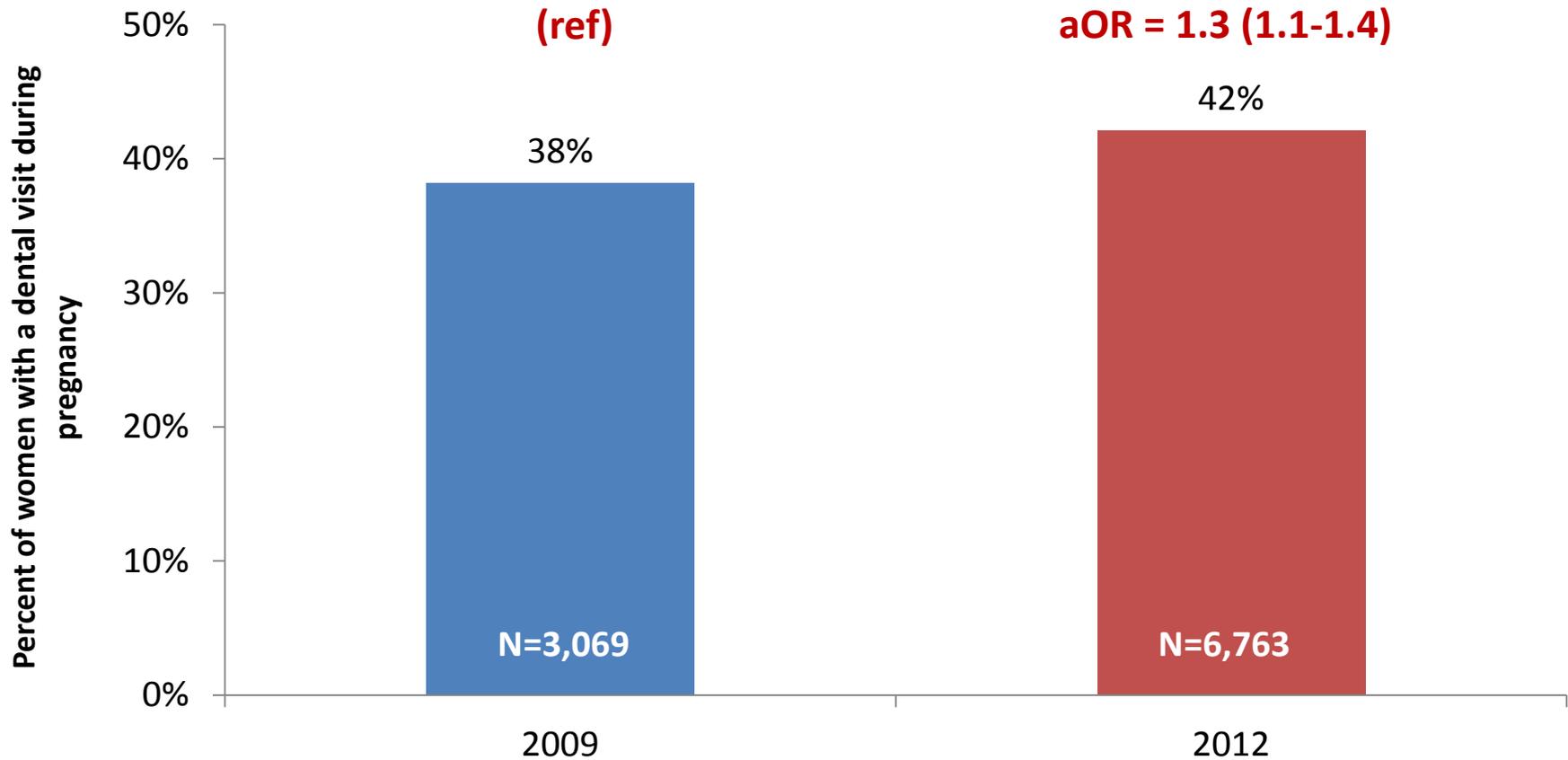
Odds ratios adjusted for income, WIC status, race/ethnicity, education, language, age, marital status, parity, insurance before pregnancy, PNC initiation and smoking. P-value for interaction of year\*PNC insurance = 0.01.

## Change in provider suggestion of dental visit from 2009 to 2012, by language



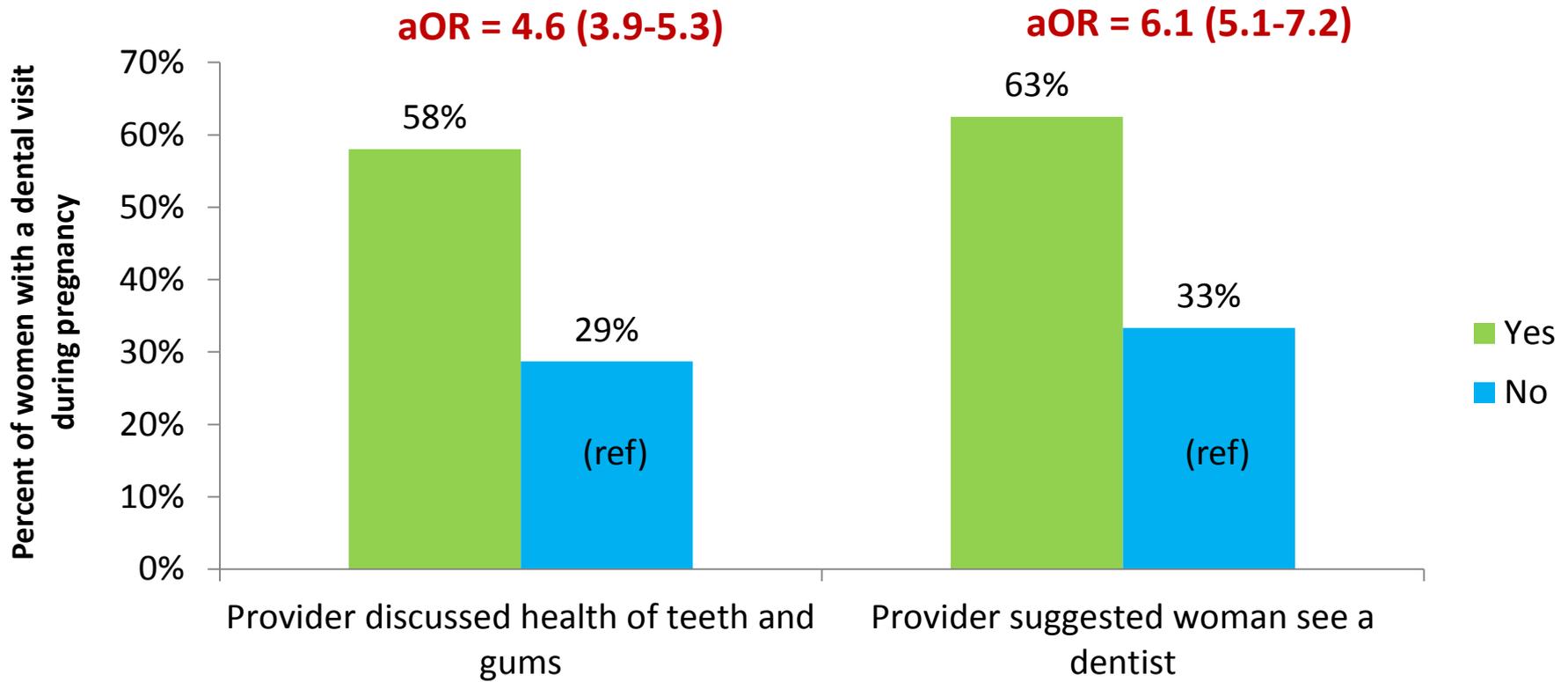
Odds ratios adjusted for income, WIC status, race/ethnicity, education, age, marital status, parity, PNC insurance, insurance before pregnancy, PNC initiation and smoking. P-value for interaction of year\*language = 0.009.

## Change in women's receipt of oral health care during pregnancy from 2009 to 2012



Odds ratios adjusted for income, WIC status, race/ethnicity, education, language, age, marital status, parity, PNC insurance, insurance before pregnancy, PNC initiation, and smoking.

## Use of oral health care by medical provider promotion practices, MIHA 2009 and 2012 combined



Odds ratios adjusted for income, WIC use, race/ethnicity, education, language, age, marital status, parity, PNC insurance, insurance before pregnancy, PNC initiation and smoking.

# Limitations

- **Cannot determine cause of changes in provider oral health promotion or women's receipt of an oral health visit**
- **Multiple statistical tests were undertaken, increasing the chances of significant findings**
- **No information available on dental problems, nor on what the providers actually discussed**
- **Type of provider unknown**
- **Recall bias**

# Conclusion

- **Medical provider promotion of oral health and women's receipt of care improved significantly between 2009 and 2012**
- **Pregnant women whose providers promoted oral health were more likely to visit dentist**
  - **Suggests outreach to women through medical providers can help increase dental visits during pregnancy**

## Conclusion, continued

- **Despite improvements, medical provider promotion of oral health and women's use of care remain low**
  - **Discussion of oral health only 42%**
  - **Referral to dentist only 26%**
  - **Had dental visit only 42%**

# Implications

- **Strengthen efforts to ensure all medical providers promote recommended oral health messages:**
  - **Dissemination of CA Perinatal Oral Health Guidelines, National Consensus Statement on Oral Health Care during Pregnancy**
  - **Medical provider training and continuing education**
  - **Identify barriers among providers to discussing oral health**
- **Identify reasons women do not seek care and develop additional strategies for resolving barriers**