



# Penalizing Minors for Possession, Use, and/or Purchase of Tobacco Products: A Viable Public Health Strategy?



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ImpacTeen and YES! are part of Bridging the Gap: Research Informing Practice for Healthy Youth Behavior, supported by the Robert Wood Johnson Foundation.

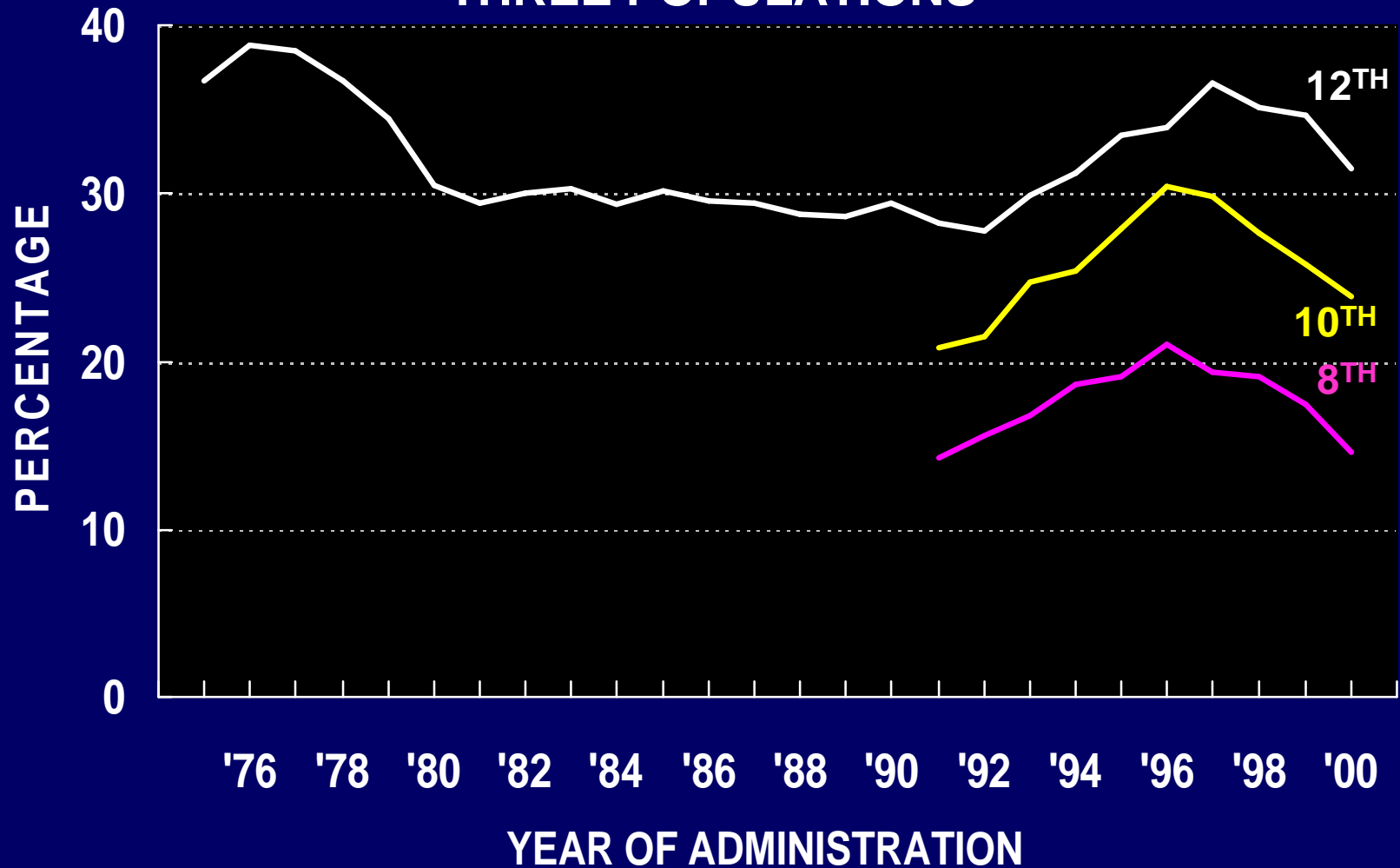
# Introduction:

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- ☰ Overview of trends in adolescent tobacco use
- ☰ Conceptual Models
- ☰ Overview of Bridging the Gap Project
  - ☰ Discussion and Analysis of Possession, Use, Purchase Laws

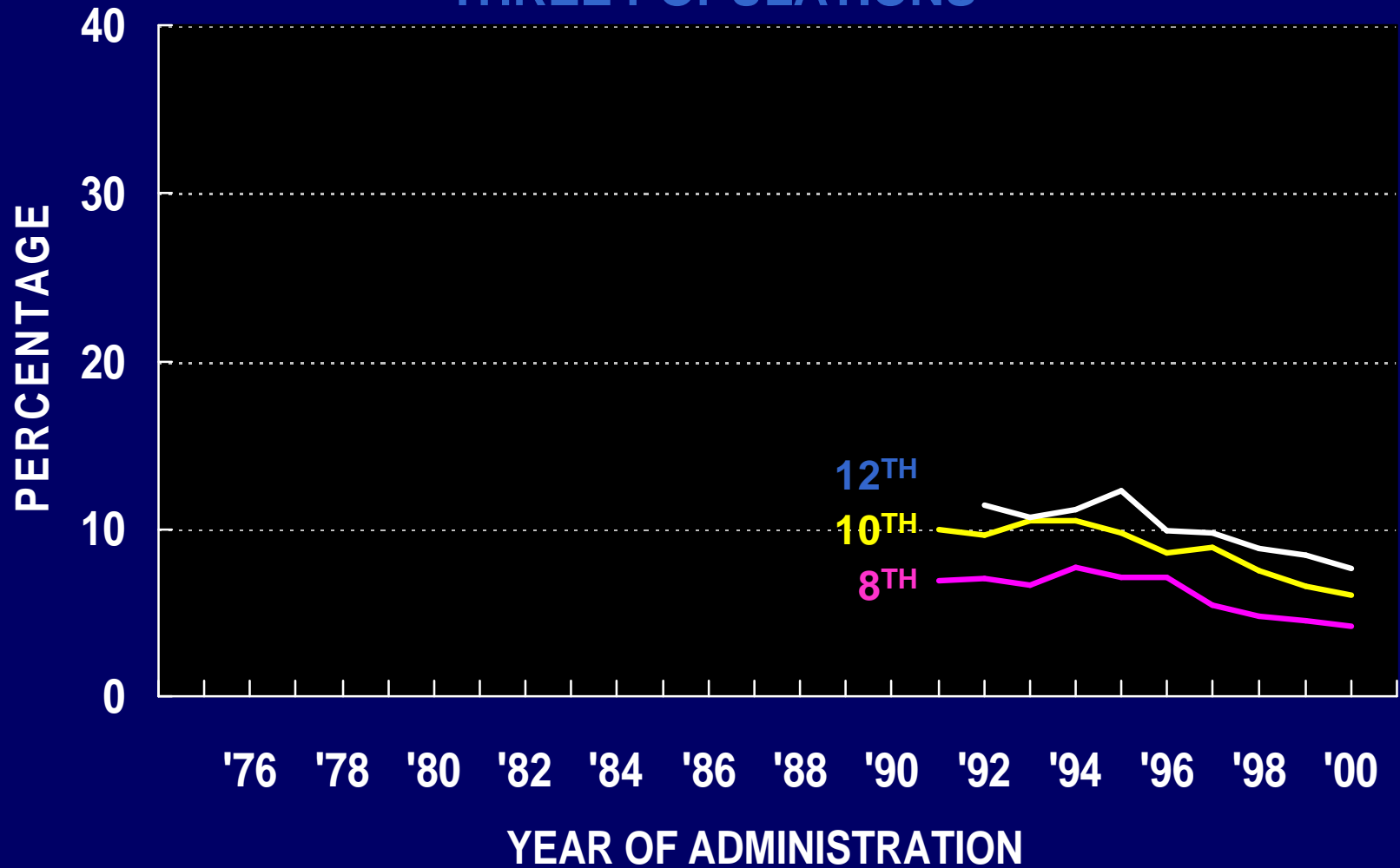
# TRENDS IN 30-DAY PREVALENCE OF CIGARETTE SMOKING

## THREE POPULATIONS

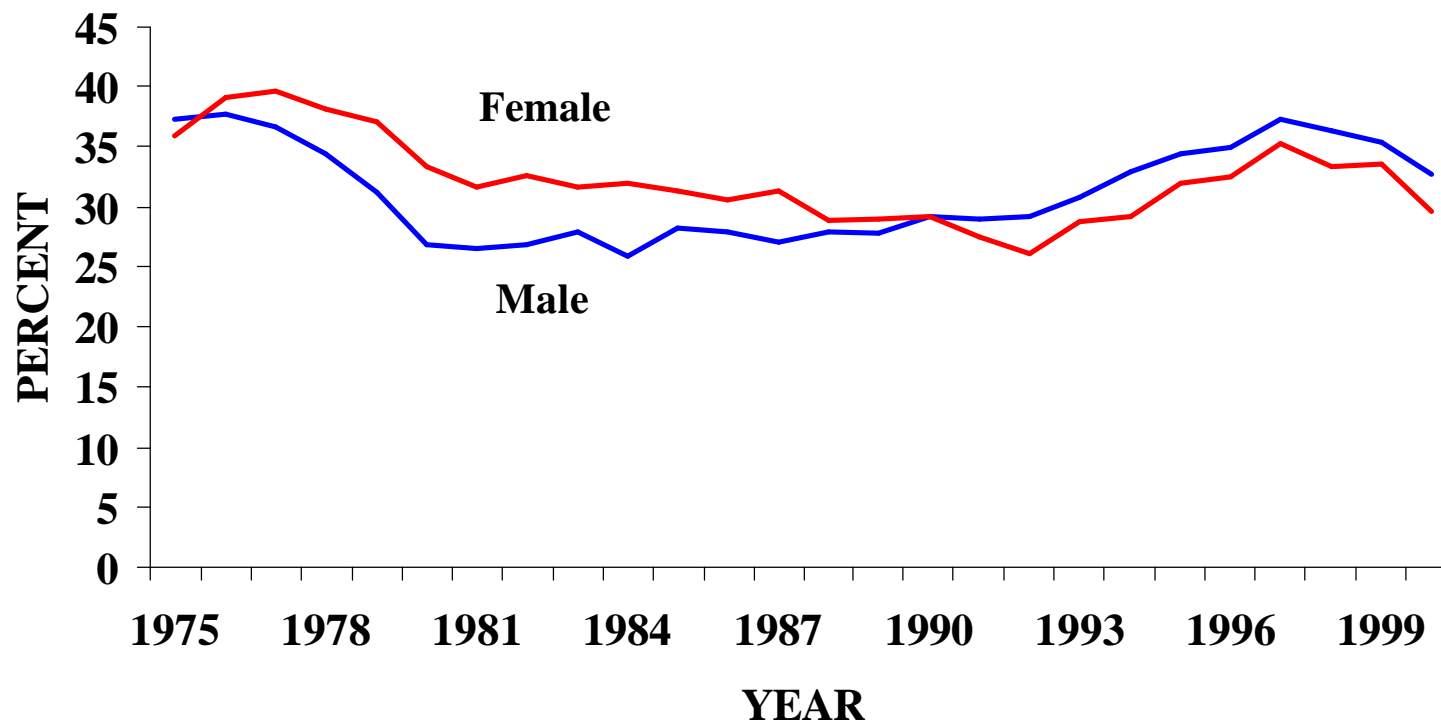


# TRENDS IN 30-DAY PREVALENCE OF SMOKELESS TOBACCO

## THREE POPULATIONS

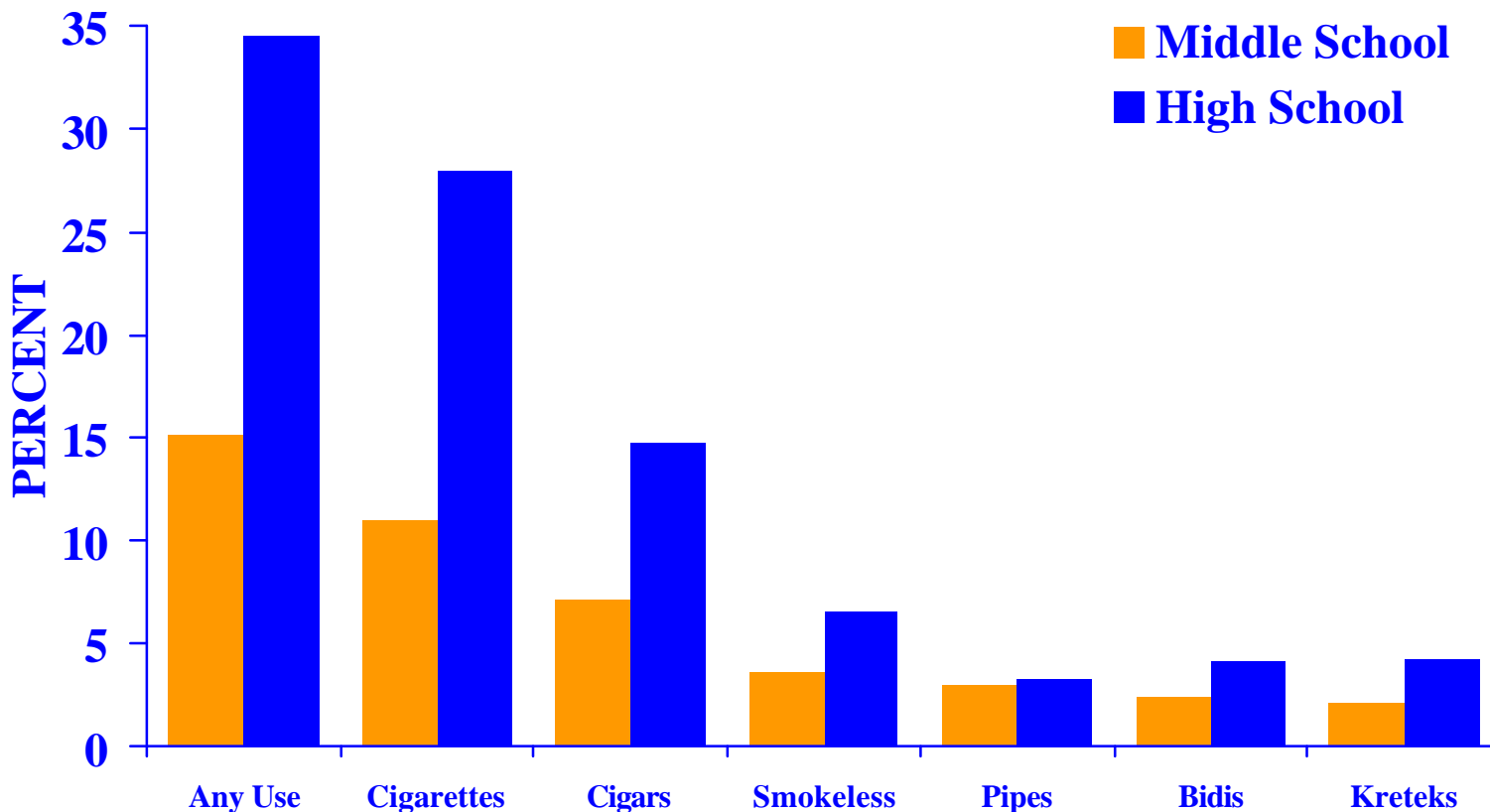


# Trends in Prevalence of Past Month Cigarette Smoking Among High School Seniors by Gender – United States, 1975-2000



Source: Institute for Social Research, University of Michigan, Monitoring the Future Surveys

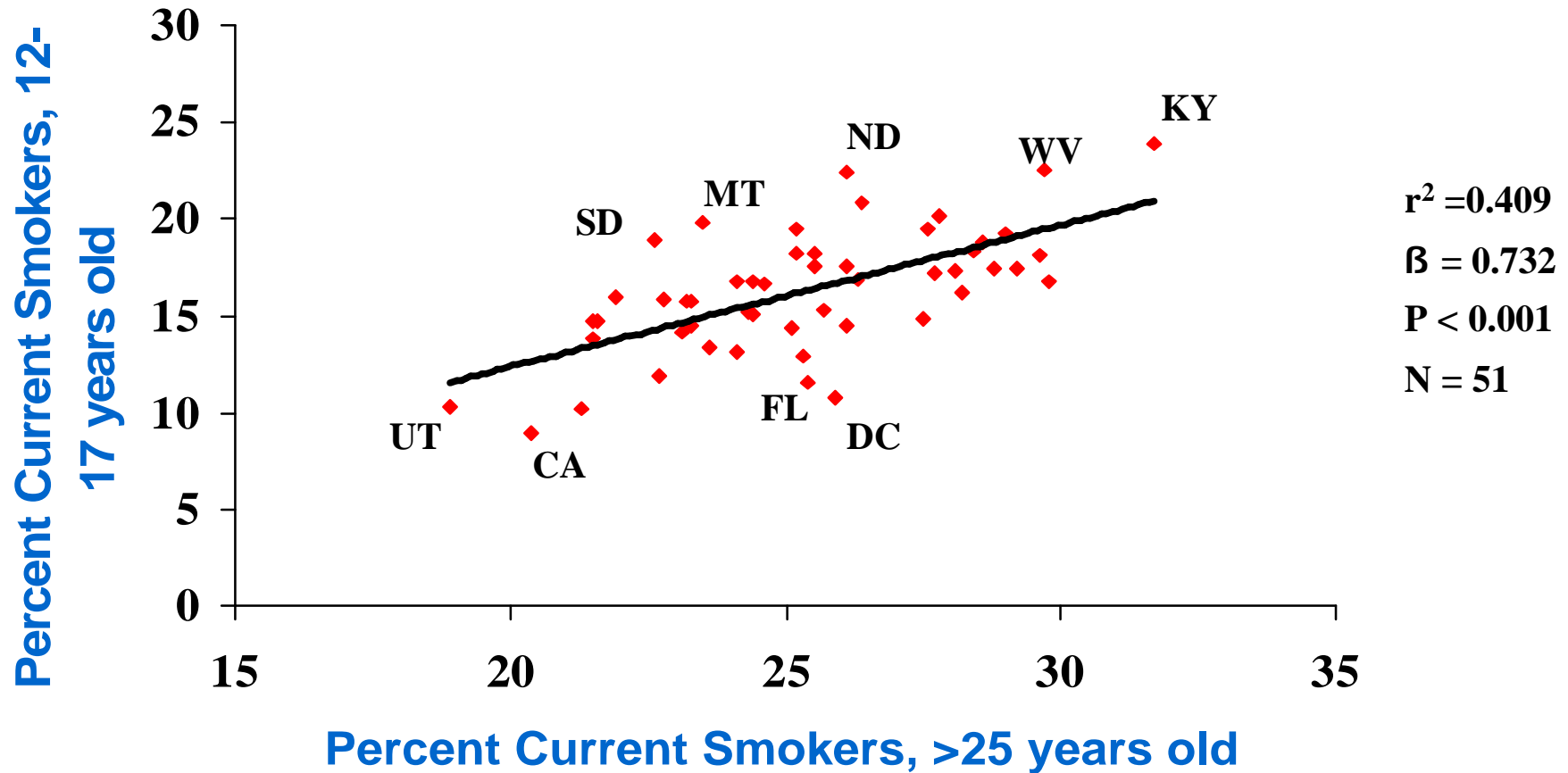
# Current Use Among U.S. Middle and High School Students by Type of Tobacco Product – National Youth Tobacco Survey, 2000



Note: Used tobacco on <sup>3</sup> 1 of the 30 days preceding the survey

Source: American Legacy Foundation, National Youth Tobacco Survey; n = 35,828

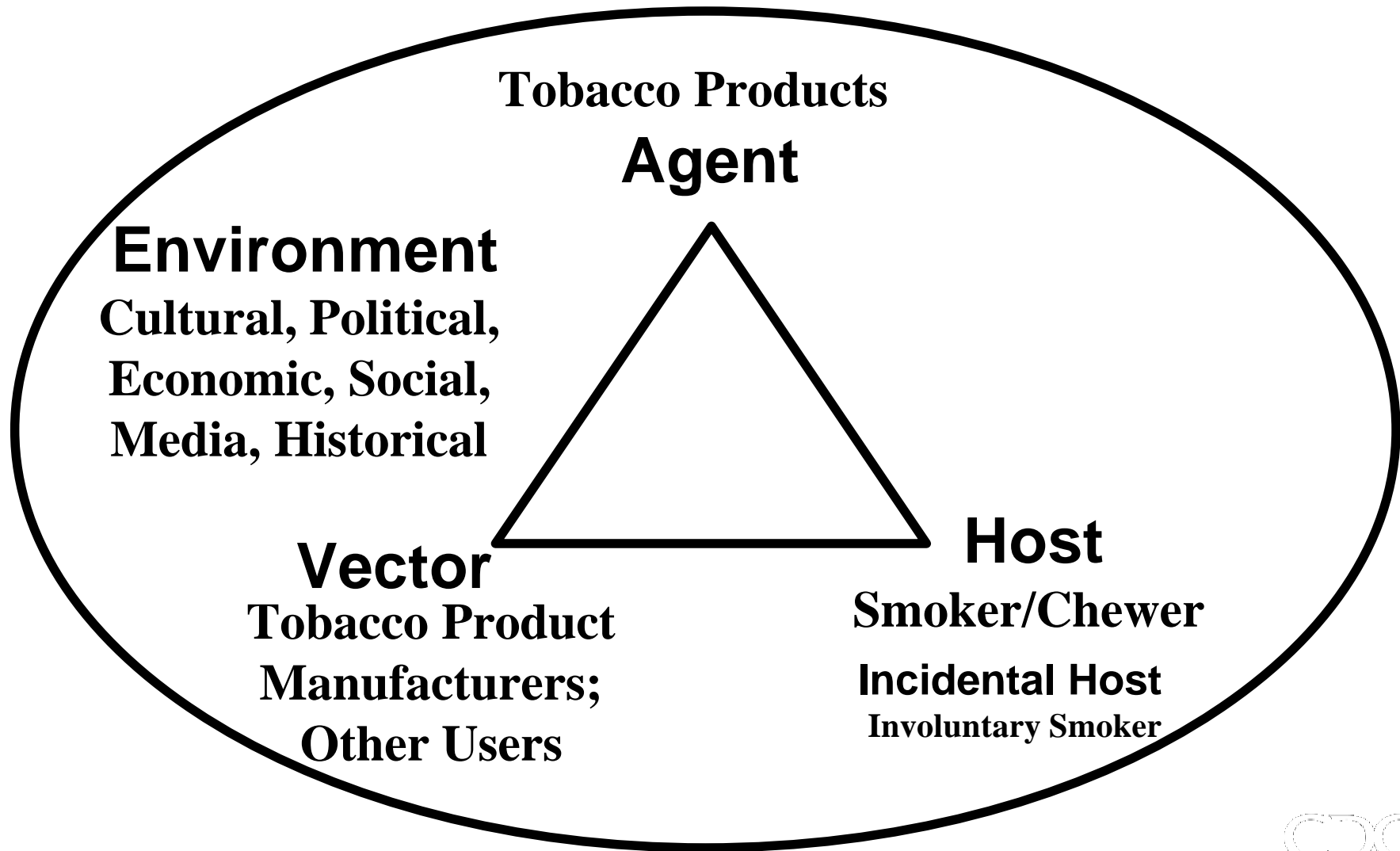
# Smoking Prevalence Among Youths Aged 12-17 Years Old and Adults Aged $\geq 26$ Years Old in All 50 States and the District of Columbia, 1999 NHSDA



Note: Current smokers were persons who smoked on  $\geq 1$  day during the previous 30 days

Source: 1999 National Household Survey on Drug Abuse

# Tobacco Control Model of Nicotine Addiction



Adapted from Orleans & Slade,  
1993

# Paradigm for Tobacco Control

- ▼ Minor's access
- ▼ Advertising

- ▲ Cessation activities
- ▲ Prevention activities
- ▲ Smoke-free air
- ▲ Regulation/Liability
- ▲ Price/Economic





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## Purpose of the Bridging the Gap Initiative:

☐ TO EVALUATE THE IMPACT OF:

*Policies, Programs, and Practices*

☐ ADDRESSING VARIOUS TYPES OF SUBSTANCES:

*Alcohol Use, Illicit Drug Use, and Tobacco Use*

☐ AT VARIOUS LEVELS:

*State, Community, School, and Individual*

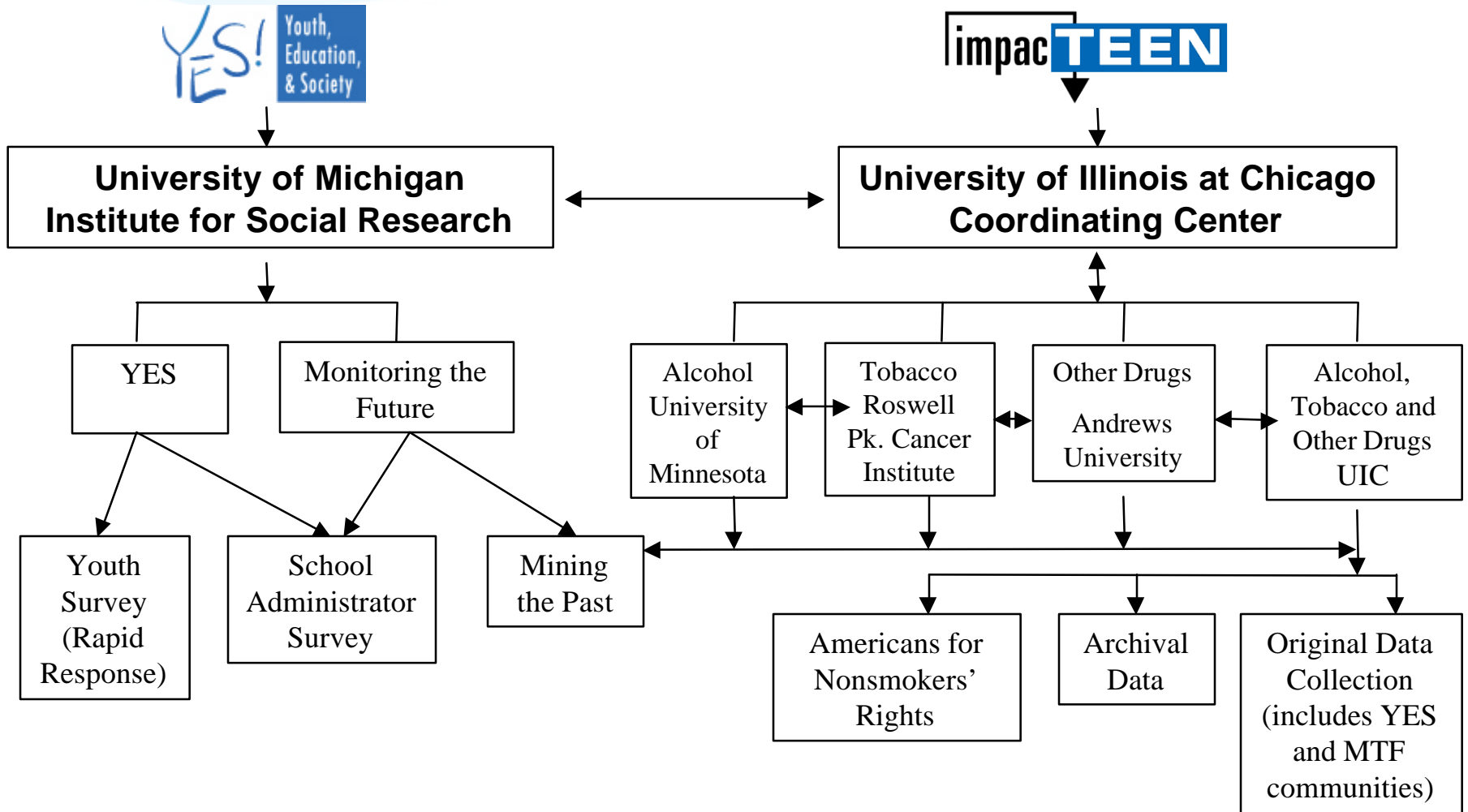
# Bridging the Gap: An Integrative Study

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## ***INTEGRATING ACROSS:***

- ☰ **Multiple Substances**
  
- ☰ **Multiple Disciplines**
  
- ☰ **Multiple Centers and Collaborators**
  
- ☰ **Multiple Levels of Social Organization**
  - ☰ **Multiple Data Sources**

# Bridging the Gap Overview



# Structure of the Samples

- **Half-Sample of MTF Schools Cycling Out of the National Sample**
  - ☐ c. 215 Schools Per Year
  - ☐ National Replicate Sample
- **Administrators in Those Schools Surveyed**
- **Community Data Collected From Their Catchment Areas**
  - ☐ Observational Studies of Retail Outlets
  - ☐ Key Informant Interviews in the Community
  - ☐ Other Existing Archival Data
- **State Level Data on Laws, Policies, and Environmental Data**

# Community Data Collections - Community Sample

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## ➤ Community Definition

- ☐ School “Catchment Area” or “Enrollment Zone”
- ☐ Radius in High Density Areas

## ➤ Number of Communities

- ☐ **1999: 193 Communities**
  - ✎ MTF: 163; Rapid Response: 30
- ☐ **2000: 224 Communities**
  - ✎ MTF: 173; Rapid Response: 51
- ☐ **2001: 241 Communities**
  - ✎ MTF: 215; Rapid Response: 26

# Community Data Collections - Community Observations

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## ➤ Retail Store Observations: Key Components

- ☰ Tobacco/alcohol pricing, promotions, product placement, functional objects, interior advertising, exterior advertising, parking lot advertising, tobacco/alcohol related signage, store characteristics

- ☰ Store Sample

- 1999: 3,505; 2000: 4,107; 2001: 4,537 (18.3 per community)

## ➤ Community Observations: Key Components

- ☰ Local Alcohol, Tobacco, Other Drug, and Youth Related Ordinances and Regulations

- ☰ General Community Observations (advertising, counter-advertising, social capital, and more)

## **Retail Store Observations - Highlights**

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### **➤ Pricing (single pack)**

**☐ Marlboro: 1999 - \$2.95; 2000 - \$3.31**

**☐ Newport: 1999 - \$2.89; 2000 - \$3.25**

**☐ Budweiser: 1999 - \$4.68; 2000 - \$4.78**

### **➤ Cigarette Placement**

**☐ No Self-Service: 1999 - 64%; 2000 - 79%**

## **Retail Store Observations - Highlights (continued)**

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### **➤ Interior Advertising**

(4 point “pervasiveness” scale)

☰ **Tobacco: 1999 - 2.0; 2000 - 2.4**

☰ **Alcohol: 1999 - 2.0; 2000 - 2.0**

### **➤ Signage (any health/access related)**

☰ **Tobacco: 1999 - 65%; 2000 - 75%**







☰ **Alcohol: 1999 - 11%; 2000 - 23% (additional measures included)**

# Key Informant Surveys

## ➤ Key Informant Surveys

### ➤ Modular Approach:







#### Core Modules

-  **Universal Questions**
-  **Demographic Module**
-  **Health Department**
-  **Police Agency**
-  **Police Officer**
-  **Coalitions**

#### **5 Targeted Modules**

-  *Youth access enforcement*
-  *Policy/media advocacy*
-  *Public education*

#### **Ordinance Feedback Modules**

-  *Youth Tobacco Possession*
-  *Keg Registration*
-  *Curfews*
-  *Inhalants*
-  *Drug Paraphernalia*
-  *Medical Marijuana*

# Collaborations to Enhance Policy/ Environmental Tracking Efforts

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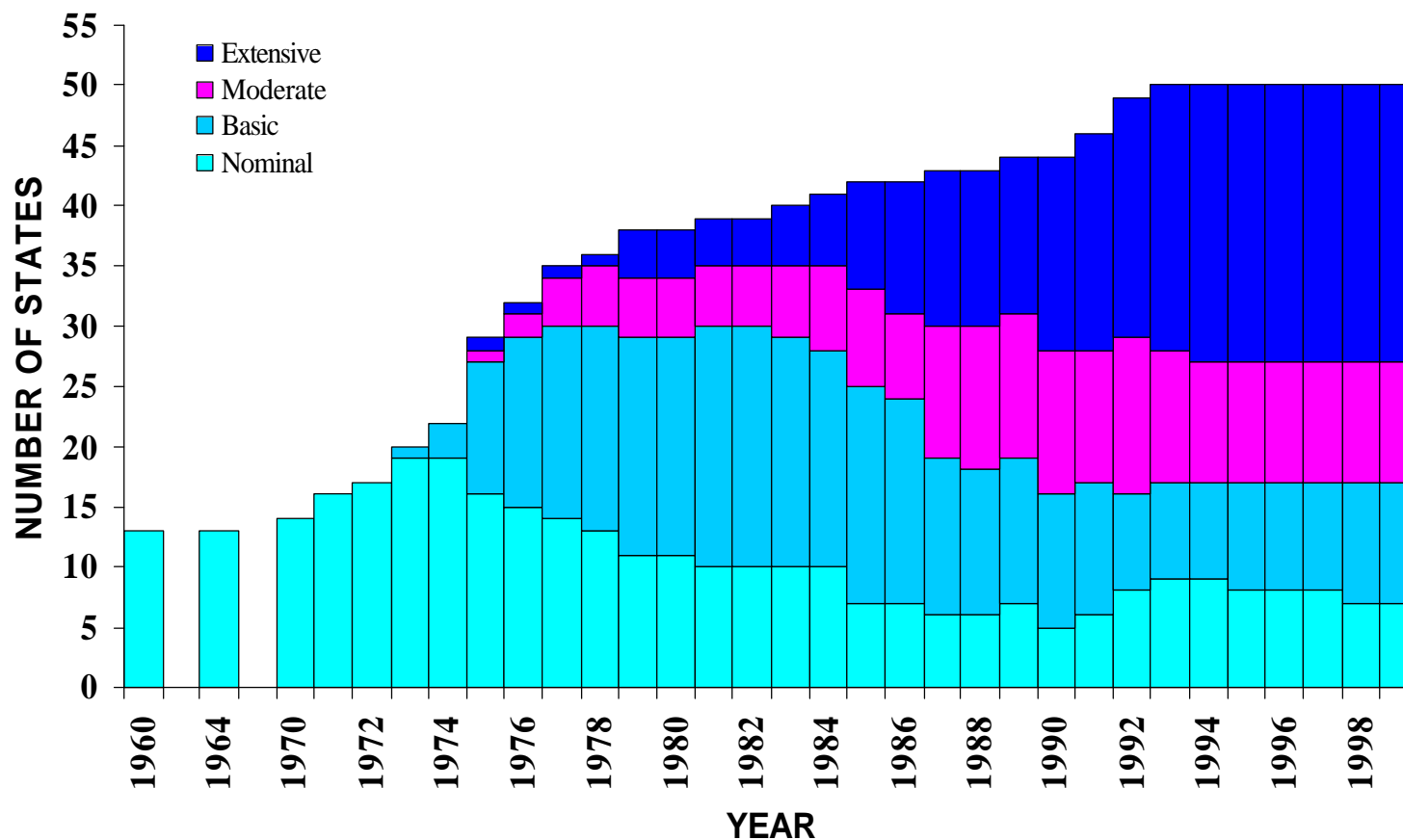
- **Highly integrated With CDC/OSH, NCI, RTI**
- **Strong liaisons With ALA, Mayatech, SAMHSA, ACCV, MIT, ACS, Others**
- **Collaborations Built/Strengthened For:**
  - ☐ **Local Ordinance Collection (NTOPS, ANRF)**
  - ☐ **State Legislation and Tobacco Control Efforts**
  - ☐ **Chartbook**
  - ☐ **Price Study**
  - ☐ **Media Measures**

# **Tobacco Policy/Legislative Data**

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- **Tobacco Control Expenditures – CDC/NCI/RTI - Since 1991**
- **Price Data – Tax Burden on Tobacco, American Chamber of Commerce Researchers' Association, Observational Data, Scanner Data, Self-Reported Data – 1955+**
- **Smoke-Free Air Laws – CDC, ALA, RPCI; 1991+**
- **Sales to Minors' Laws – CDC, SLATI, MIT; 1991+**
- **Purchase, Possession, and Use Laws – CDC, ALA, RPCI; 1988+**

# Restrictiveness Of State Laws Regulating Smoking In Public Places – U.S., 1960-1999



Sources: 1989 Surgeon General's Report, ALA's SLATI, CDC's STATE system, Roswell Park Cancer Institute. Note: Includes the District of Columbia; Alabama = only state with no restrictions on public smoking.

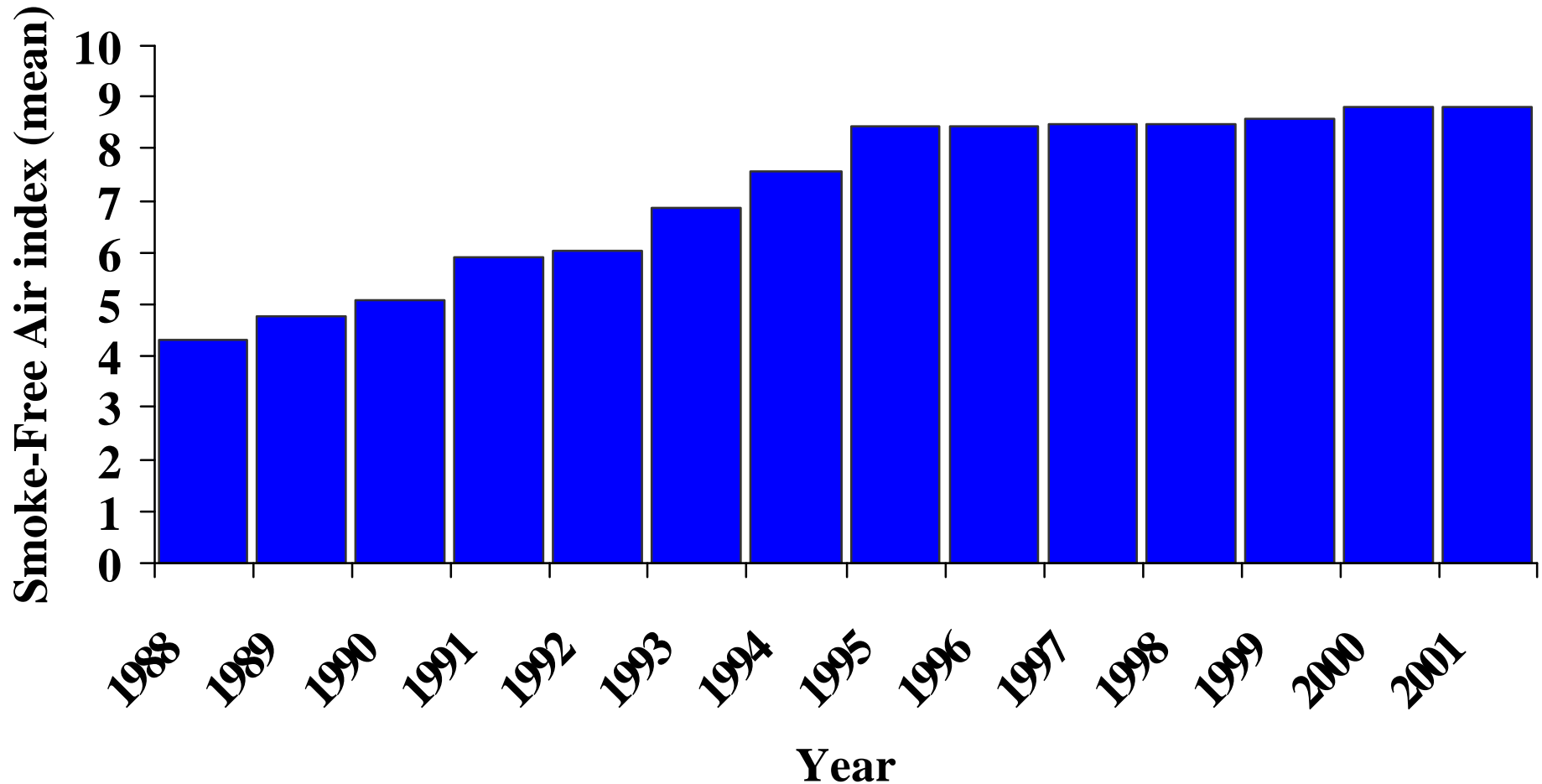
# Sources of Data:

## Legislative Data

### Smoke-free Air (SFA) Legislation:

- ▶ Each state was given a rating based on the strength of protection (*i.e., none, restricted, restricted with separate ventilation, prohibited*) provided in various locations during 1991-1998 with points subtracted for preemption clauses.
- ▶ Locations include: private worksites, government worksites, restaurants, retail/grocery stores, malls, sports arenas, child care centers, hospitals, public transit, and hotels/motels.

# Mean Smoke-Free Air Law Rating Per State\* -- United States, 1988-2001



\*Includes the District of Columbia; Theoretical Range = -5-42

Sources: ALA's SLATI, CDC's STATE system, and Roswell Park Cancer Institute

# Possession, Use, and Purchase Laws

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- Penalize minors, not vendors
  - States want to avoid criminal record for offender (Teen Court or Peer Court)
  - Penalties include:
    - Fines -- most common
      - range as high as \$750 (some graduated)
      - many  $\leq$  \$100
- Other penalties in lieu of or in addition to fines:**
- Community Service
  - Smoking Education Classes
  - Smoking Cessation Classes
  - Driver's License Suspension

# Sources of Data:

## Legislative Data

### PUP Legislation:

- ▶▶ The presence of a law prohibiting minors' possession, use, and/or purchase of cigarettes in each state for 1991-1998 was determined.
- ▶▶ A PUP Index was calculated as the sum of the number of laws in each state in a given year (*range = 0-3*).

# Arguments In Favor of PUP Laws

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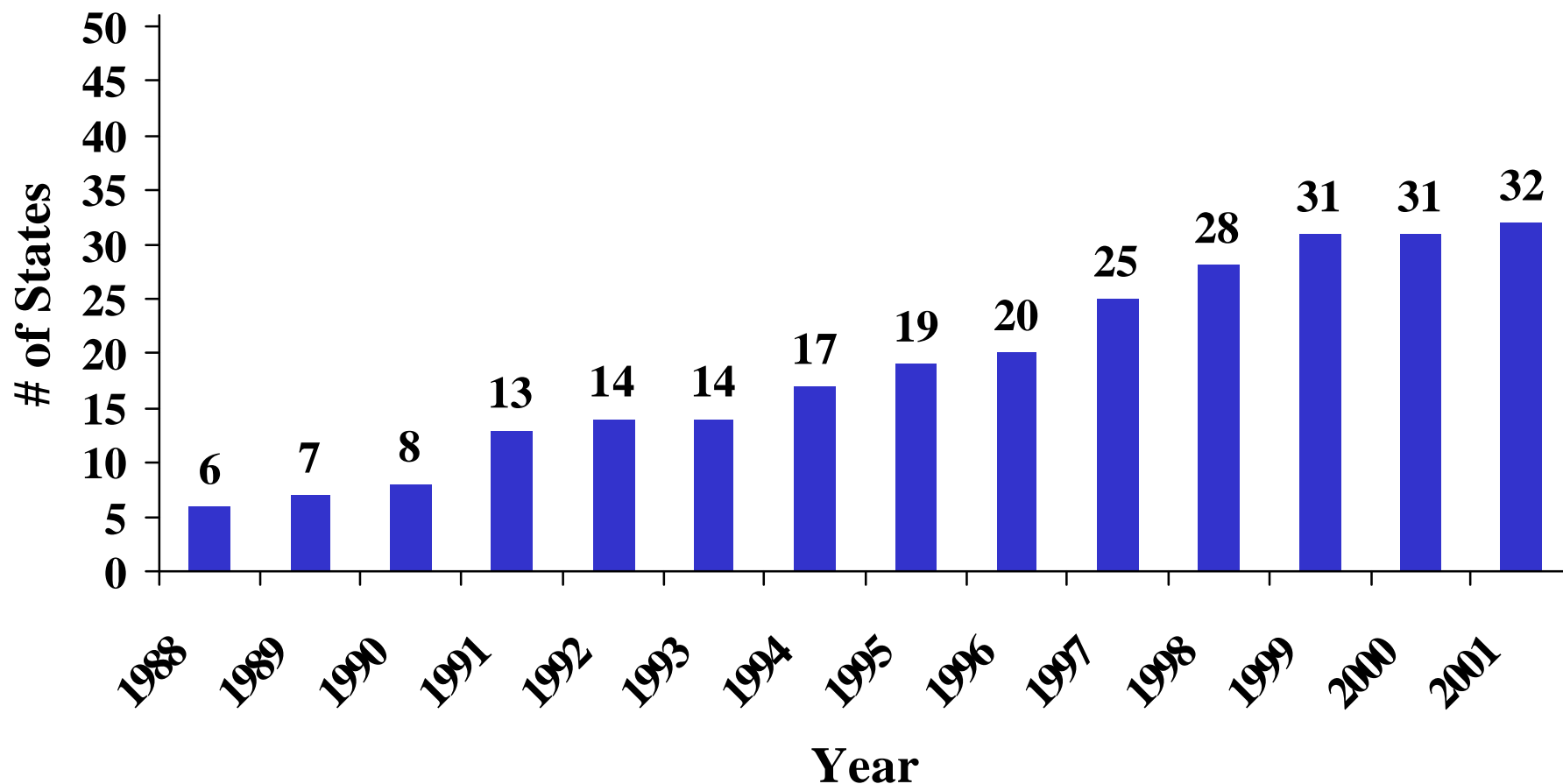
- **Promote Accountability, Personal Responsibility**
  - **Vendors Shouldn't be Liable**
- **Add a Cost to Tobacco Use**
- **Can be Used by Law Enforcement Officers to Inspect Suspicious Youths - May Reduce Crime Rate**
- **Send a Message That Adults Mean What They Say**
- **Alcohol Experience - minimum age increase (to 21 years old) has reduced drinking and saved lives**

# Arguments Against PUP Laws

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- **Youths are Enticed to Smoke by Marketing, Only to Be Punished for Wanting the Promoted Product**
- **Enforcement Costs; May Reduce STM Enforcement**
- **Profiling**
- **Industry Youth Focus Diverts Attention From Effective Tobacco Control Efforts and Facilitates Preemption**
- **Kids Rebel**
- **Age-aspiration Means Adult Status is Attractive**
- **Efficacy of Sales to Minors Laws in Doubt**
- **Blood Alcohol Concentration Laws Reduce Drinking and Driving ONLY**

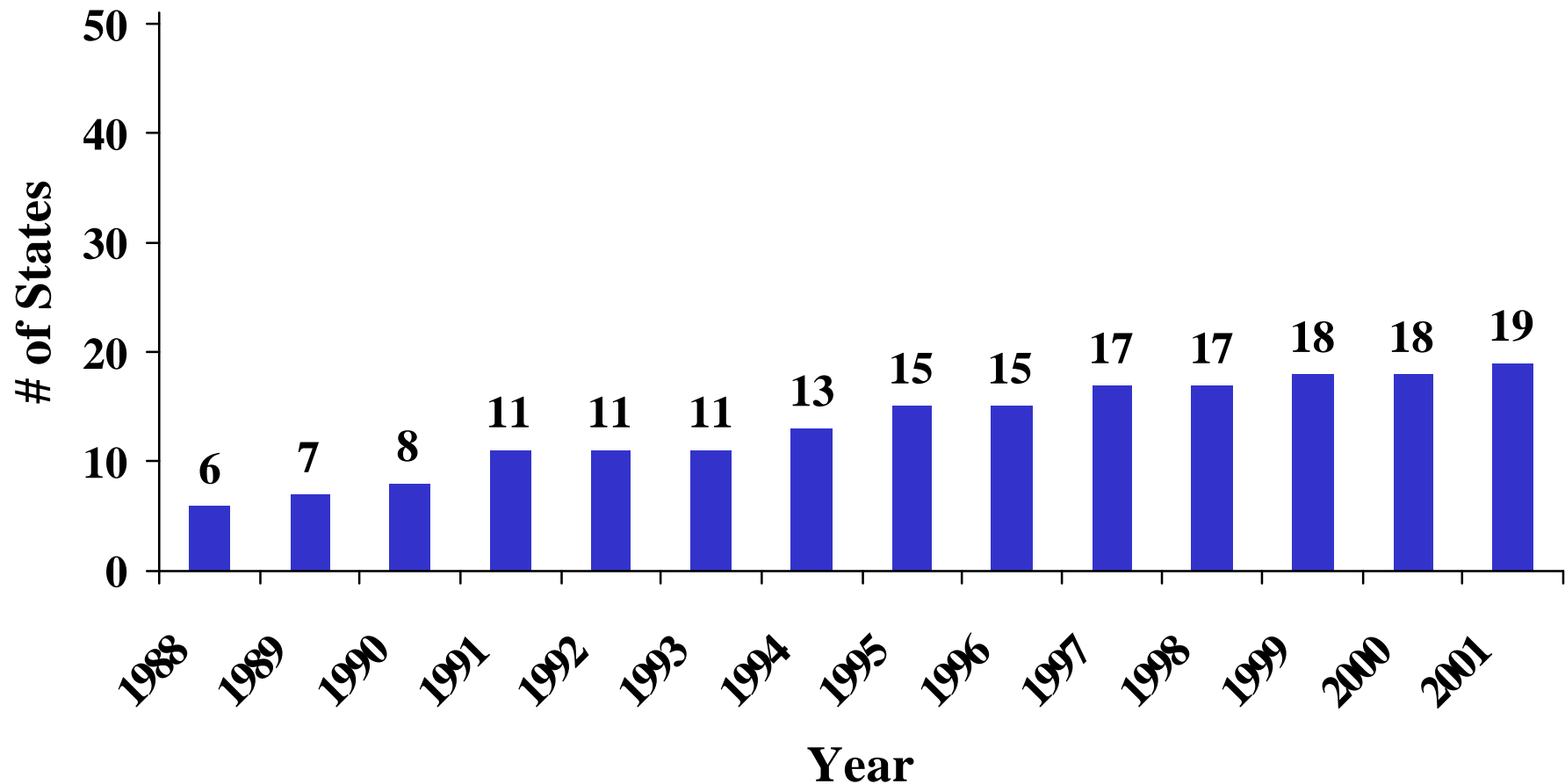
# Number of U.S. States including D.C.\*, with Legislation Restricting Possession of Cigarettes to Persons aged $\geq 18$ years, 1988-2001



\*District of Columbia

Source: "State Legislated Actions On Tobacco Issues", 1988-2001, CDC's STATE system, Roswell Park Cancer Institute.

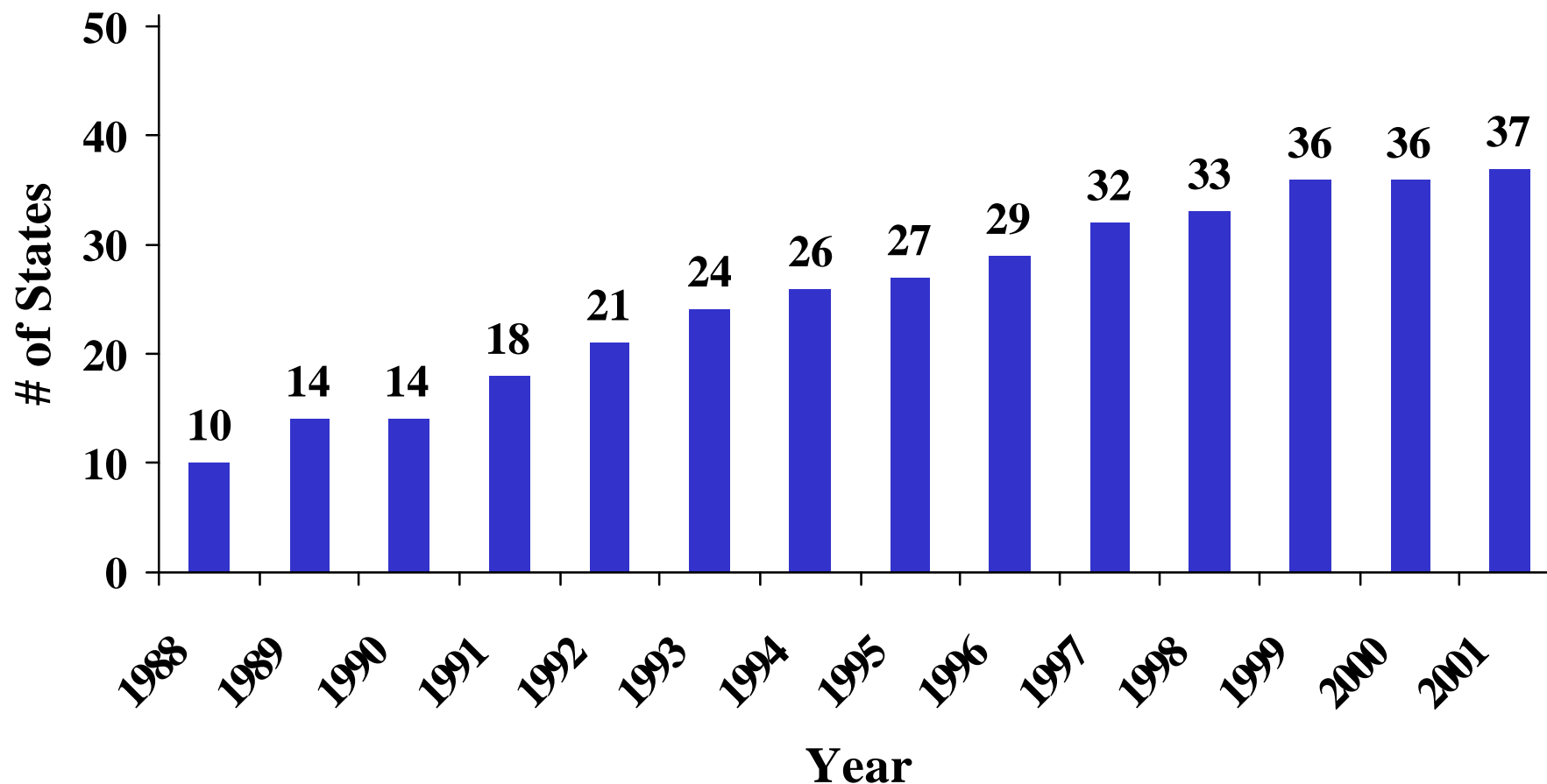
# Number of U.S. States including D.C.\*, with Legislation Restricting the Use of Cigarettes to Persons aged $\geq 18$ years, 1988-2001



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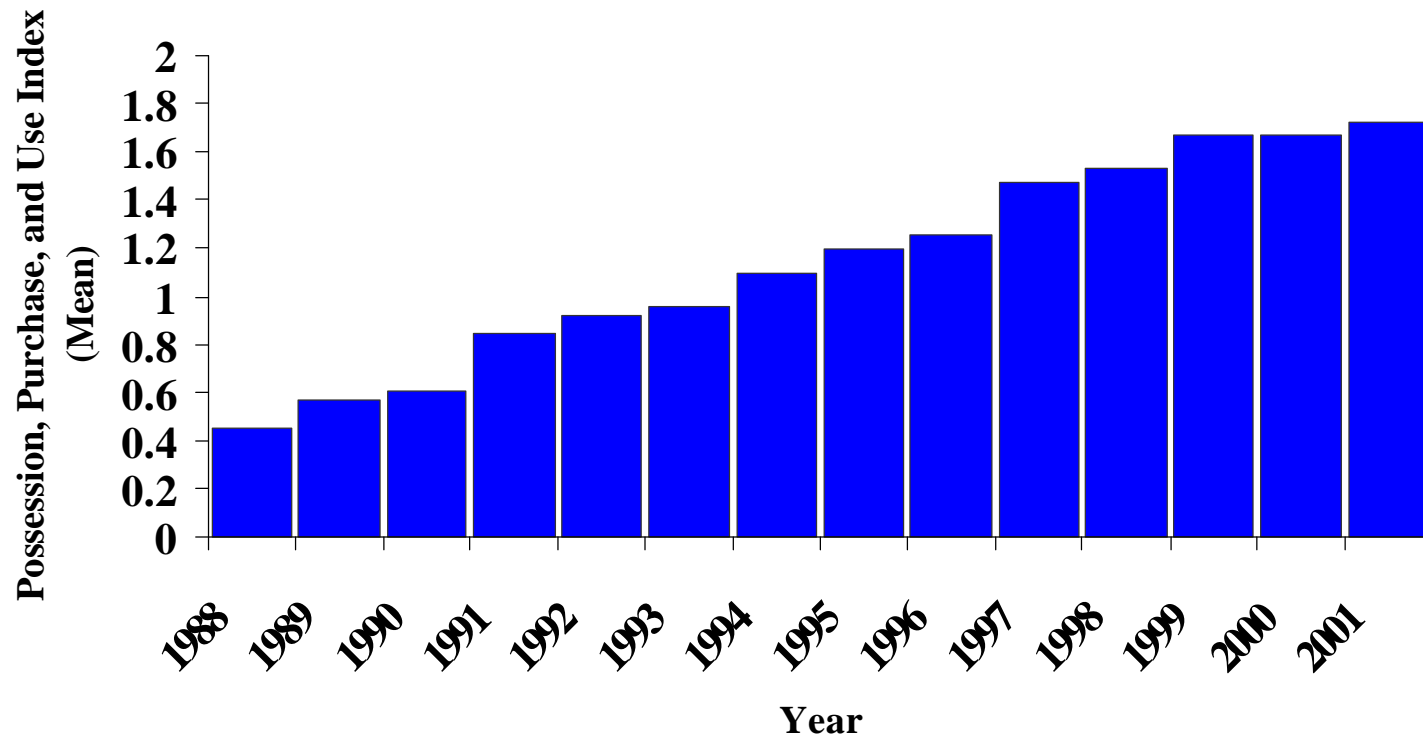
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\*District of Columbia

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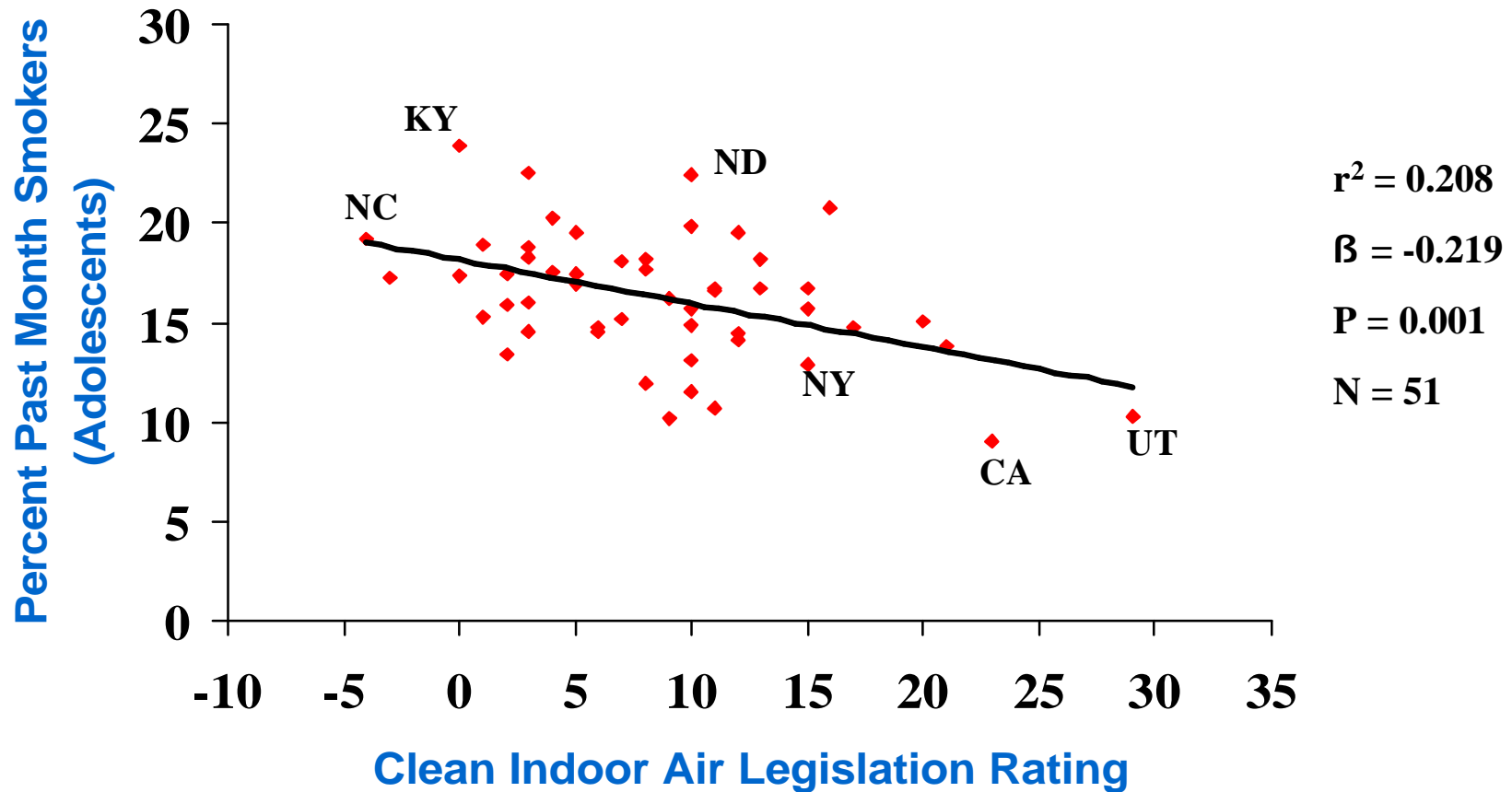
# Mean Number of Possession, Use, and Purchase Laws per State\* -- United States, 1988-2001



\*Includes the District of Columbia; Theoretical Range = 0-3

Sources: ALA's SLATI, CDC's STATE system, and Roswell Park Cancer Institute

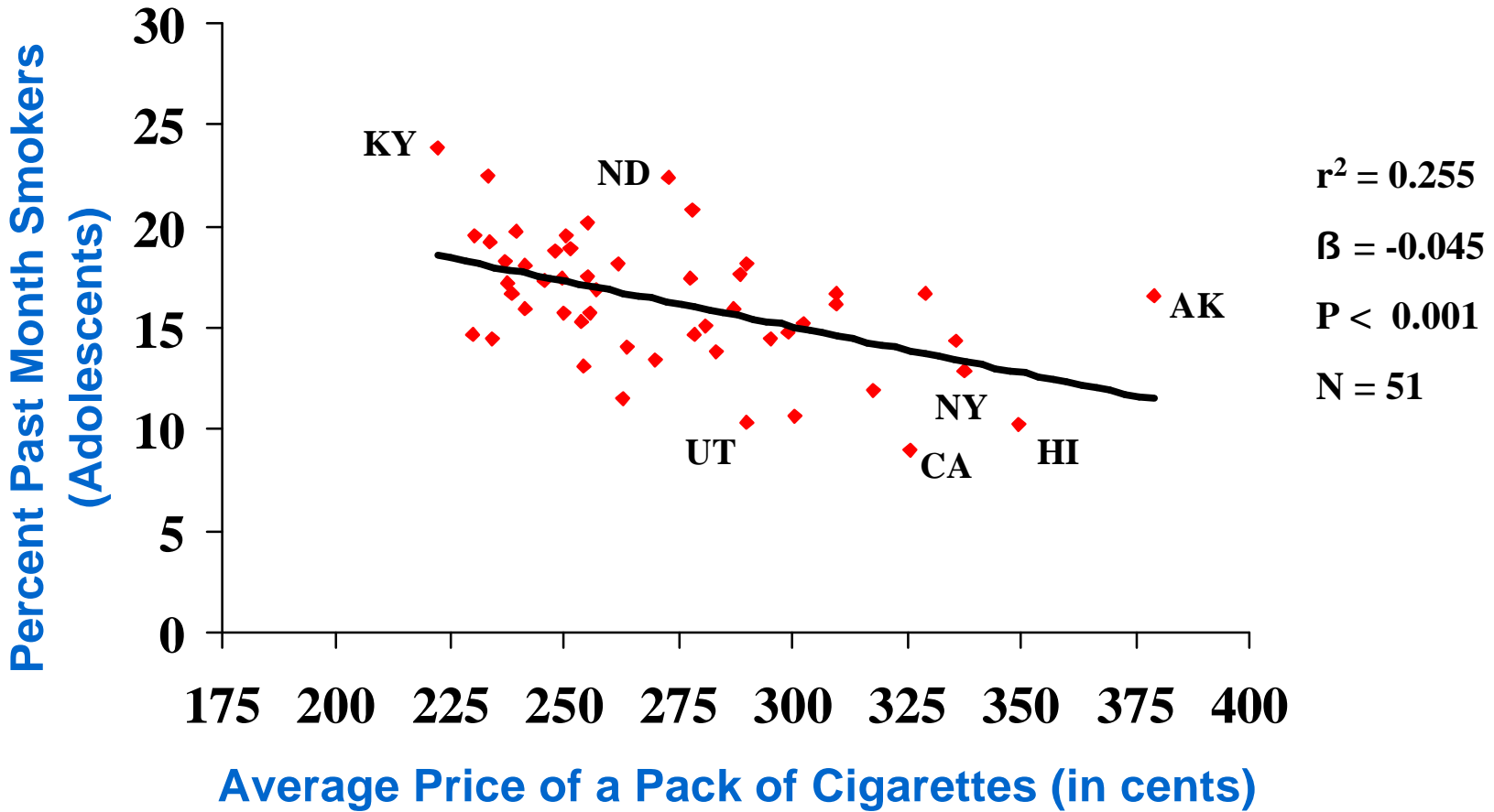
# Cigarette Smoking Among Youth by the Clean Indoor Air Legislation Rating in 50 States and the District of Columbia, 1999



Sources: 1999 NHSDA (12-17 year olds); ALA's SLATI, CDC's STATE system, and the Roswell Park Cancer Institute.

Note: Past Month Smoking = smoked on  $\geq 1$  day in the previous 30 days

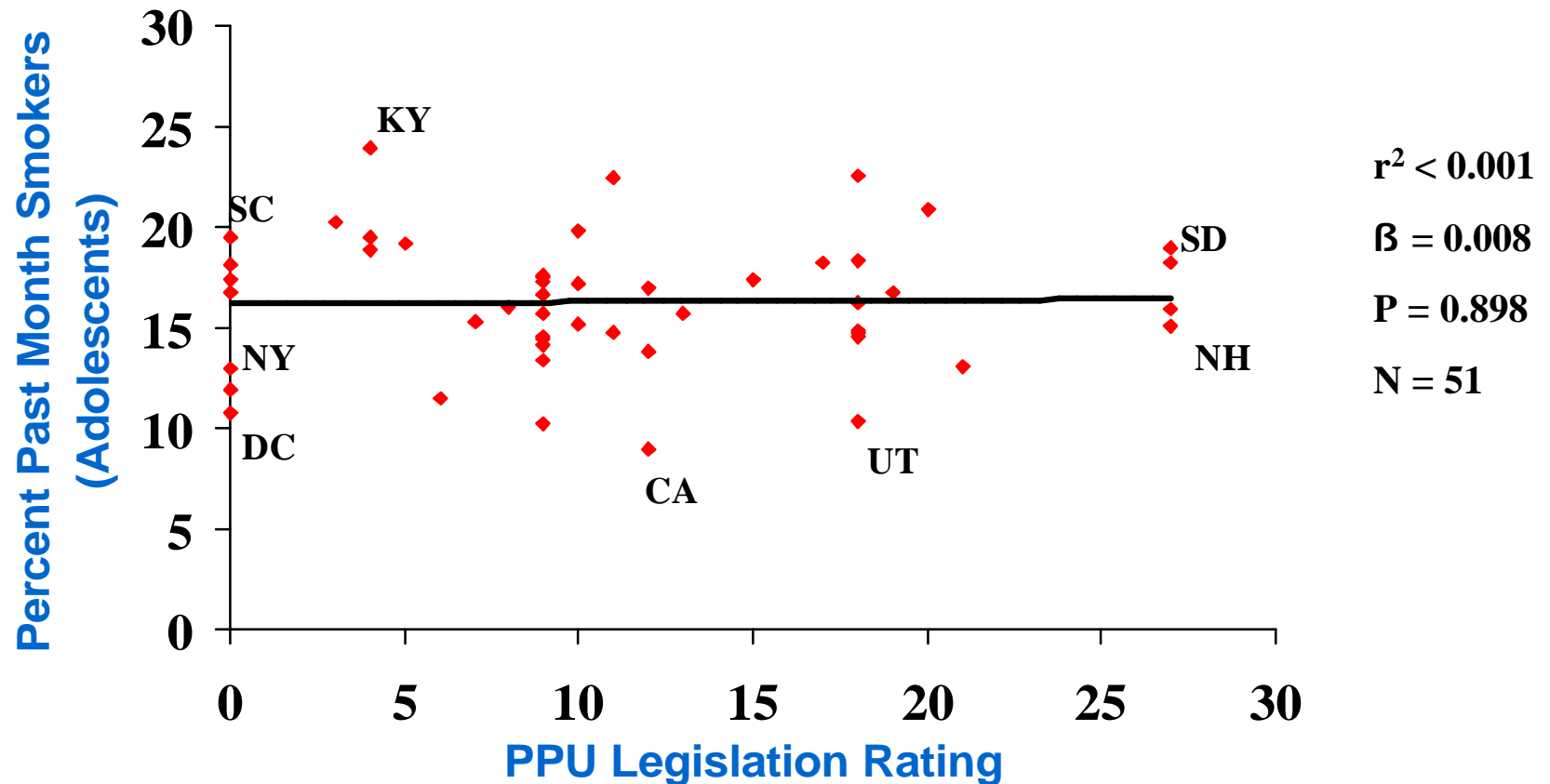
# Cigarette Smoking Among Youth by the Average Price of a Pack of Cigarettes in 50 States and the District of Columbia, 1999



Sources: 1999 NHSDA (12-17 year olds); 1999 *Tax Burden On Tobacco*

Note: Past Month Smoking = smoking on  $\geq 1$  day during the previous 30 days

## Cigarette Smoking Among Youth by the Historical PPU Legislation Rating in 50 States and the District of Columbia, 1999



Sources: 1999 NHSDA (12-17 year olds); ALA's SLATI, CDC's STATE system, and the Roswell Park Cancer Institute

Note: Past Month Smoking = smoked on  $\geq 1$  day during the previous 30 days  
 Historical PPU Legislation Rating = Sum of PPU laws for previous 8 years (0 = no law; 1 = law present)

# Control Variables for Merged Analyses

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- **Tobacco Control Expenditures, Cigarette Prices, Sales to Minors Laws, Smoke-free Air Laws**
  - **Age, Sex, Race/Ethnicity, Father's Education, Mother's Education, Respondent's Earned Income, Respondent's Income From Other Sources, Labor Force Status, Mother's Work Status, Religiosity, School Performance**
-

# Table 1. Logit Analyses of the Association Between Purchase, Possession, and/or Use Laws and Cigarette Smoking among Minors – United States, 1991-1998

| <b>Past Month Smoking</b>           |                       |              |
|-------------------------------------|-----------------------|--------------|
|                                     | Adjusted*             |              |
|                                     | Coefficient (z-score) | p-value      |
| Purchase                            | <b>-0.075 (-1.75)</b> | <b>0.080</b> |
| Possession                          | <b>-0.050 (-1.11)</b> | <b>0.266</b> |
| Use                                 | <b>-0.017 (-0.46)</b> | <b>0.642</b> |
| PPU Index                           | <b>-0.040 (-2.08)</b> | <b>0.038</b> |
| <b>Past Month Smoking Intensity</b> |                       |              |
|                                     | Adjusted*             |              |
|                                     | Coefficient (z-score) | p-value      |
| Purchase                            | <b>-0.089 (-1.94)</b> | <b>0.052</b> |
| Possession                          | <b>-0.066 (-1.39)</b> | <b>0.166</b> |
| Use                                 | <b>-0.016 (-0.41)</b> | <b>0.682</b> |
| PPU Index                           | <b>-0.048 (2.30)</b>  | <b>0.022</b> |

\*Adjusted for demographics, risk, and tobacco control variables

N (Weighted) = 248,369

**Table 2. Logit Analyses of the Association Between Purchase, Possession, and/or Use Laws and Past Month Smoking among Minors, by Age and Risk Group – United States, 1991-1998**

| Past Month Smoking |          |         |            |         |         |         |           |         |
|--------------------|----------|---------|------------|---------|---------|---------|-----------|---------|
| Age/Risk Group     | Purchase |         | Possession |         | Use     |         | PPU Index |         |
|                    | z-score  | p-value | z-score    | p-value | z-score | p-value | z-score   | p-value |
| ≤ 14 yrs/Low       | -2.13    | 0.033   | -2.00      | 0.046   | -1.99   | 0.047   | -3.53     | <0.001  |
| ≤ 14 yrs/Medium    | -0.68    | 0.497   | -2.05      | 0.040   | -2.79   | 0.005   | -2.91     | 0.004   |
| ≤ 14 yrs/High      | 0.15     | 0.885   | -0.22      | 0.826   | -1.52   | 0.128   | -0.58     | 0.564   |
| 15-16 yrs/Low      | -0.96    | 0.336   | -0.52      | 0.602   | -1.54   | 0.124   | -1.49     | 0.137   |
| 15-16 yrs/Medium   | -0.61    | 0.541   | 0.89       | 0.373   | 0.90    | 0.366   | 0.56      | 0.578   |
| 15-16 yrs/High     | -1.83    | 0.068   | 1.02       | 0.309   | 2.10    | 0.035   | 0.28      | 0.777   |
| 17 yrs/Low         | -2.08    | 0.038   | -1.36      | 0.174   | 0.91    | 0.361   | -1.60     | 0.110   |
| 17 yrs/Medium      | -0.58    | 0.559   | -0.18      | 0.859   | -0.35   | 0.725   | -0.75     | 0.452   |
| 17 yrs/High        | -1.60    | 0.111   | -0.26      | 0.795   | 0.64    | 0.520   | -1.23     | 0.219   |

Note: Adjusted for demographics and tobacco control variables  
 N (Weighted) for each age/risk strata ranges from 9,894 – 62,766

**Table 3. Logit Analyses of the Association Between Purchase, Possession, and/or Use Laws and Past Month Smoking Intensity among Minors, by Age and Risk Group – United States, 1991-1998**

| Past Month Smoking Intensity |          |         |         |         |         |         |           |         |
|------------------------------|----------|---------|---------|---------|---------|---------|-----------|---------|
| Age/Risk Group               | Purchase |         | Possess |         | Use     |         | PPU Index |         |
|                              | z-score  | p-value | z-score | p-value | z-score | p-value | z-score   | p-value |
| ≤ 14 yrs/Low                 | -2.20    | 0.028   | -2.13   | 0.033   | -1.98   | 0.047   | -3.64     | <0.001  |
| ≤ 14 yrs/Medium              | -0.61    | 0.542   | -2.15   | 0.032   | -2.94   | 0.003   | -3.03     | 0.002   |
| ≤ 14 yrs/High                | -0.31    | 0.753   | -1.23   | 0.218   | -1.74   | 0.082   | -1.51     | 0.130   |
| 15-16 yrs/Low                | -1.11    | 0.268   | -0.69   | 0.492   | -1.77   | 0.077   | -1.73     | 0.084   |
| 15-16yrs/Medium              | -0.84    | 0.402   | 0.58    | 0.564   | 0.78    | 0.435   | 0.17      | 0.861   |
| 15-16 yrs/High               | -2.28    | 0.023   | 0.36    | 0.719   | 2.00    | 0.045   | -0.30     | 0.763   |
| 17 yrs/Low                   | -2.18    | 0.029   | -1.50   | 0.135   | 0.78    | 0.434   | -1.73     | 0.084   |
| 17 yrs/Medium                | -0.97    | 0.331   | -0.61   | 0.544   | -0.45   | 0.653   | -1.29     | 0.197   |
| 17 yrs/High                  | -1.26    | 0.209   | -1.01   | 0.313   | 0.21    | 0.830   | -1.48     | 0.139   |

Note: Adjusted for demographics and tobacco control variables  
 N (Weighted) for each age/risk strata ranges from 9,894 – 62,766

## ➤ **PUP Analyses to Incorporate:**

- ☐ **State Enforcement Data**
- ☐ **Local Laws and Enforcement**
- ☐ **Focus Group Data in Communities with Various Degrees of Enforcement**
- ☐ **Cost-Effectiveness Analysis**

## ➤ **Ongoing/Planned Analyses of Merged Data Sets:**

- ☐ **Tobacco Control Expenditures, Smoke-Free Indoor Air Laws**
  - ☐ **Other Outcomes, Such as Purchase Experiences, Attitudes, Quitting**
-

# Acknowledgements:

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