

Tobacco Measurement

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Public Health Model

- ▶ **Agent -- tobacco products**
- ▶ **Host -- consumers or potential consumers of tobacco products**
- ▶ **Vector -- tobacco industry and other entities that distribute and promote tobacco products**
- ▶ **Environment – context in which agent, host, and vector operate**

Selected Agent Characteristics

- ▶ **Product type**
- ▶ **Nicotine dose levels**
- ▶ **Constituents (e.g., tar, CO) and ingredients (e.g., additives)**
- ▶ **Market share**

Selected Host Characteristics

- ▶ Tobacco use behavior
- ▶ Genetic susceptibility
- ▶ Addiction
- ▶ Risk perception
- ▶ Exposure to secondhand smoke
- ▶ Attitudes about smoking in public

Selected Vector Characteristics

- ▶ Pricing strategies
- ▶ Advertising, marketing, promotion, and public relations
- ▶ Corporate sponsorship and donations
- ▶ Political activism

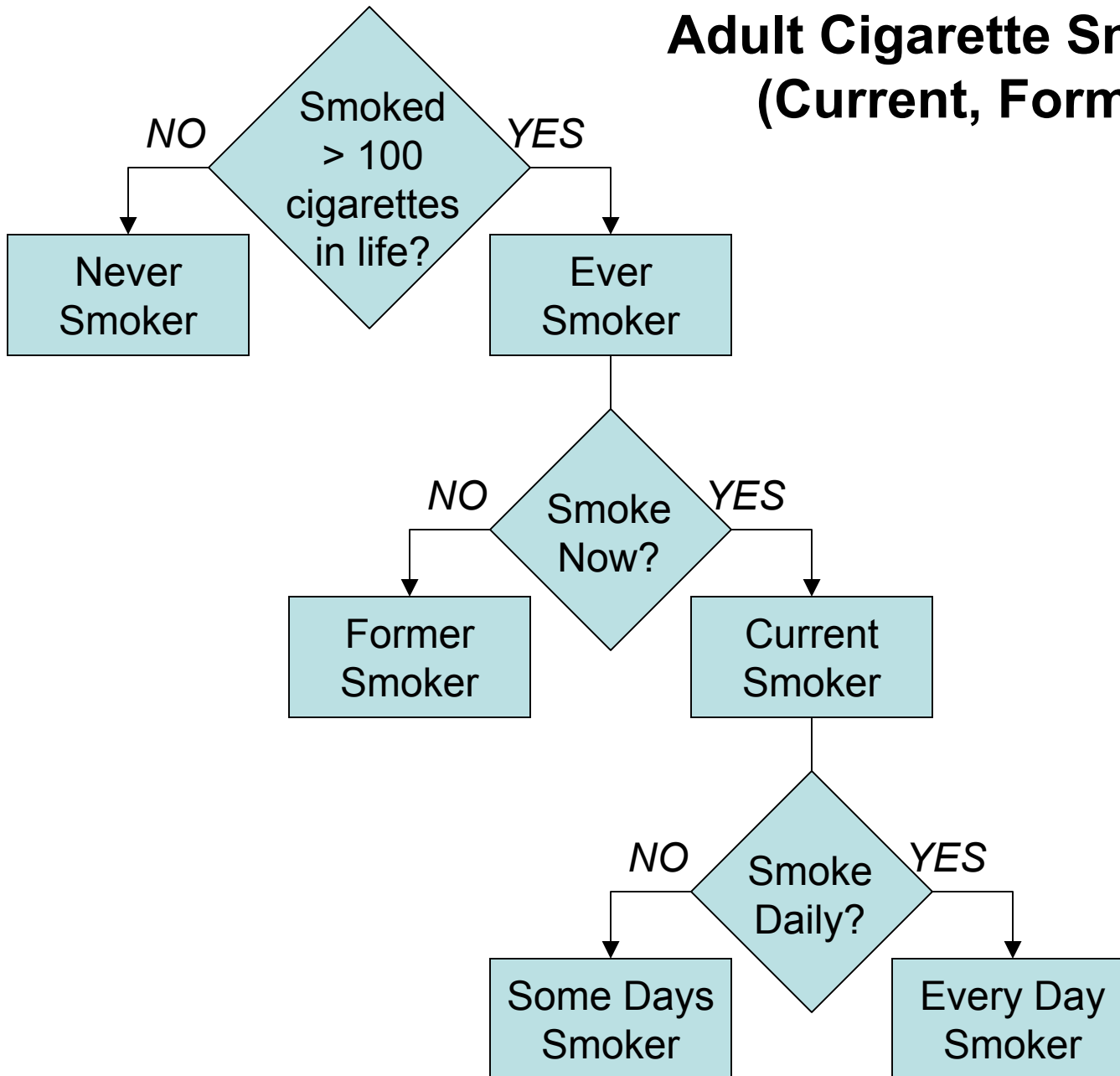
Selected Environment Factors

- ▶ **State and local tobacco control policies (clean indoor air, youth access, worksite restrictions)**
- ▶ **Anti-tobacco marketing**
- ▶ **Excise taxes**
- ▶ **Social norms about smoking**
- ▶ **Insurance coverage for treatment**

Adult Smoking Status

- ▶ **Have you smoked at least 100 cigarettes in your entire life?**
- ▶ **Do you now smoke cigarettes every day, some days, or not at all?**
- ▶ **Use responses to these standard questions to define current, former, never smokers**

Adult Cigarette Smoking Status (Current, Former, Never)



Other Behavioral Constructs

- ▶ Age of initiation
- ▶ Frequency and intensity of use
- ▶ Number of years used product
- ▶ Addiction/dependence
- ▶ Quitting and maintenance history
- ▶ Methods used to try to quit

Translations of Host Items

- ▶ **TUS-CPS items in Spanish, Korean, Chinese (Mandarin and Cantonese), and Vietnamese**
- ▶ **CHIS items in Spanish, Chinese, Vietnamese, Korean, and Khmer (Cambodian)**

Tobacco Use Supplement to the Current Population Survey

- ▶ **Key source of national and state data on smoking and other tobacco use**
- ▶ **Contains about 40 items covering a wide variety of topics:**
 - ▶ **Cigarette smoking prevalence**
 - ▶ **Smoking history**
 - ▶ **Current and past consumption**
 - ▶ **Cigarette smoking quit attempts and intentions to quit**
 - ▶ **Cigar, pipe, chewing tobacco and snuff use**
 - ▶ **Medical and dental advice to quit**
 - ▶ **Home and workplace policies**
 - ▶ **Attitudes towards smoking in public places**
- ▶ **Data used to:**
 - ▶ **Monitor trends in tobacco use**
 - ▶ **Conduct tobacco-related research**
 - ▶ **Evaluate tobacco control programs**

Validity and Reliability Testing

- ▶ **Caraballo RS, Giovino GA, Pechacek TF. Self-reported cigarette smoking vs. serum cotinine among U.S. adolescents. Nicotine Tob Res 2004; 6:19-25.**

<http://journalsonline.tandf.co.uk/media/CMWWTPXUXLJE2QMLHG71/Contributions/0/H/D/B/0HDBWVQC4WRL8FNJ.pdf>

Validity and Reliability Testing

- ▶ Panter AT, Reeve BR. Assessing tobacco beliefs among youth using item response theory models. Drug Alcohol Dependence 2002;68:S21-S39
http://www.sciencedirect.com/science?_ob=MIimg&_imagekey=B6T63-46SY0TS-4-P&_cdi=5019&_user=10843&_orig=search&_coverDate=11%2F01%2F2002&_qd=1&_sk=999319999.8998&_view=c&_wchp=dGLbVzz-zSkWz&_md5=43134a4f715e834a8a4de4cd702ee9a1&_ie=/sdarticle.pdf

Resources

- ▶ **Federal government (NCI, CDC)**
- ▶ **NGOs (ACS, Legacy, RWJF, ALA)**
- ▶ **Professional associations (SRNT)**
- ▶ **Extramural researchers (TTURC)**
- ▶ **State government**
- ▶ **State tobacco control organizations**

Resources

- ▶ **CDC Question Inventory on Tobacco (QIT) (Host and Environment)**
<http://apps.nccd.cdc.gov/QIT/index.clt.asp>
- ▶ **American Legacy Foundation's Tobacco Survey Database (Host and Environment)**
<http://tobacco.rti.org/data/New/index.cfm>

Resources

- ▶ **SRNT workgroup examined outcome measures used in clinical trials (Host)**

Hughes Jr et al. Measures of abstinence in clinical trials: issues and recommendations. Nicotine Tob Res 2003;5:13-25.

Resources

- ▶ **Minimum recommendations:**
 - ▶ Prolonged abstinence as preferred measure plus point prevalence as secondary measure
 - ▶ Use 7 consecutive days of smoking or smoking on ≥ 1 day of 2 consecutive weeks to define treatment failure;
 - ▶ Include non-cigarette tobacco use but not nicotine medications in definitions of failure;
 - ▶ Report results from survival analysis to describe outcomes more fully.

Resources

- ▶ **SRNT workgroups also reported on:**
 - ▶ **Biochemical validation**
 - ▶ **Withdrawal**
 - ▶ **Harm reduction**
 - ▶ **Adolescent outcomes**
 - ▶ **Statistical issues**

Resources

- ▶ **Benowitz N et al. Biochemical verification of tobacco use and cessation. Nicotine Tob Res 2002;4:149-159.**
- ▶ **Shiffman S, West RJ, Gilbert D. The assessment of tobacco craving and withdrawal in smoking cessation trials. 2000 SRNT presentation**

Resources

- ▶ **Henningfield JE et al. Treatment outcome measures for the studies of reduction of cigarette smoking. 2000 SRNT presentation**
- ▶ **Mermelstein RJ et al. Methodological issues in measuring treatment outcome in adolescent smoking cessation studies. Nicotine Tob Res 2002;4:395-403.**

Resources

- ▶ **Wisconsin TTURC (Host -- addiction/dependence)**
http://www.ctri.wisc.edu/Researchers/researchers_measures&scales.htm
- ▶ **Behavior Change Consortium (Host)**
- ▶ <http://www1.od.nih.gov/behaviorchange/measures/smoking.htm>

Resources

- ▶ **NCI Measures Guide for Youth Tobacco Research (Host)**

http://dccps.nci.nih.gov/tcrb/guide_measures.html

Validated Youth Measures from NCI Guide

- ▶▶ Advertising receptivity
- ▶▶ Beliefs and expectancies
- ▶▶ Smoking susceptibility
- ▶▶ Dependence
- ▶▶ Friends/family smoking
- ▶▶ Mood

Validated Youth Measures from NCI Guide

- ▶ **Problems**
- ▶ **Smoking Behavior**
- ▶ **Stressors**
- ▶ **Temptations to smoke**
- ▶ **Self-efficacy**
- ▶ **Validity of self-report**

Resources

- ▶ **Action on Smoking and Health (Agent)**

<http://www.ash.org.uk/html/regulation/html/chemistry.html>

- ▶ **Tobacco Control Resource Center for Wisconsin (Agent, Host, Vector, and Environment)**

http://www.tobwis.org/tobacco_industry/index.php?category_id=19

Resources

- ▶ **Contract: Laboratory Assessment of Tobacco Use Behavior and Exposure to Toxins among Users of New Tobacco Products (Agent, Host)**

<http://rcb.cancer.gov/rcb-internet/appl/rfp/55009/toc.pdf>

Resources and New Funding Opportunity

- ▶ **Program Announcement: Testing Tobacco Products Promoted to Reduce Harm (Mar 2, 2006) (Agent)**
<http://grants.nih.gov/grants/guide/pa-files/PA-04-103.html>

Resources

- ▶ **The Tobacco Industry Monitoring Evaluation (TIME) Listserv (Vector)**
 - ▶ Lists tobacco-sponsored public events in California and ten other comparison states
 - ▶ Contact tsscruz@usc.edu for information

Resources

- ▶ Tobacco industry documents
(Vector)

<http://www.library.ucsf.edu/tobacco/>

Resources

- ▶ **ImpacTeen State Level Tobacco Legislative Database (Environment)**
<http://www.impacteen.org/tobaccodatabase.htm>
- ▶▶ **Price/tax/funding**
- ▶▶ **Youth access laws**
- ▶▶ **Smoke-free air laws**
- ▶▶ **Smoke-free air preemption**

Resources

- ▶ **Campaign for Tobacco-Free Kids
(Vector, Environment)**

<http://www.tobaccofreekids.org/research/>

Resources

- ▶ Chriqui JF et al. Application of a rating system to state clean indoor air laws (USA). Tobacco Control 2002;11:26-34 (Environment)
<http://tc.bmjournals.com/cgi/content/full/11/1/26>

Resources

- ▶ **State Cancer Legislative Database Program (Environment)**
<http://www.sclدnci.net/sclدtobaccoratings.cfml>
- ▶ **State Legislated Activities on Tobacco Issues (Environment)**
<http://slati.lungusa.org/>

Resources

- ▶ **CDC/OSH State Tobacco Activities Tracking and Evaluation System (Environment)**

<http://apps.nccd.cdc.gov/statesystem/>

Future Directions

- ▶ **Initiative for the Study and Implementation of Systems (ISIS)**
- ▶ **Tobacco Informatics Grid (ToBIG)**
 - ▶ **Need for community-based “sensor” network for rapid response surveillance**
 - ▶ **Workspace will include data, people, and resources**
 - ▶ **Standardized core measures across agent, host, vector, and environment**

Future Directions

- ▶ Planning workshop for the National Longitudinal Study of Tobacco Use and Quitting (NLSTUQ) in August
- ▶ If interested in participating, please contact me at sm311j@nih.gov or talk to me after this session