

Tobacco Surveillance in the United States



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Outline of Presentation

- Public health surveillance
- Tobacco surveillance
- Conceptual models
- Historical, current, and emerging systems
- Data
- Key areas for surveillance

Public Health Surveillance

Definition

The ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and improve health.

Data disseminated by a public health surveillance system can be used for immediate public health action, program and policy planning and evaluation, and formulating and testing research hypotheses.

Adapted from: CDC. Updated Guidelines for Evaluating public health surveillance systems: recommendations from the guidelines working group. *MMWR* 2001;50(No. RR-13),page 2.

Evolution of Surveillance in the 20th Century

1900s – Individual contacts of infected persons

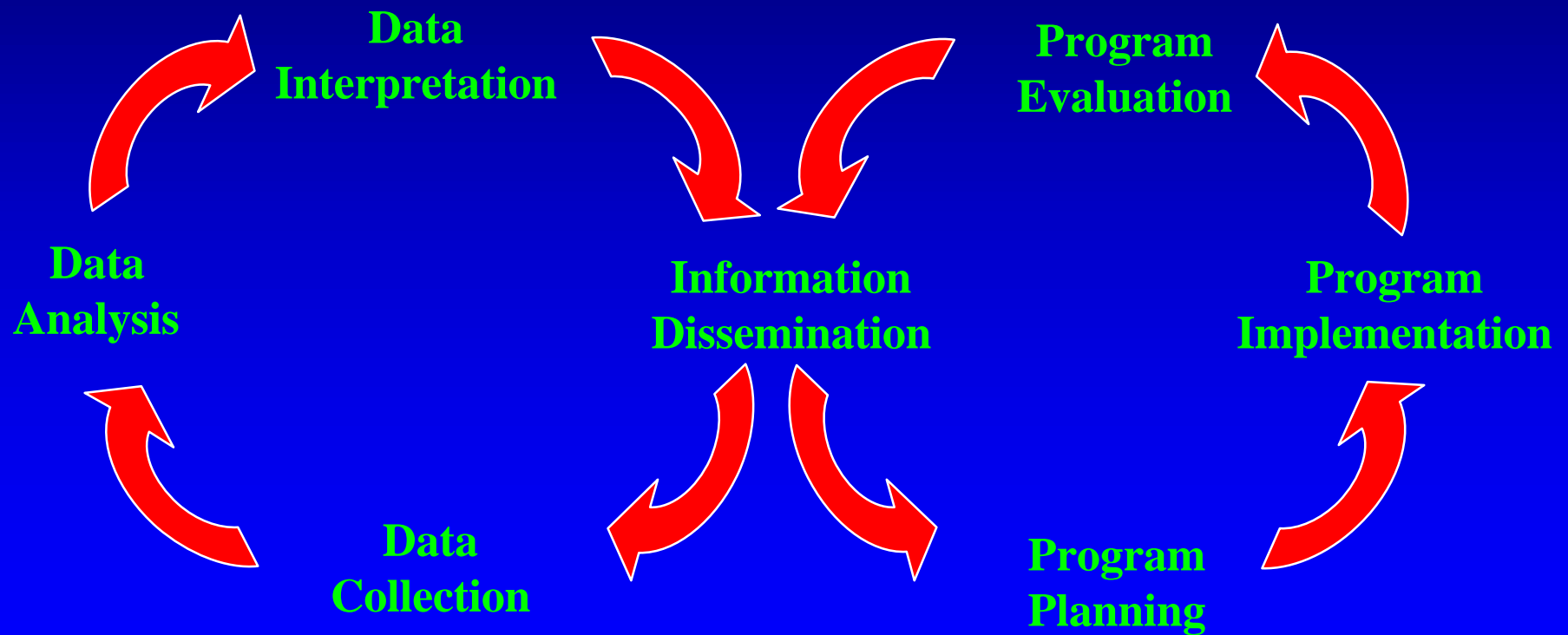
1950s – Communicable diseases

1970s – Selected chronic diseases

**1950s-present – Behavioral, occupational, and
environmental risk factors**

Source: Remington and Goodman, “Chronic Disease Surveillance,” in Brownson et al. (eds), *Chronic Disease Epidemiology and Surveillance*, 1998

Organizational Model for State-Based Chronic Disease Surveillance Programs



Source: Remington and Goodman; *Chronic Disease Epidemiology and Surveillance*, 1999

Purposes of a Tobacco-Related Surveillance System

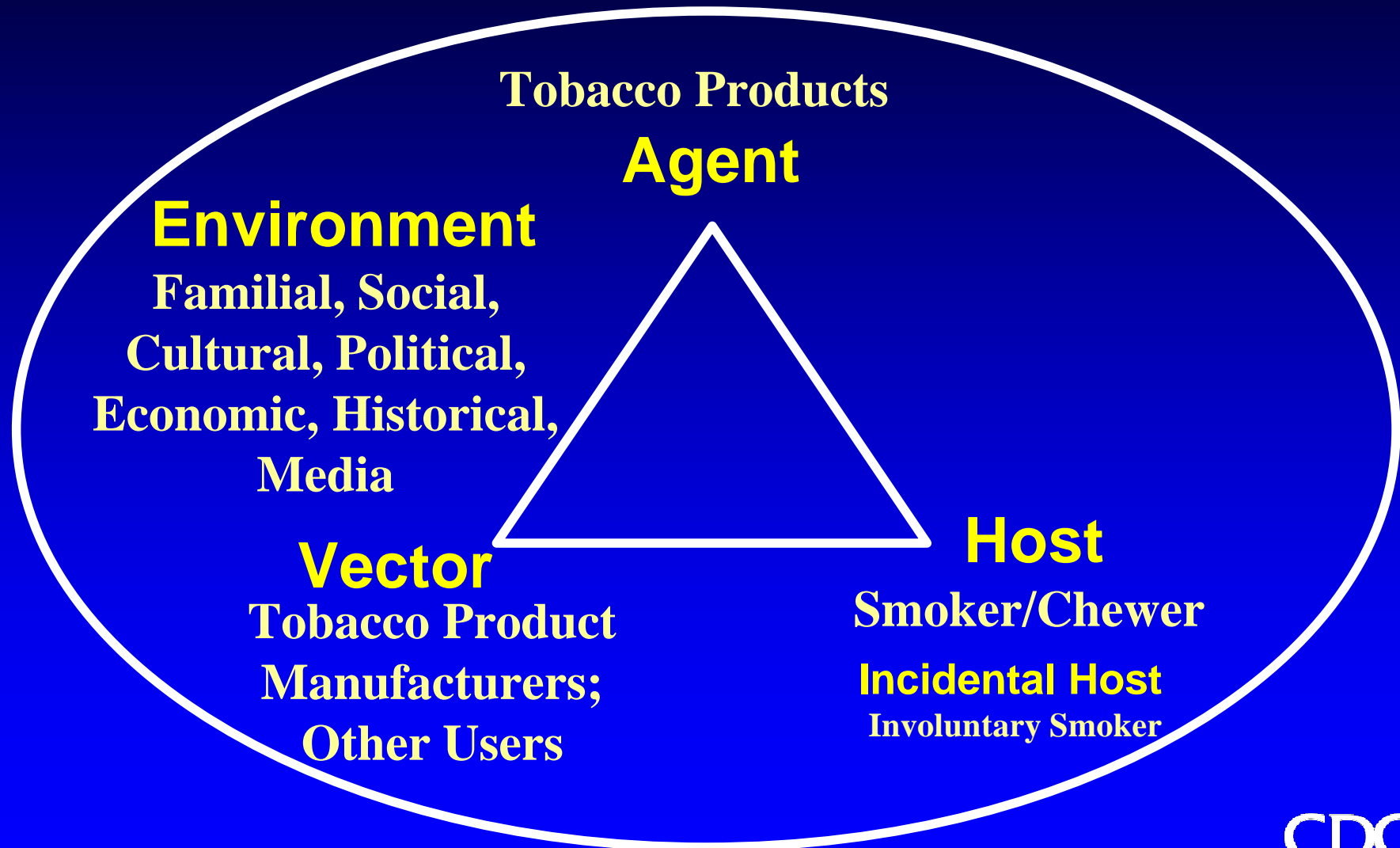
To provide timely information from populations on:

- prevalence of use of various products (tobacco and pharmaceutical)
- factors that influence their use
- incidence, prevalence, and mortality from tobacco-attributable diseases
- impact of tobacco control programs and policies on relevant outcomes

Uses of Tobacco Surveillance Data

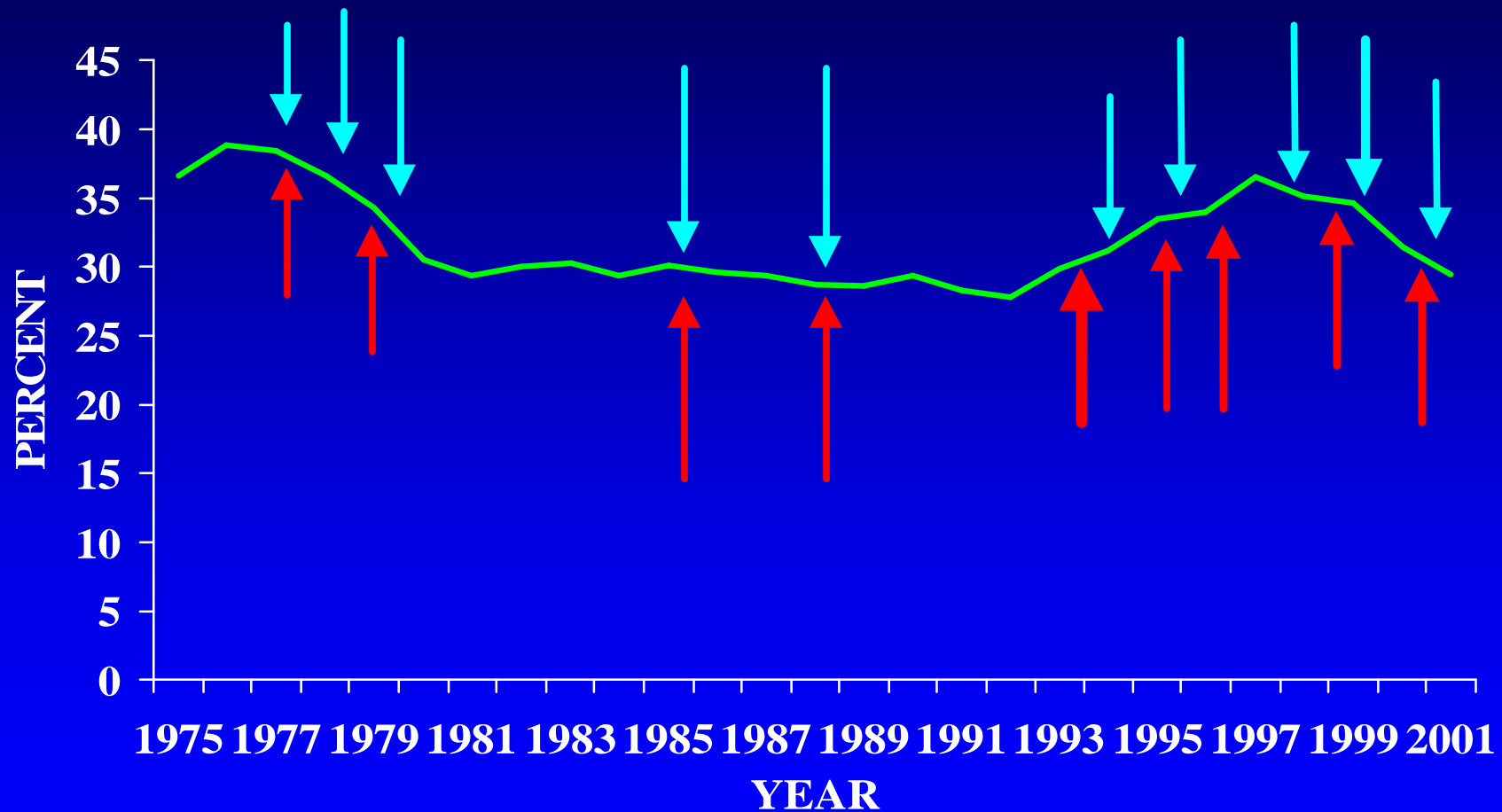
- **Learn about nature of the problem**
- **Justify policies, programs, and legislation**
- **Monitor and evaluate these**
- **Set realistic objectives**
- **Identify high risk groups**
- **Justify research initiatives**
- **Conduct research**

Tobacco Control Model of Nicotine Addiction



Source: Orleans & Slade, 1993

Conceptual Model of Factors Influencing Trends in Adolescent Smoking – United States, 1975-2001



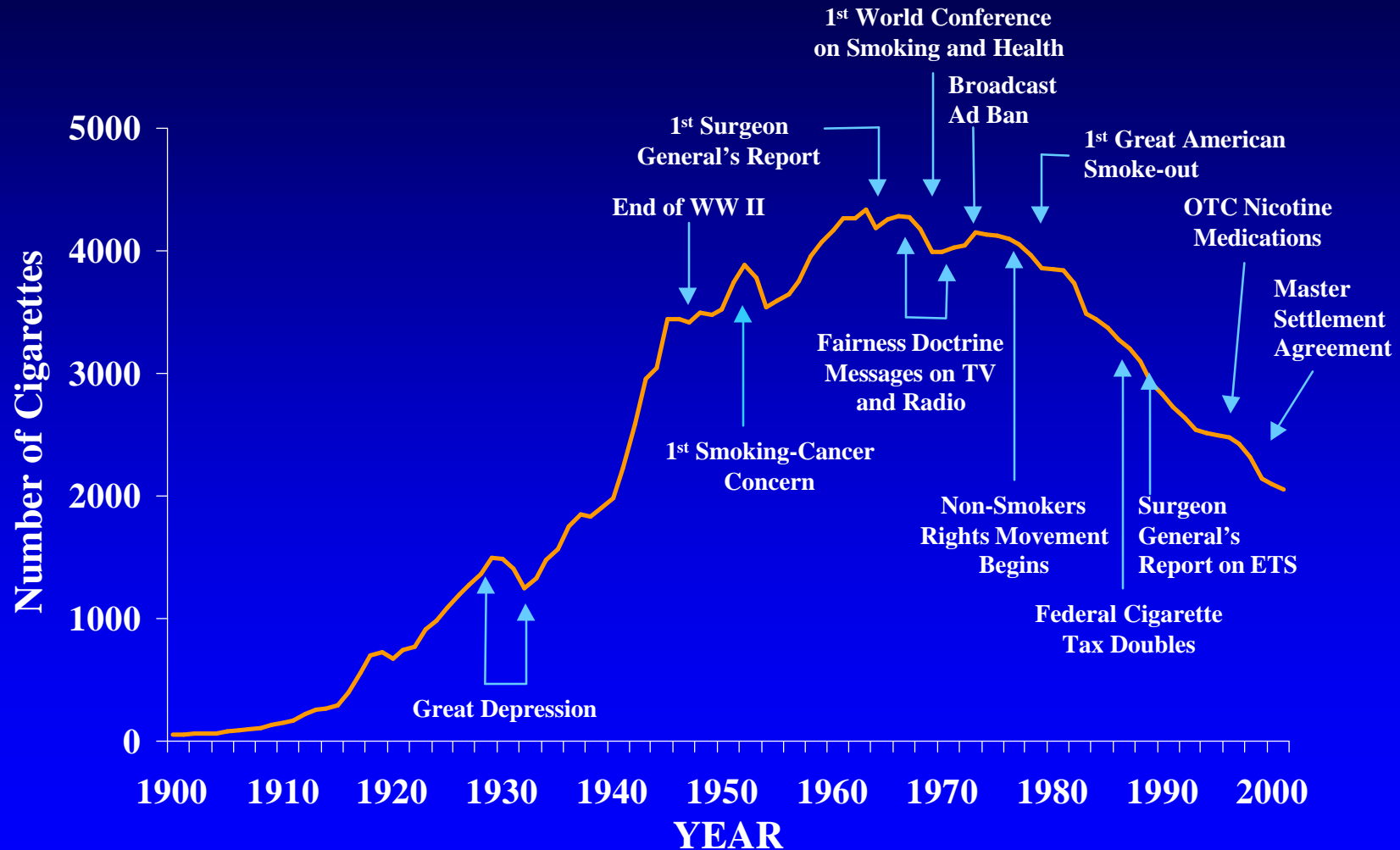
Data Source: Institute for Social Research, University of Michigan, Monitoring the Future Surveys

Major Sources of Data on Tobacco Use in the United States

Consumption Data

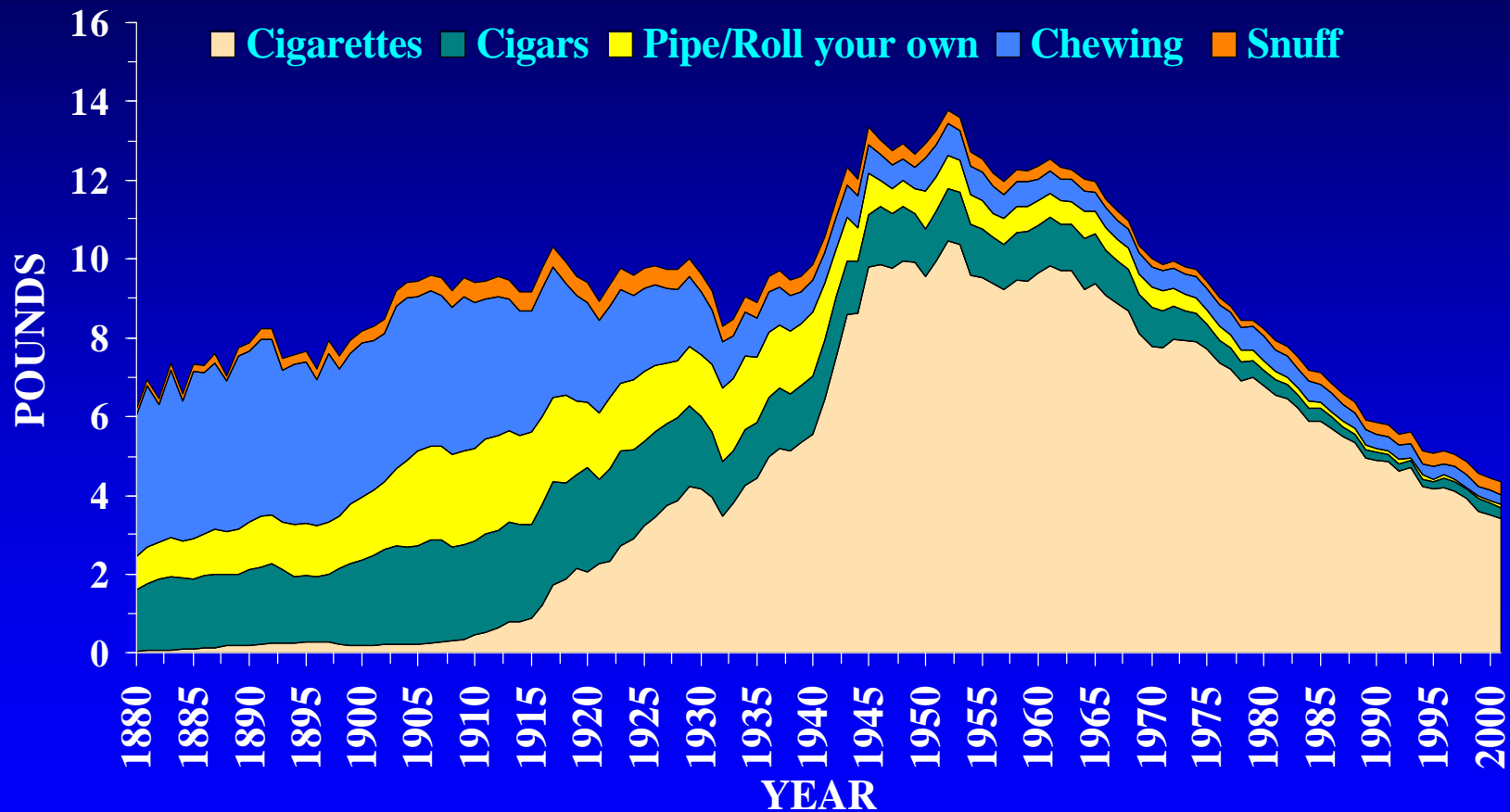
- **U.S. Department of Agriculture (USDA)**
- **Federal Trade Commission (FTC)**
- **State-specific data**

Adult Per Capita Cigarette Consumption and Major Smoking and Health Events – United States, 1900-2001



Source: United States Department of Agriculture

Trends in Per Capita Consumption of Various Tobacco Products – United States, 1880-2001

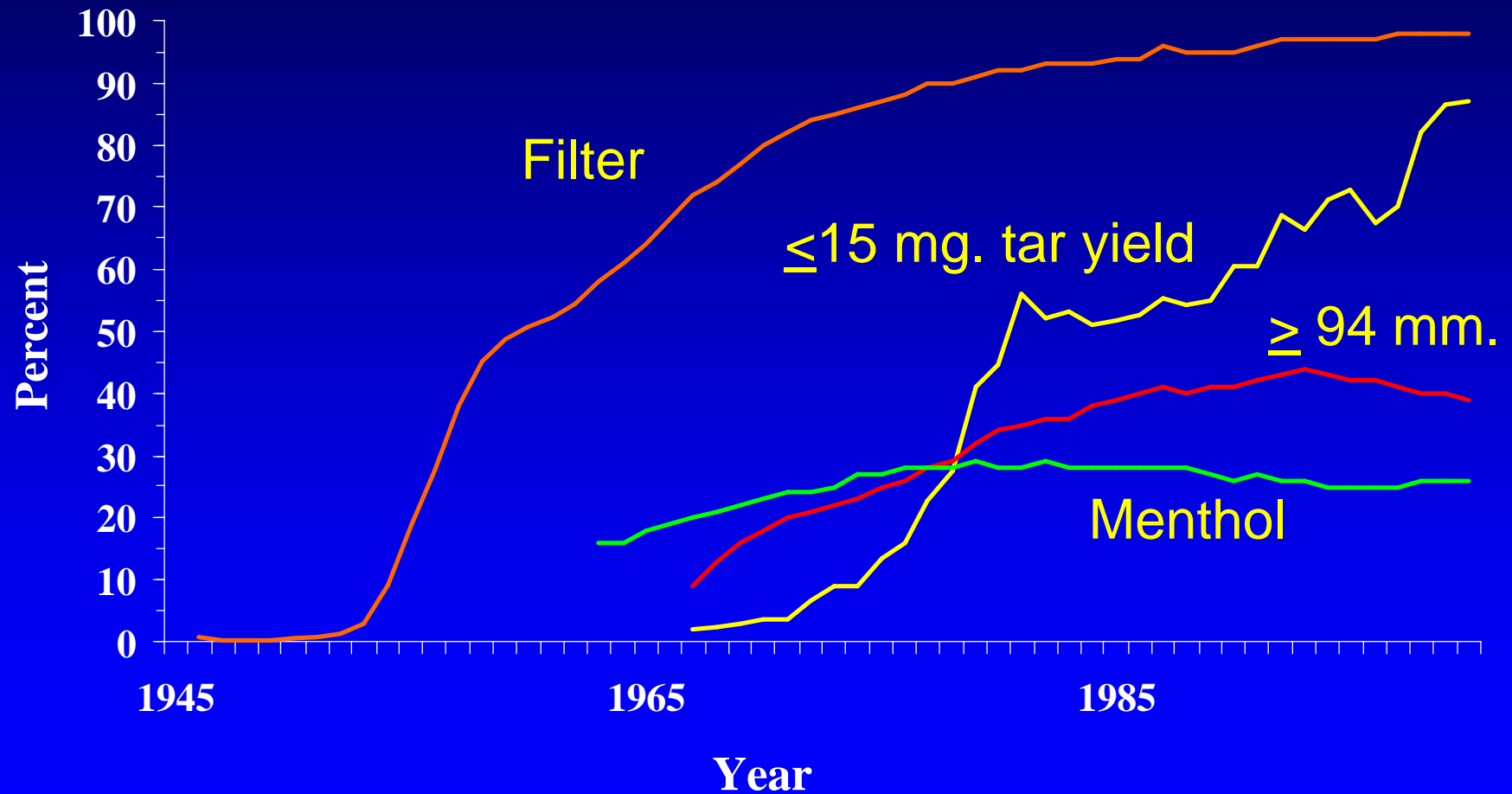


Source: Tobacco Situation and Outlook Report, U.S. Department of Agriculture, U.S. Census

Note: Among persons >18 years old.

Beginning in 1982, fine-cut chewing tobacco was reclassified as snuff.

Domestic Market Share of Cigarettes by Tar Yield, Filter Status, Length, and Menthol Status: United States, 1963 - 2000



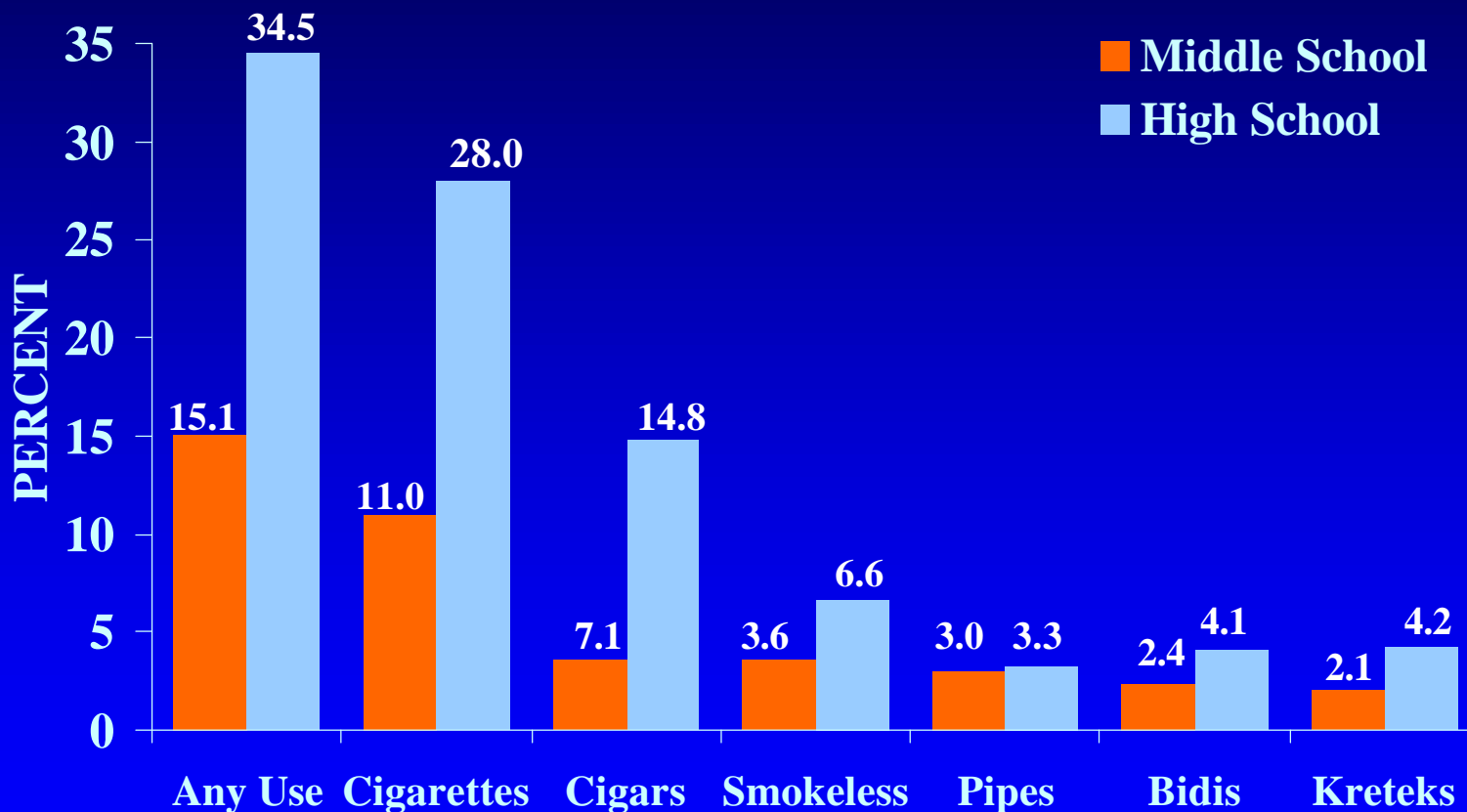
Source: United States Department of Agriculture, 1962; Federal Trade Commission, 2001

Major Sources of Data on Tobacco Use in the United States

Surveys of Young People

- **Teenage Tobacco Surveys**
- **Monitoring the Future Surveys (MTFS)**
- **National Household Survey on Drug Abuse (NHSDA)**
- **National Health and Nutrition Examination Survey (NHANES)**
- **Youth Risk Behavior Surveillance System (YRBSS)**
- **National Youth Tobacco Survey (NYTS)**
- **Youth Tobacco Survey (YTS)**
- **Global Youth Tobacco Survey (GYTS)**
- **Legacy Media Tacking Surveys**

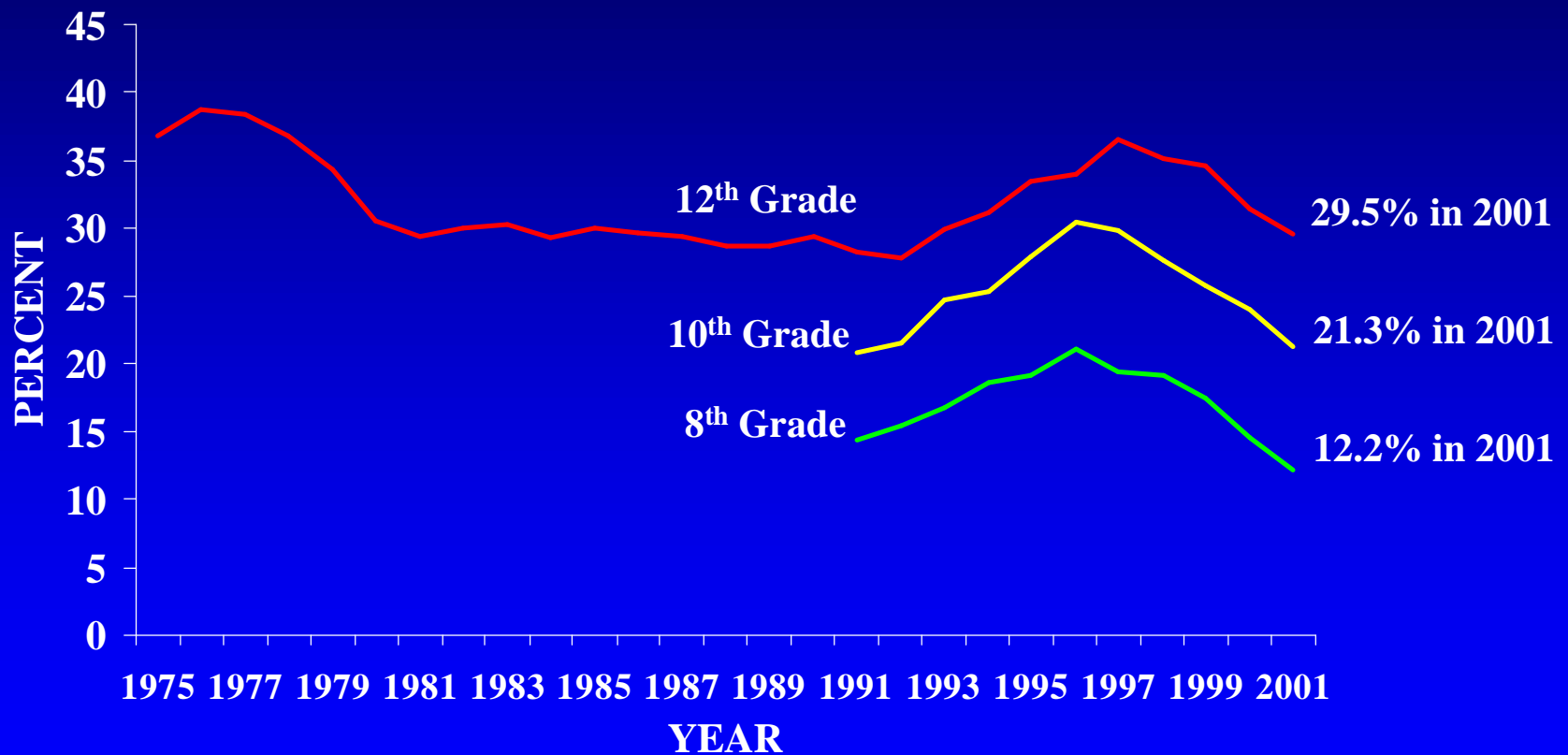
Current Use Among Middle and High School Students by Type of Tobacco Product – National Youth Tobacco Survey, 2000



Note: Used tobacco on ³ 1 of the 30 days preceding the survey

Source: American Legacy Foundation, National Youth Tobacco Survey

Trends in Cigarette Smoking Anytime in the Past 30 days by Grade in School – United States, 1975-2001



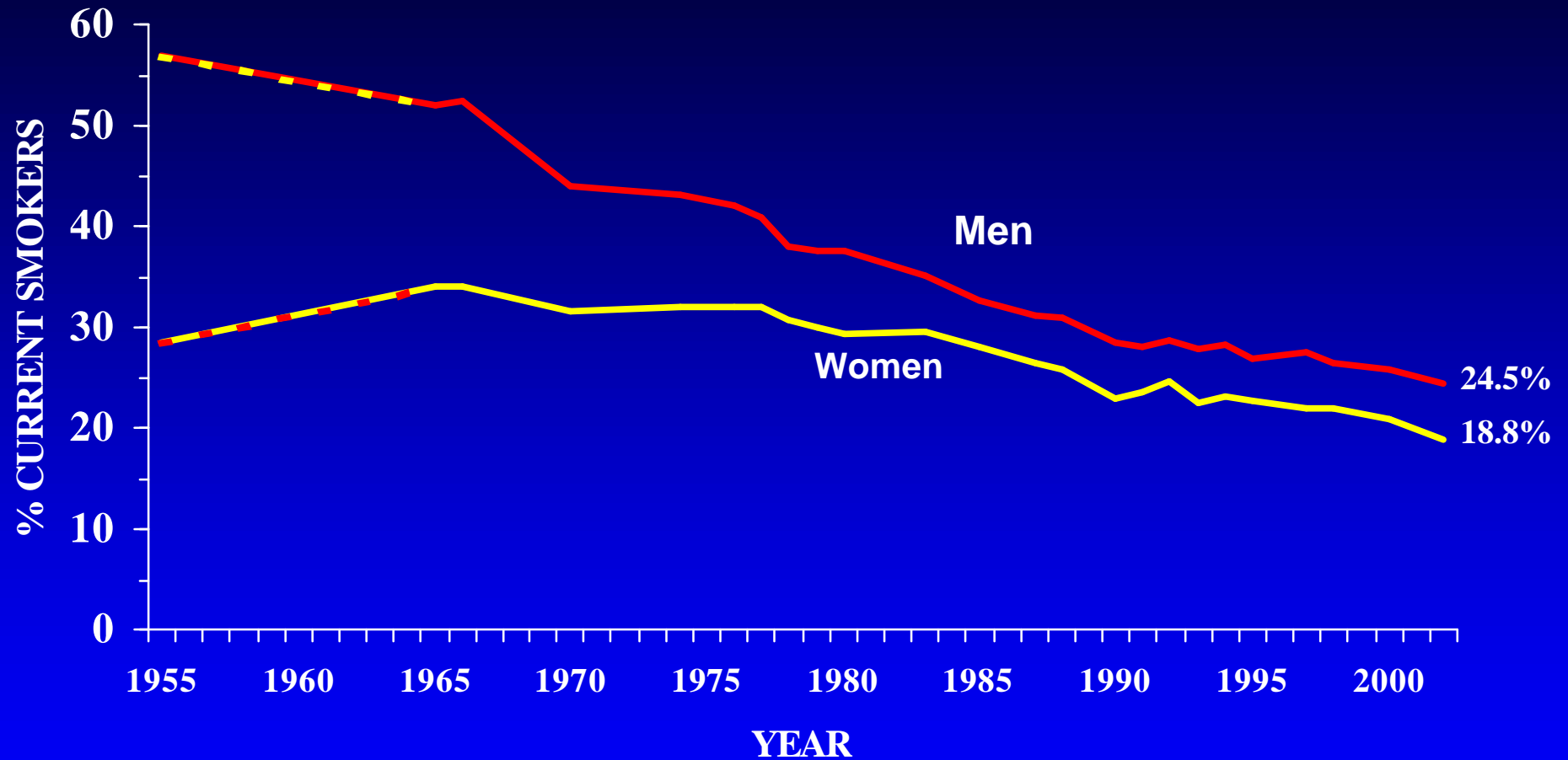
Source: Institute for Social Research, University of Michigan, Monitoring the Future Surveys

Major Sources of Data on Tobacco Use in the United States

Surveys of Adults

- **Current Population Surveys (CPS)**
- **Adult Use of Tobacco Surveys (AUTS); Adult Tobacco Surveys (ATS)**
- **National Health Interview Survey (NHIS)**
- **National Household Survey on Drug Abuse (NHSDA)**
- **National Health and Nutrition Examination Survey (NHANES)**
- **Behavioral Risk Factor Surveillance System (BRFSS)**
- **American Smoking and Health Survey (ASHES)**

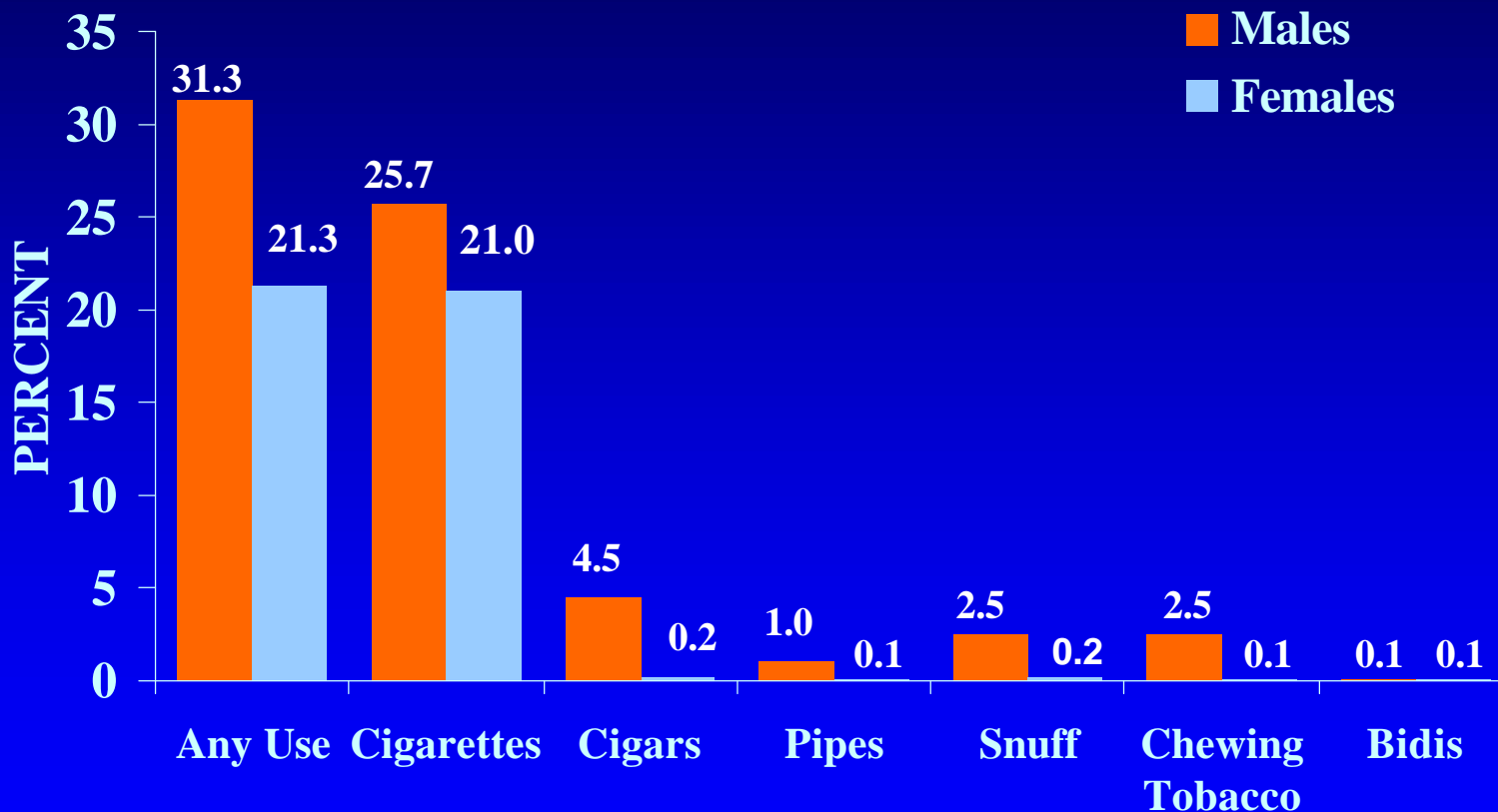
Trends in cigarette smoking* among adults aged ≥ 18 years, by sex - United States, 1955-2002



*Before 1992, current smokers were defined as persons who reported having smoked ≥ 100 cigarettes and who currently smoked. Since 1992, current smokers were defined as persons who reported having smoked ≥ 100 cigarettes during their lifetime and who reported now smoking every day or some days.

Source: 1955 Current Population Survey; 1965-2002 National Health Interview Survey; 2002 estimates for first quarter only

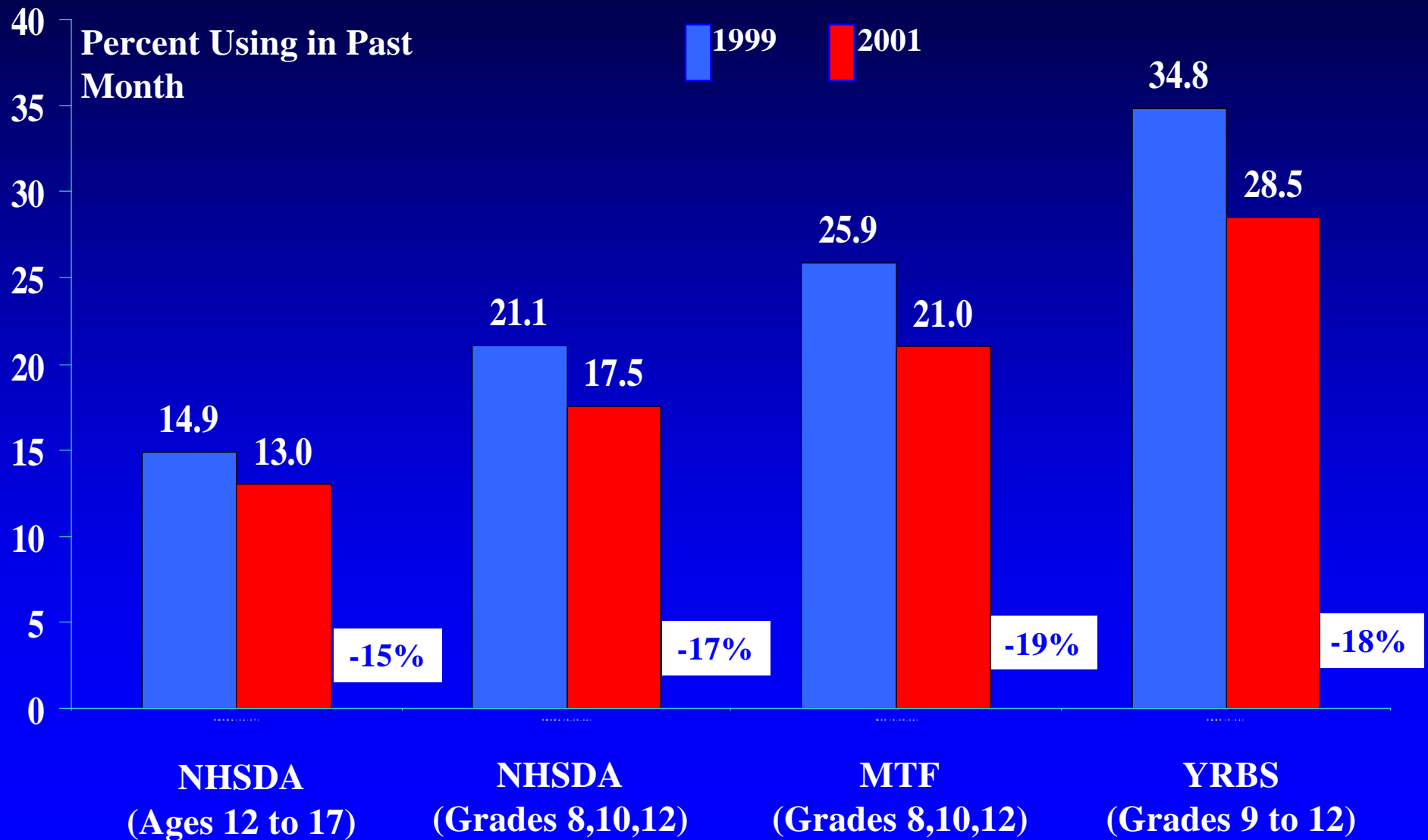
Current Use Among U.S. Adults of Various Tobacco Products, by Sex – National Health Interview Survey, 2000



Note: Current users report using either every day or on some days

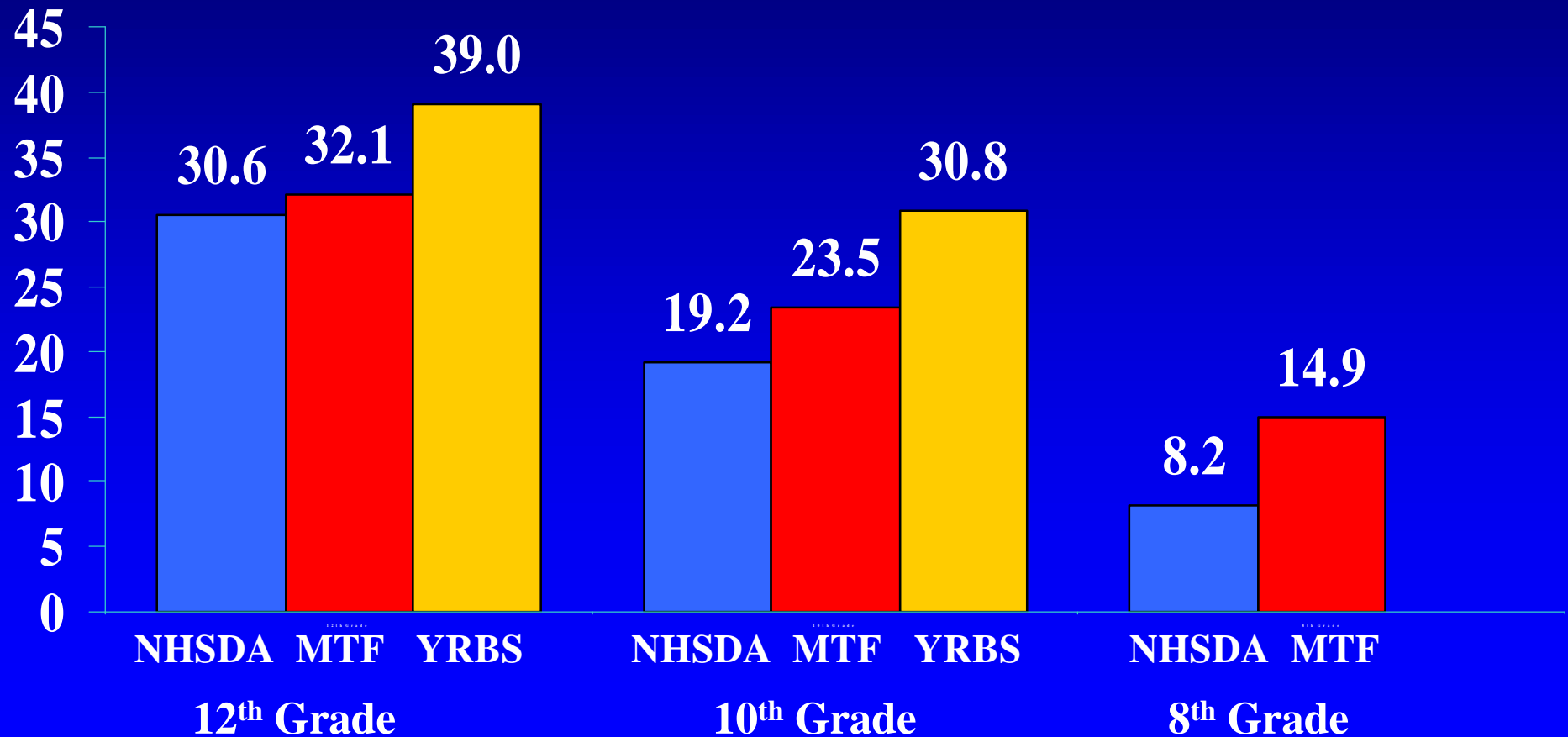
Source: National Center for Health Statistics

Cigarette Use Trends Among Youths: NHSDA, MTF, and YRBS



Comparison of Current Cigarette Use Prevalences from NHSDA, MTF, and YRBS, by Grade: 1999 and 2001 Averages

Percent Using in Past Month



Potential Reasons for Differences in Survey Estimates

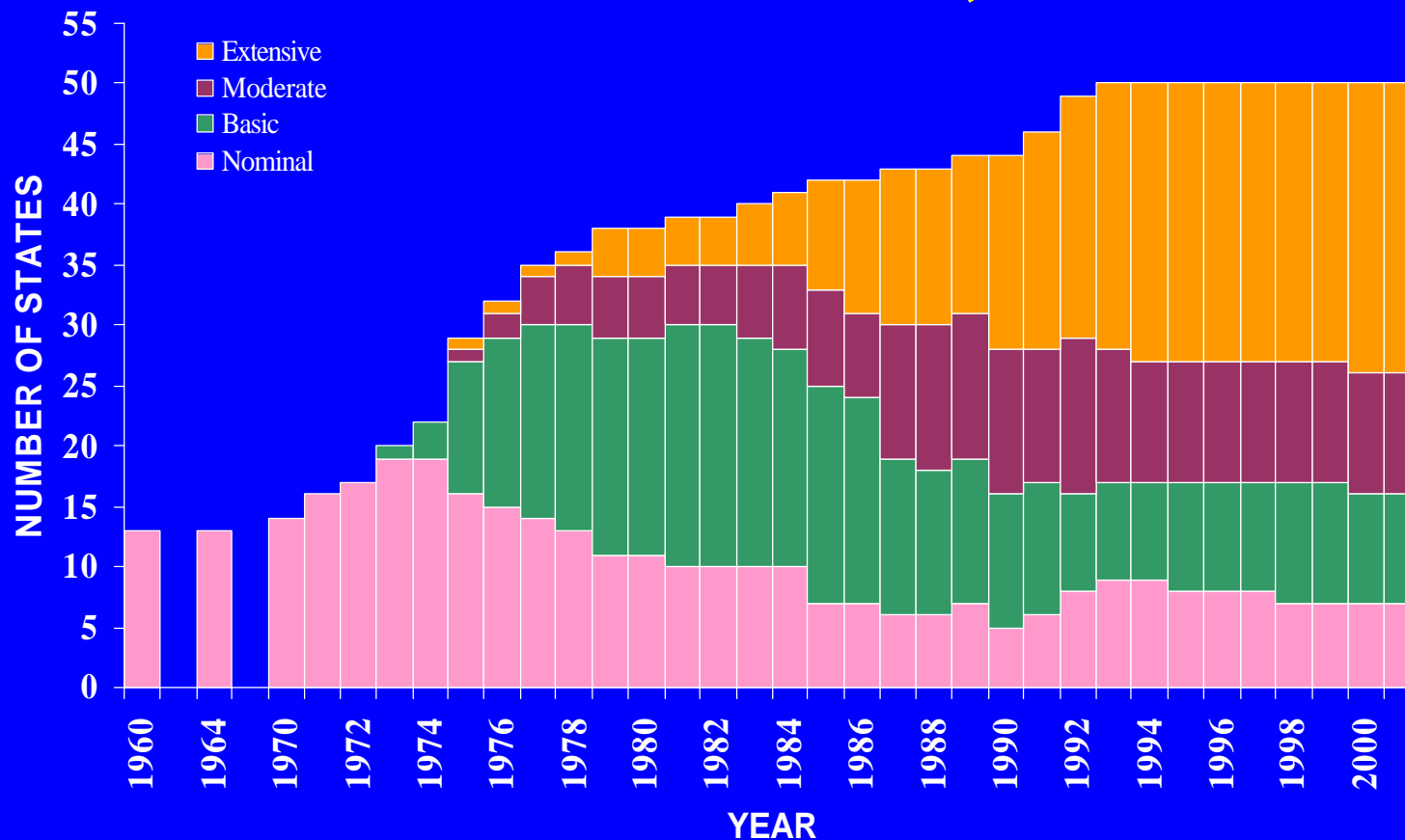
- Setting
 - Questionnaire content
 - Sample design
 - Perception that biochemical validation might occur
 - Response rates
- Mode of Administration
Definitions used
Editing procedures
Consent procedures

Major Sources of Legislative Data on Tobacco Issues in the United States

Legislation

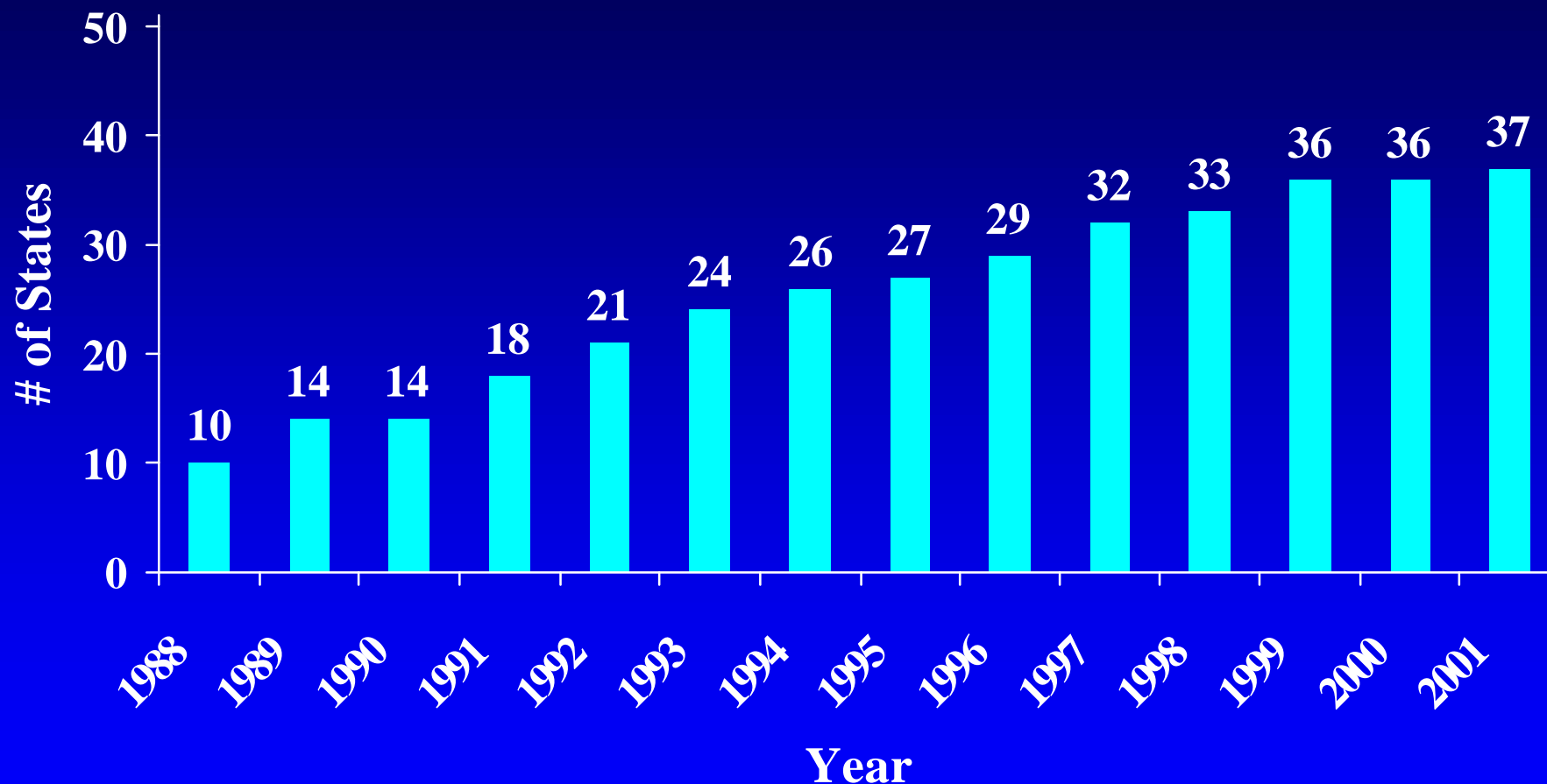
- **Americans for Nonsmokers' Rights (ANR)**
- **State Cancer Legislative Data Base (SCLD)**
- **State Legislated Actions on Tobacco Issues (SLATI)**
- **State Tobacco Activities Tracking and Evaluation System (STATE)**

Restrictiveness Of State Laws Regulating Smoking In Public Places – U.S., 1960-2001



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.

Number of U.S. States including D.C.*, with Legislation Restricting the Purchase of Cigarettes to Persons aged ≥ 18 years, 1988-2001



*District of Columbia

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

Emerging Systems

- **Bridging the Gap**
- **Assessing Youth Smoking Cessation Needs and Practices Survey**
- **Beliefs About Nicotine Dependence (BAND) survey**
- **International Tobacco Control (ITC) Policy Study**

Emerging Issues

- **CDC lab and NCI resources to better characterize the product. Massachusetts regulation.**
- **California and other systems to monitor vector. Often involves proprietary data.**
- **Environmental monitoring - legislation, media, price. Often involve proprietary data.**

Key Areas for Surveillance

- **Evaluating Tobacco Control Programs in a Multi-variate World**
- **Surveillance for Tobacco Harm Reduction**
- **Understanding Natural Histories**
- **Understanding Trends**

Lessons Learned

- **“Why?” is inevitable**
- **Timeliness matters**
- **Analyses and reporting takes time and resources**
- **Categorical surveys are needed**
- **Relationships count**