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

- 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

YEAR OF ADMINISTRATION

PERCENTAGE
TRENDS IN 30-DAY PREVALENCE OF SMOKELESS TOBACCO

THREE POPULATIONS

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 ≥ 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 ≥26 Years Old in All 50 States and the District of Columbia, 1999 NHSDA

Note: Current smokers were persons who smoked on ≥1 day during the previous 30 days
Source: 1999 National Household Survey on Drug Abuse
Tobacco Control
Model of Nicotine Addiction

Agent

Tobacco Products

Environment
Cultural, Political, Economic, Social, Media, Historical

Vector
Tobacco Product Manufacturers; Other Users

Host
Smoker/Chewer
Incidental Host
Involuntary Smoker

Adapted from Orleans & Slade, 1993
Paradigm for Tobacco Control

- Minor’s access
- Advertising

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

Individual

Tobacco Addiction

Society
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

INTEGRATING ACROSS:

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

- **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

- 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

- 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)

- 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

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

- 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

- 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+

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

- 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 ≤ $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

- 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

- 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 ≥18 years, 1988-2001

*District of Columbia

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

*District of Columbia

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

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 ≥ 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

![Graph showing correlation between average price of a pack of cigarettes and percent past month smokers among adolescents.](Image)

- **Graph Title:** Cigarette Smoking Among Youth by the Average Price of a Pack of Cigarettes in 50 States and the District of Columbia, 1999
- **Axes:**
  - Y-Axis: Percent Past Month Smokers (Adolescents)
  - X-Axis: Average Price of a Pack of Cigarettes (in cents)
- **Data Points:** KY, ND, UT, NY, CA, HI, AK
- **Statistical Results:**
  - $r^2 = 0.255$
  - $\beta = -0.045$
  - $P < 0.001$
  - $N = 51$

**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 > 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

- 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

<table>
<thead>
<tr>
<th>Past Month Smoking</th>
<th>Coefficient (z-score)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase</td>
<td>-0.075 (-1.75)</td>
<td>0.080</td>
</tr>
<tr>
<td>Possession</td>
<td>-0.050 (-1.11)</td>
<td>0.266</td>
</tr>
<tr>
<td>Use</td>
<td>-0.017 (-0.46)</td>
<td>0.642</td>
</tr>
<tr>
<td>PPU Index</td>
<td><strong>-0.040 (-2.08)</strong></td>
<td><strong>0.038</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Past Month Smoking Intensity</th>
<th>Coefficient (z-score)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase</td>
<td>-0.089 (-1.94)</td>
<td>0.052</td>
</tr>
<tr>
<td>Possession</td>
<td>-0.066 (-1.39)</td>
<td>0.166</td>
</tr>
<tr>
<td>Use</td>
<td>-0.016 (-0.41)</td>
<td>0.682</td>
</tr>
<tr>
<td>PPU Index</td>
<td><strong>-0.048 (2.30)</strong></td>
<td><strong>0.022</strong></td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Age/Risk Group</th>
<th>Purchase</th>
<th>Possession</th>
<th>Use</th>
<th>PPU Index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>z-score</td>
<td>p-value</td>
<td>z-score</td>
<td>p-value</td>
</tr>
<tr>
<td>≤ 14 yrs/Low</td>
<td>-2.13</td>
<td>0.033</td>
<td>-2.00</td>
<td>0.046</td>
</tr>
<tr>
<td>≤ 14 yrs/Medium</td>
<td>-0.68</td>
<td>0.497</td>
<td>-2.05</td>
<td>0.040</td>
</tr>
<tr>
<td>≤ 14 yrs/High</td>
<td>0.15</td>
<td>0.885</td>
<td>-0.22</td>
<td>0.826</td>
</tr>
<tr>
<td>15-16 yrs/Low</td>
<td>-0.96</td>
<td>0.336</td>
<td>-0.52</td>
<td>0.602</td>
</tr>
<tr>
<td>15-16 yrs/Medium</td>
<td>-0.61</td>
<td>0.541</td>
<td>0.89</td>
<td>0.373</td>
</tr>
<tr>
<td>15-16 yrs/High</td>
<td>-1.83</td>
<td>0.068</td>
<td>1.02</td>
<td>0.309</td>
</tr>
<tr>
<td>17 yrs/Low</td>
<td>-2.08</td>
<td>0.038</td>
<td>-1.36</td>
<td>0.174</td>
</tr>
<tr>
<td>17 yrs/Medium</td>
<td>-0.58</td>
<td>0.559</td>
<td>-0.18</td>
<td>0.859</td>
</tr>
<tr>
<td>17 yrs/High</td>
<td>-1.60</td>
<td>0.111</td>
<td>-0.26</td>
<td>0.795</td>
</tr>
</tbody>
</table>

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

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

Note: Adjusted for demographics and tobacco control variables

N (Weighted) for each age/risk strata ranges from 9,894 – 62,766
FUTURE DIRECTIONS . . .

- **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
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