

# TRDRP Legislative Briefing

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# Lung cancer deaths in California VS the rest of the USA

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**Research Article**

**Cancer  
Epidemiology,  
Biomarkers  
& Prevention**

## **Forty Years of Faster Decline in Cigarette Smoking in California Explains Current Lower Lung Cancer Rates**

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# Lung cancer

- 80% to 90% of lung cancer deaths are attributed to smoking.

[http://www.cdc.gov/cancer/lung/basic\\_info/risk\\_factors.htm](http://www.cdc.gov/cancer/lung/basic_info/risk_factors.htm)

- At the population level, death rates correlate with cigarette consumption.
  - There is a lag of 15-20 years.  
(Peace, 1985, UK data)



# What is the effect of the California Tobacco Control Program on lung cancer deaths?

- Compare trends in **cigarette consumption**, CA vs US, over 40 years
  - (from two independent government data sources)
- Do these correlate with **Tobacco Control**?
- Do these correlate with **lung cancer deaths**?



# Lung cancer rates

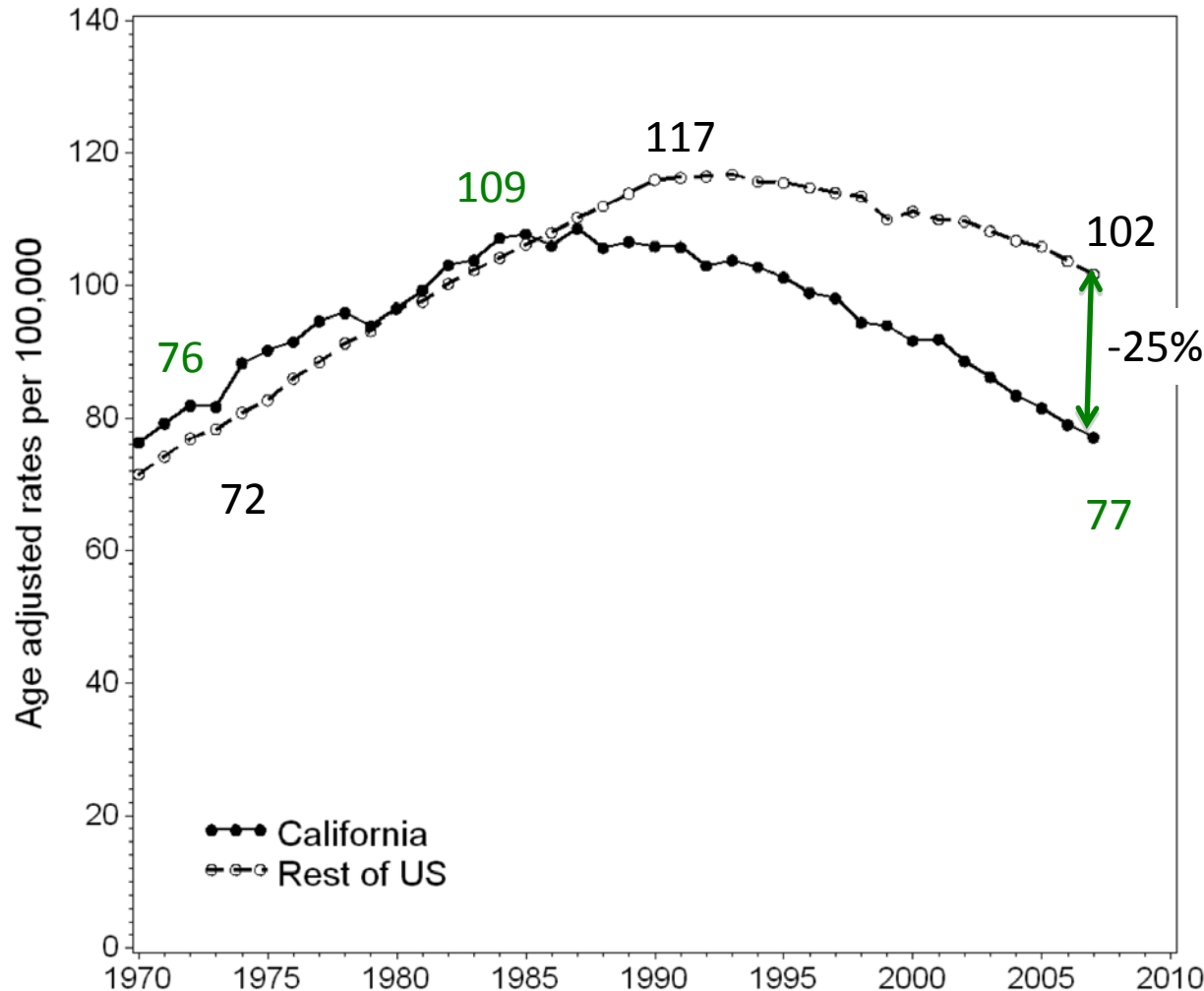
## National Center for Health Statistics

("SEER" data from NCI)

- Annual age adjusted lung cancer mortality rates, age 35 years and older
- Standardized to 2000 US census population
- California vs. US



# 38 years' data on lung cancer mortality, CA vs US



- CA lung cancer is higher from 1970 to 1985
- CA declines rapidly from 1987
- US declines more slowly, from 1993



**LUNG CANCER DEATH RATES IN CA ARE  
25% LOWER THAN THE REST OF THE US.  
(2007)**

**CAN CIGARETTE CONSUMPTION  
EXPLAIN THESE TRENDS?**

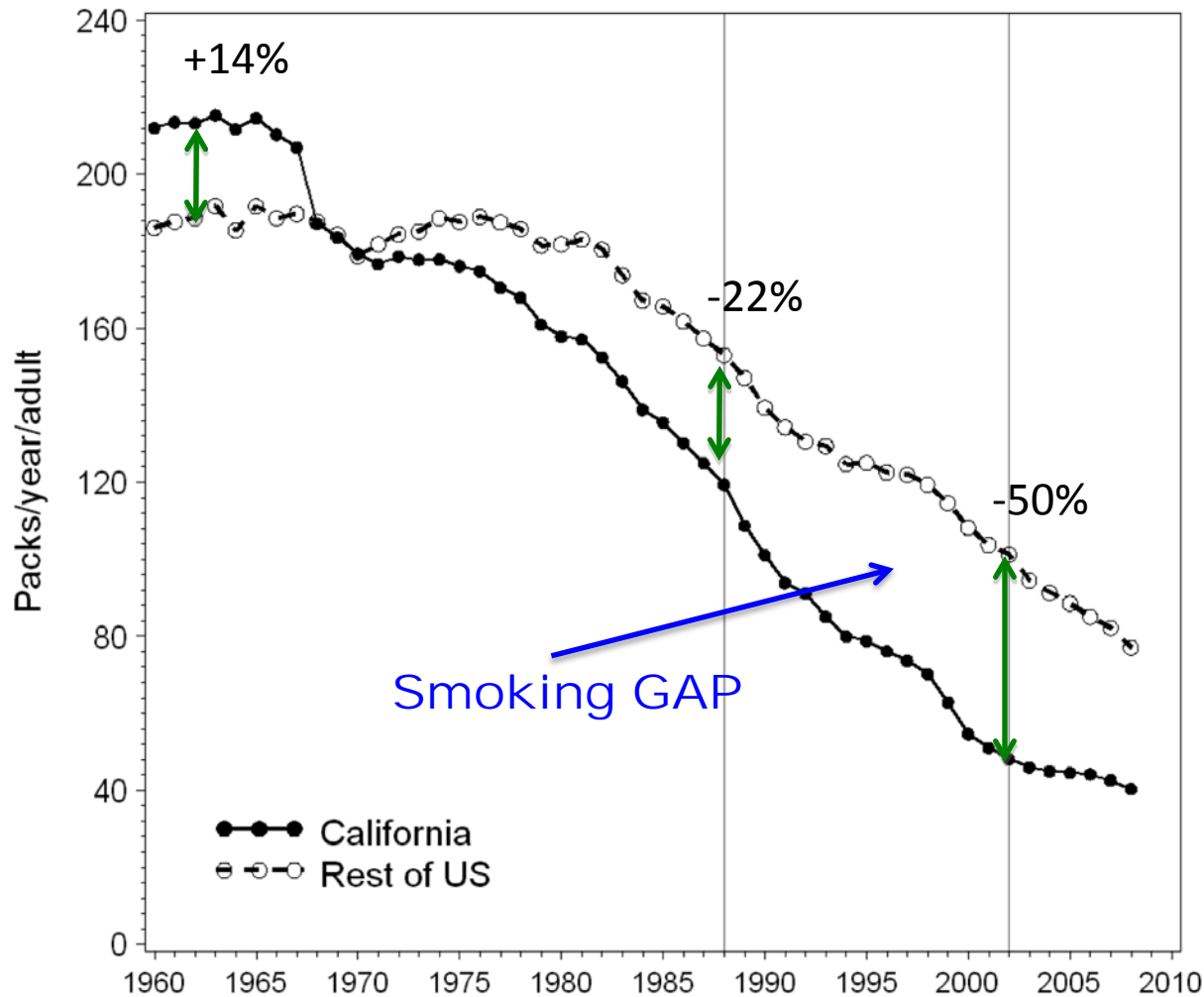


# Per Capita cigarette consumption

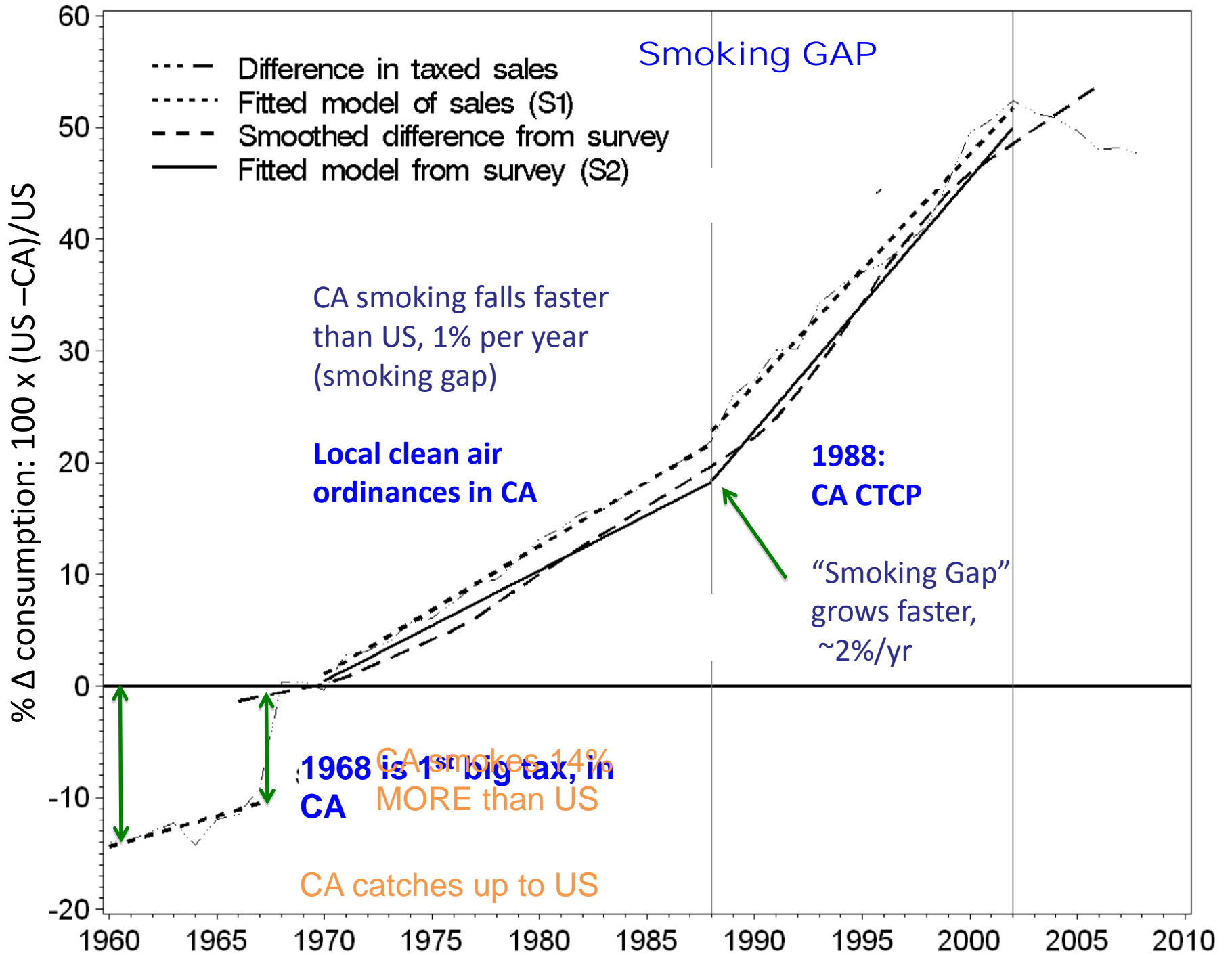
- Taxable Cigarette Sales
  - CA Department of Finance  
(Orzechowski and Walker)
- Population survey data
  - CDC and Census Bureau
  - (TUS-CPS and NHIS)



# ~50 years' data on per capita cigarette sales, CA vs US



- CA consumption is  $\geq$  US until 1968
- CA declines rapidly from 1974
- US declines more slowly, from 1981
- WHY?



# Summary of consumption

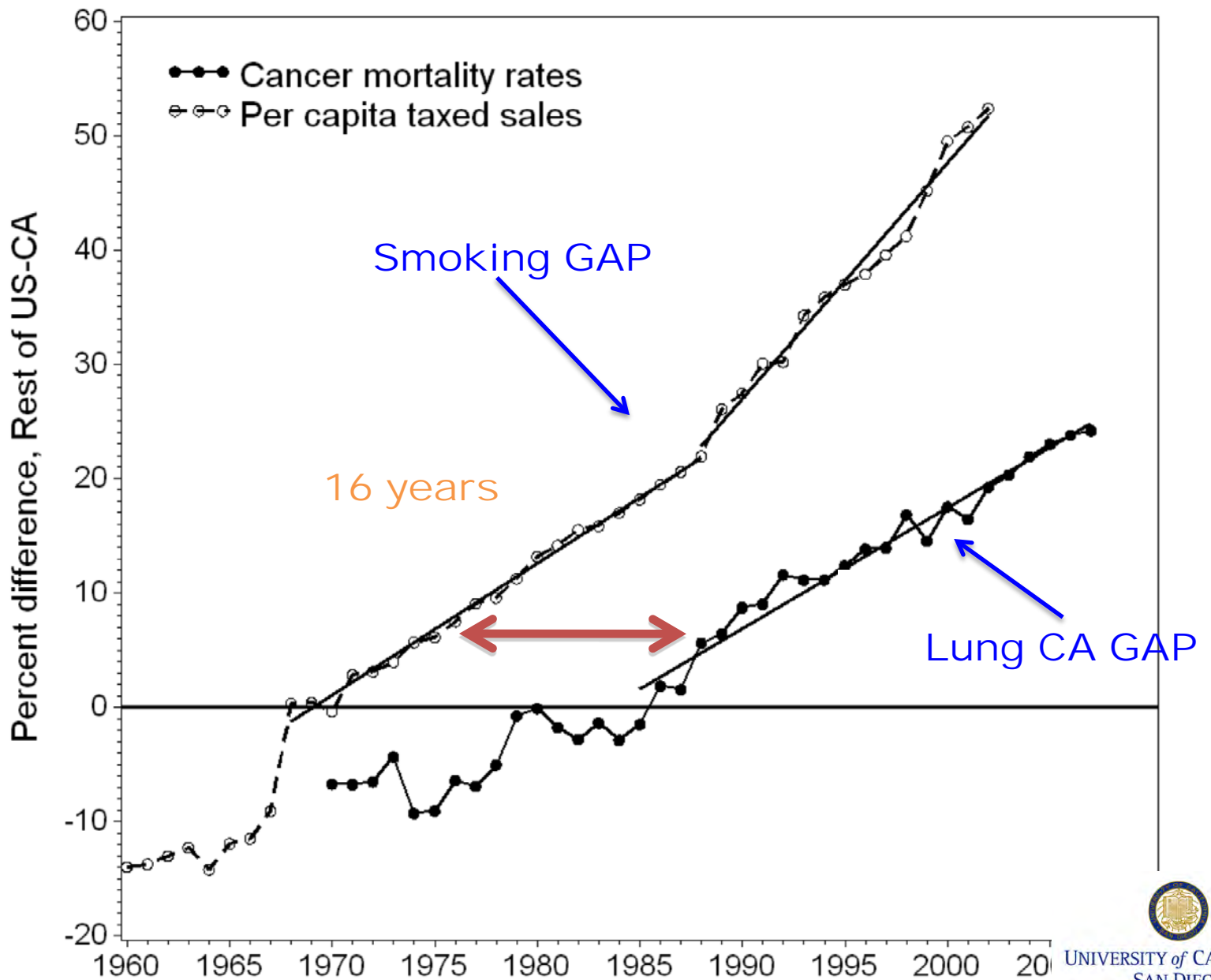
Survey and tax data agree:

- Californians smoked MORE than US until first big CA cigarette excise tax in 1968
- Over next 20 years, consumption in CA dropped faster than in rest of US
  - Attributable to greater tobacco control activity in CA
- This “smoking gap” accelerated in 1988 with the CA Tobacco Control Program

# Put it all together:

- % difference in consumption rates, CA vs US
- % difference in lung ca rates, CA vs US
- Over the last ~40 years





### ACCR EVENT BRINGS U.S. SURGEON GENERAL TO CAPITOL HILL

*Surgeon general, AACR leaders urge increased investment in research to tackle tobacco epidemic*

Stemming the global tide of tobacco-related death and suffering and promoting public health will require an intensification of tobacco control efforts and further research to better understand initiation, addiction and the countless harmful effects of tobacco, emphasized U.S. Surgeon General Regina Benjamin, along with other research experts, at a March 1 Capitol Hill briefing hosted by the AACR.



U.S. Surgeon General Regina Benjamin

Benjamin, speaking to congressional aides and representatives from the health research and advocacy communities, praised the public health efforts that have led to the remarkable decline in smoking rates over the past four decades, but noted that this decline has stalled in recent years. About one in five American adults still smoke and every day, nearly 4,000 youths try their first cigarette. She cited the ongoing need for more scientific discovery in tobacco to drive the development of more effective policies and treatments.

Benjamin also pointed to successful anti-smoking policies at the state level as models for the rest of the nation. California's 40-year-long tobacco control program, for instance, has resulted in lung cancer rates that are nearly 25 percent lower than other states.

# National impact

## March 1 Capitol Hill briefing by Surgeon General:

“California's 40-year-long tobacco control program, for instance, has resulted in lung cancer rates that are nearly 25 percent lower than other states.”

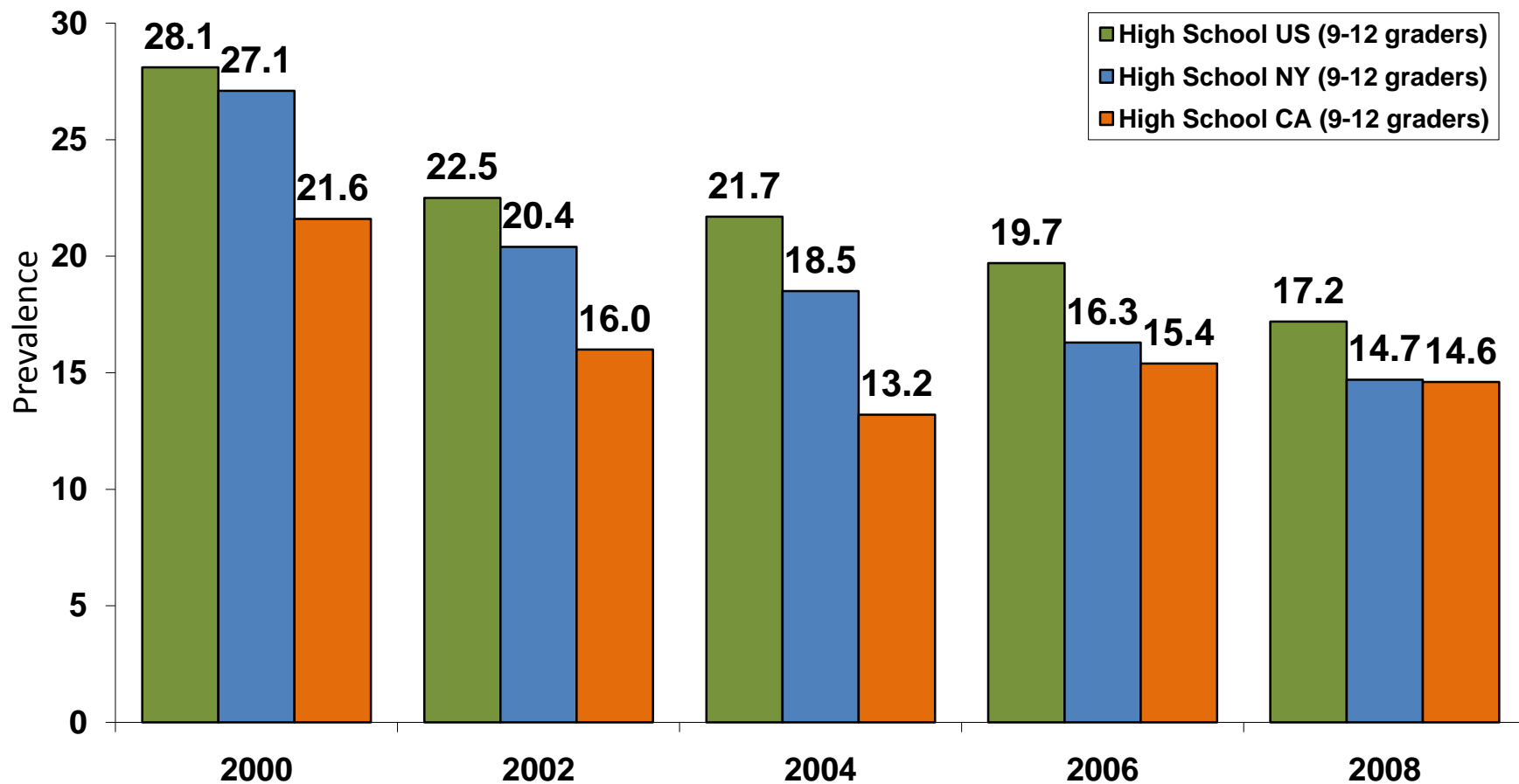


# HOWEVER-we are now losing ground

- Data from the California Tobacco Survey on youth smoking rates
  - California Department of Public Health
- We are losing the kids! They are now smoking **more** than previously.

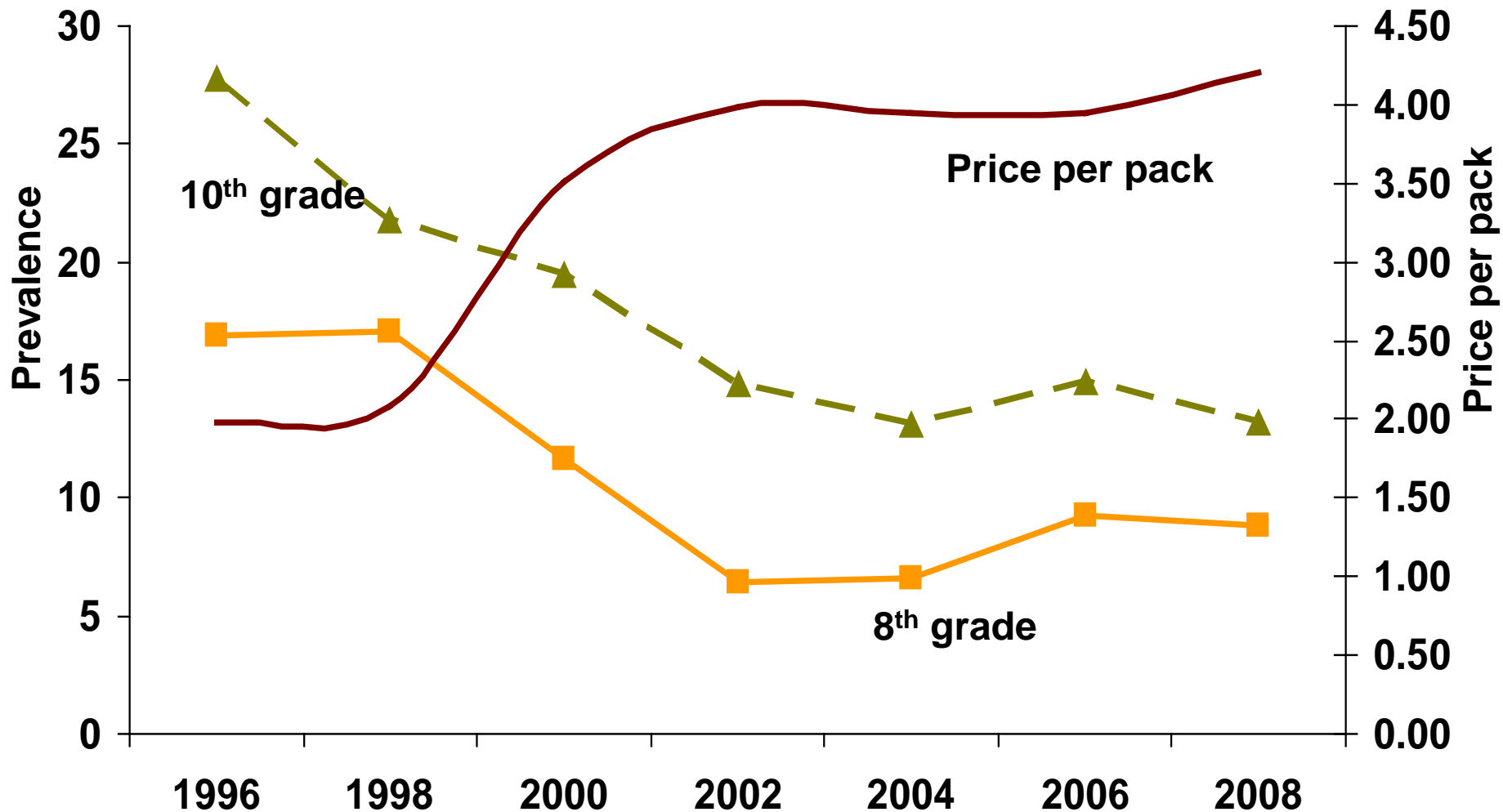


# 30-day smoking prevalence for California, New York and U.S. high school (9th-12th grade) students, 2000-2008



Source: The 2000, 2002, 2004 and 2006 data is from the California Student Tobacco Survey. The 2000 data collection used passive parental consent, 2002 and 2004 used active parental consent, and 2006 and 2008 data collection used a mixed parental consent procedure. New York data from the New York Youth Tobacco Survey, 2000-2008. The U.S. data is from the National Youth Tobacco Survey. Prepared by: California Department of Public Health, California Tobacco Control Program, March 2011.

# 30-day smoking prevalence among 8th, and 10th, graders in California, 1996-2008 and the average price of a pack of cigarettes



Source: The 2000 data is from the National Youth Tobacco Survey collected by the American Legacy Foundation, which used passive parental consent. The 2002, 2004, 2006, and 2008 data is from the California Student Tobacco Survey. The 2002 and 2004 data collection used active parental consent while the 2006 and 2008 data collection used a mixed parental consent procedure.

Prepared by: California Department of Health Services, Tobacco Control Section, February 2009.

# Conclusions

- After 1<sup>st</sup> big CA cigarette tax in 1968, the ‘smoking gap’ started: CA vs US
- The 1988 Tobacco Tax Health Promotion Act, **doubled the rate of the “smoking gap”**
- As predicted, from 1986, a corresponding “lung cancer death gap” appeared.

The CA Tobacco Control Program should continue to prevent lung cancer deaths **for decades to come.**

**BUT ONLY IF IT IS FUNDED.**