

***Lessons learned from 30 years
of research about the
evaluation of public health
communication campaigns.***

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Talk Outline

1. The roles for research and evaluation (and a focus on summative evaluation)
2. Why do public health communication campaigns raise special problems for evaluation.
3. Why the textbook design, randomized control trials, may not be ideal.
4. What are the alternatives, and what are some important examples which have used such alternative designs

Tasks for Program Research and Evaluation

- Foundational Research
- Message Testing
- Ongoing monitoring research
- Summative evaluation

Tasks for Program Research and Evaluation

- Research resources may often be better allocated to foundational, message testing and monitoring research than to summative research but...sometimes
- Summative evaluation: “did it work?” is the question you need to address.

The competing requirements of summative evaluations

- Evaluation designs which permit credible claims of effects.
- Evaluations which respect complex paths to success
- Evaluations which meet limits of funding, time, professional skill

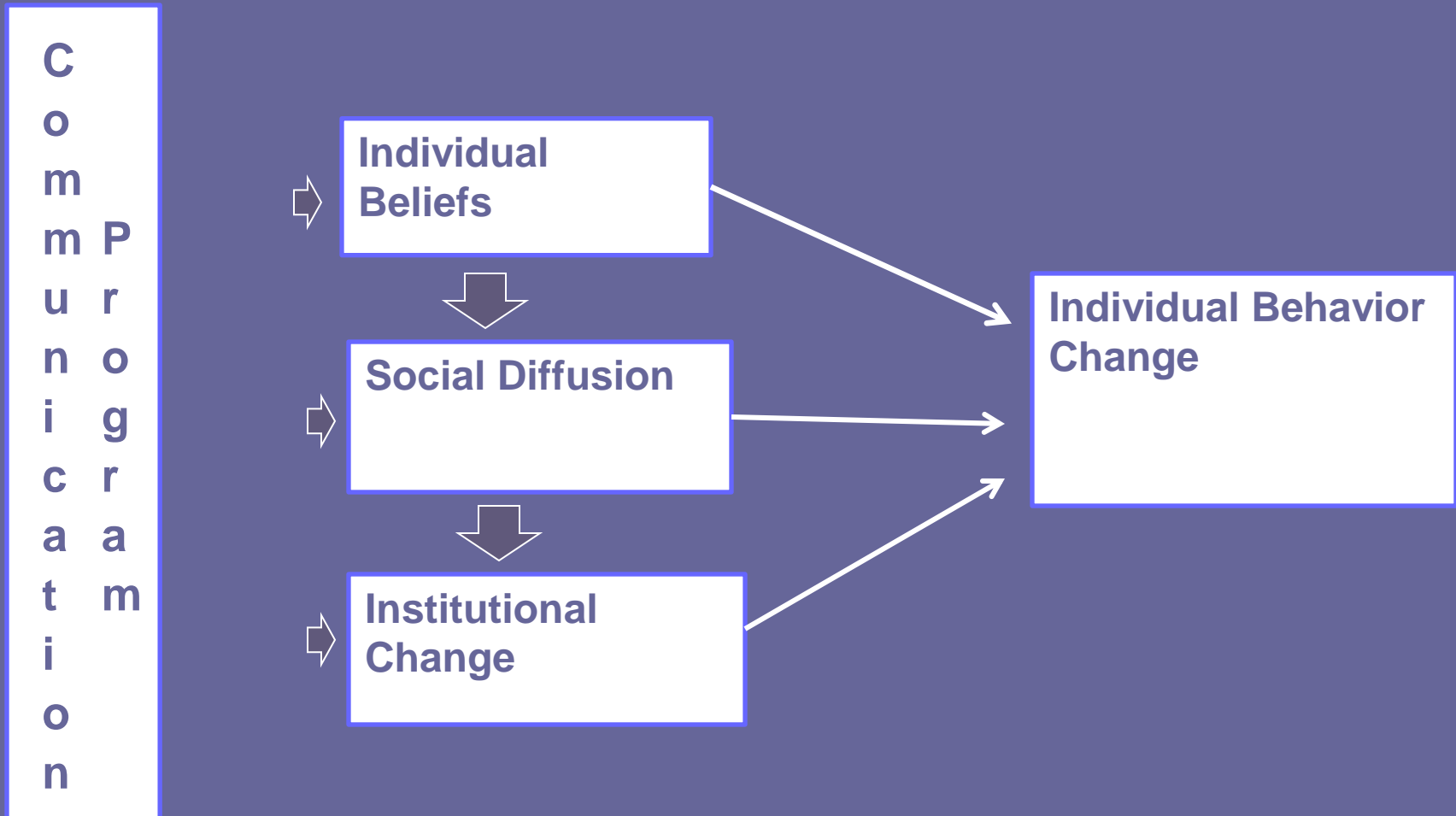
A continuing theme:

- Randomized control trials (RCTs) are **the gold standard**, but maybe not.
- Are there alternative evaluation designs worth considering?

Issues in evaluating campaigns I

- Complex and complementary paths of effect
 - Individual path of effect – direct influence of message exposure
 - Social path of effect – indirect diffusion of messages, social network response to messages
 - Institutional path of effect – repeated messages over time through multiple channels may affect institutional action

Knowing the model of effect –individual, social, institutional models of effect



Issues in evaluating campaigns II

- Change may be slow – years not weeks – for some behaviors.
- Population changes may be small – 1-2% per year.
 - (But slow and small may matter in the long run on a population basis.)

Issues in evaluating campaigns III

- Programs are not fixed; (not like drugs or vaccines.) Not a fixed set of messages over a fixed set of channels
- Interventions describe a process for using audience research and developing and changing an intervention as the audience changes
- The intervention mix will change over time; the messages will change, and so will the rest of the marketing mix.

Issues in evaluating campaigns IV/V

- Programs often struggle to achieve exposure to messages, particularly repeated exposure through multiple channels over time
 - Issues in measuring exposure
 - Issues in locating comparable high and low exposure populations
- Concerns about disparities in effects – between social groups. Communication programs may open gaps in behavior rather than reduce them.

The research textbook says

- The only way to be sure to make a confident claim about the influence of an intervention is with:
 - Random assignment to treatment or control condition
 - Enough units assigned to each condition to make statistically meaningful claims
 - Compare intact groups on target outcome.

Why aren't randomized controlled trials (RCTs) the answer?

- Large scale programs are often not politically open to RCTs.
- RCTs better at individual effects assessment than social and institutional paths of effect assessment.
- RCTs better at detecting quick, large effects than for slow and small changes
- RCTs better at evaluating well defined and stable interventions than for evolving interventions in natural settings

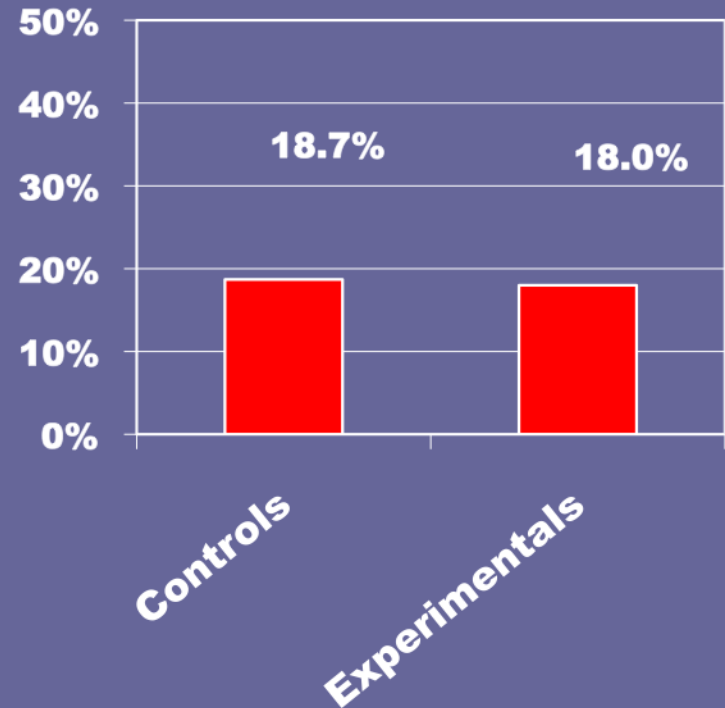
Why aren't randomized controlled trials (RCTs) the answer?

- RCTs risk getting a very good answer to the wrong question – they risk controlling away central pieces of the communication activity.
- The COMMIT Trial and the (US) National High Blood Pressure Education Program (NHBPEP)

Commit -Anti-tobacco

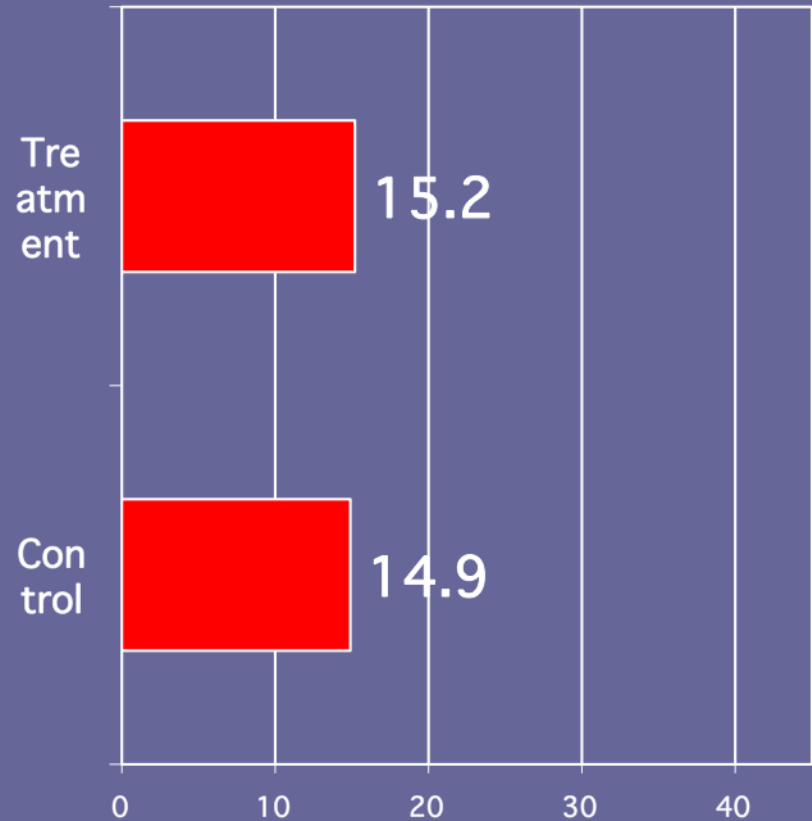
- 11 pairs matched cities, randomly assigned
- 4 years/\$900K per city
- 58 activities
- public education, health care providers, work sites, cessation resources

% Quitters -Heavy Smokers



Commit Exposure: Little difference

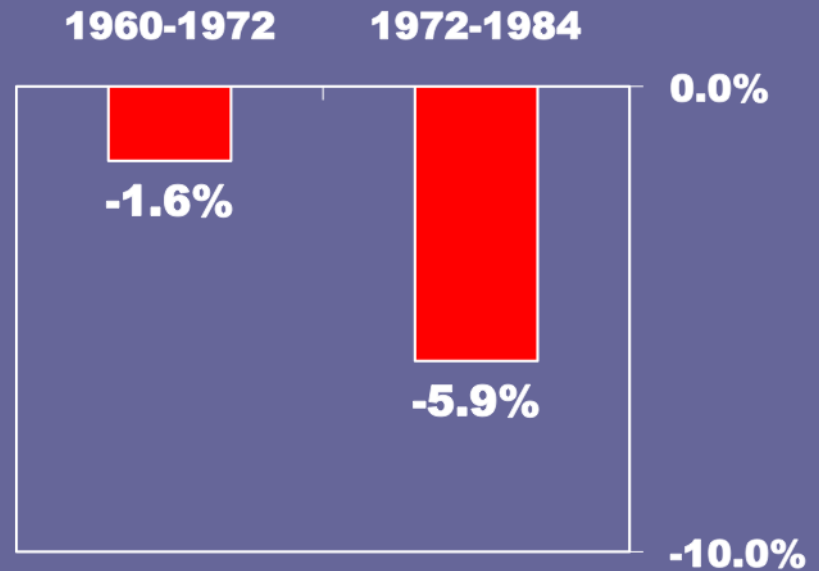
- Commit: 5 channels:
 - smoking cessation kits,
 - health care sites,
 - work sites
 - mass media,
 - religious organizations



National High Blood Pressure Education Program

- Professional organizational involvement
- Mass media
- community organizations
- Reaching the entire population

Annual Age-adjusted stroke mortality decline



Are there alternative designs for summative evaluation?

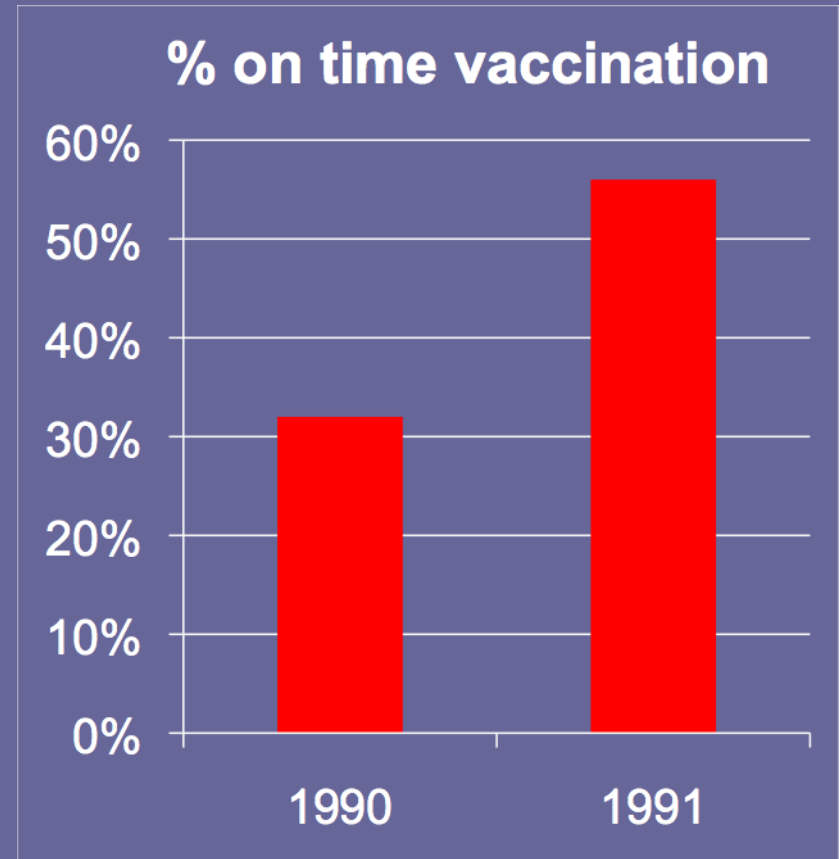
- Pre-post studies
- Long term cohort studies
- Media market-level comparisons
- Interrupted time series
- Associational time series
- Quasi experiments.

But what are the alternatives?

- Pre-post design
 - Philippines National Urban Vaccination Campaign (Zimicki et al)

Pre-Post Design

- Philippines National Urban Vaccination Campaign
- Measles, media advertising.



But what are the alternatives?

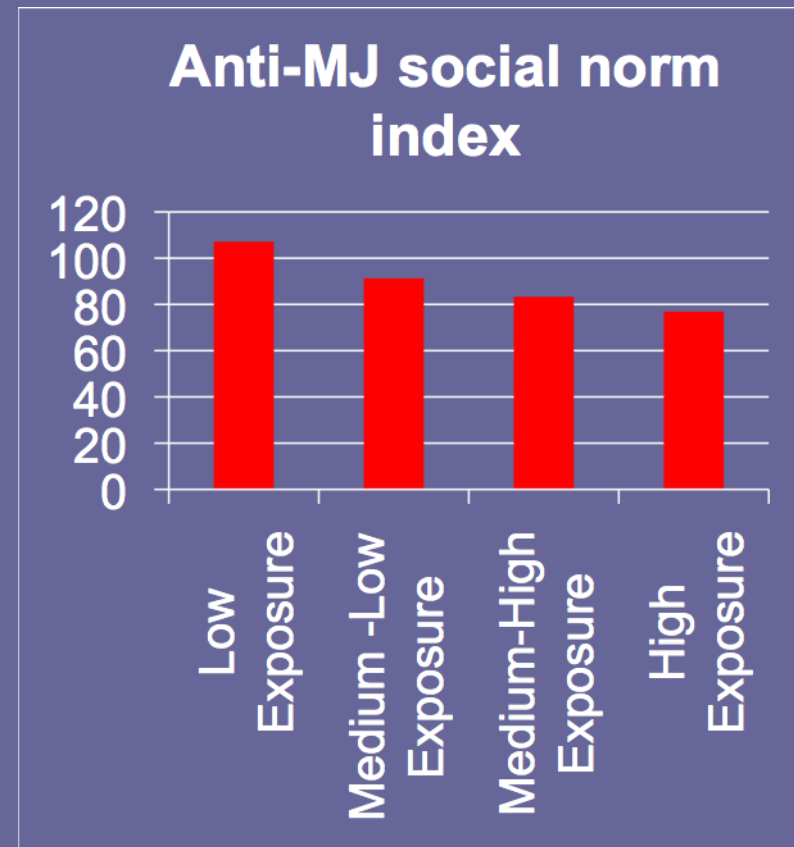
Long term cohort studies

- The VERB physical activity evaluation (Huhman et al)
- The NYAMC anti-drug evaluation (Hornik et al)
 - 8000 children/6000 parents surveyed annually over 4 years
 - Measures of advertising exposure and drug beliefs and behavior

Cohorts with lagged exposure effects

US National Youth Anti-drug Media Campaign

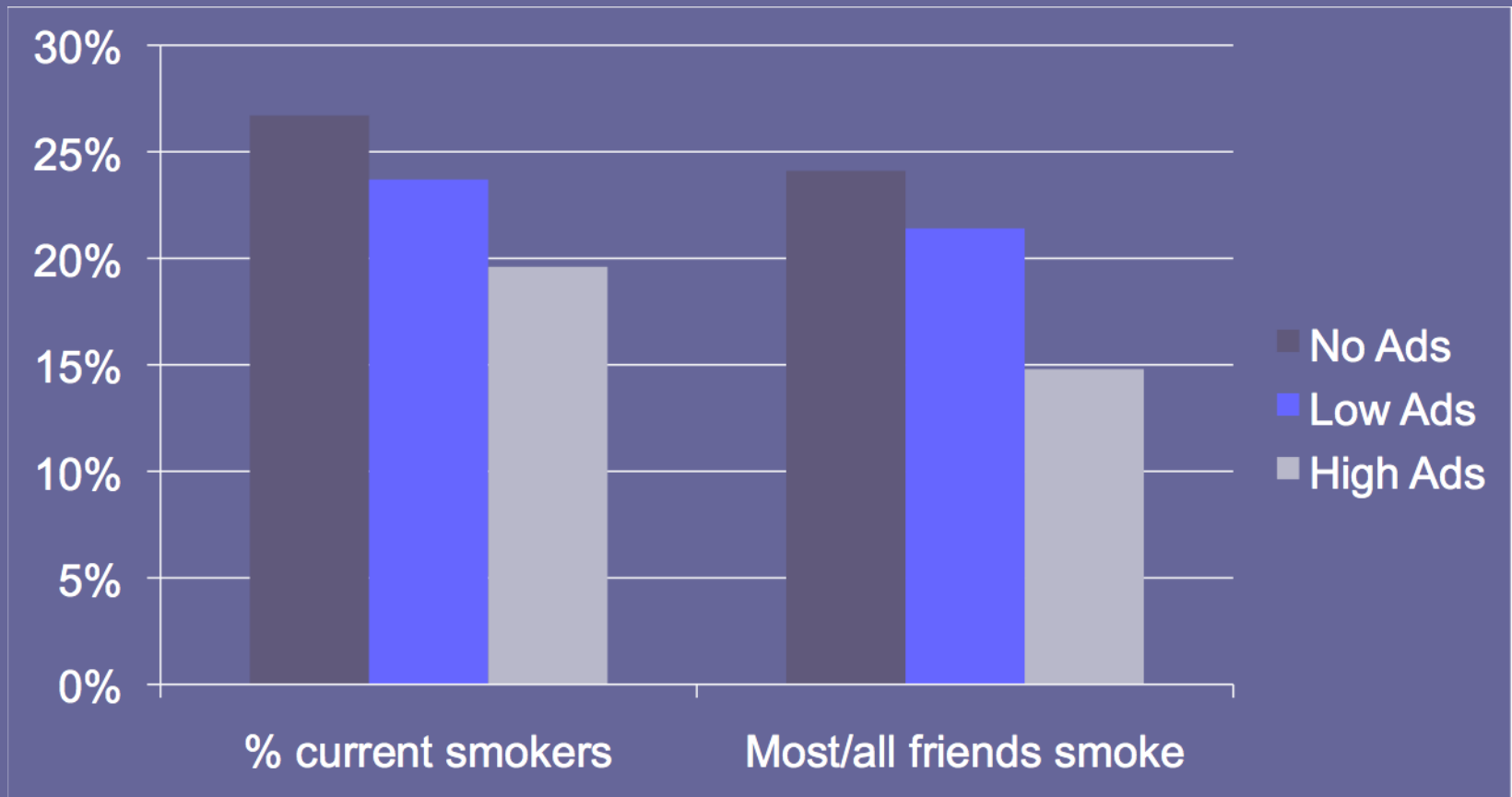
- Anti-Marijuana social norms at time 2 as a function of ad exposure at time 1, adjusting for confounders and prior social norms



But what are the alternatives?

- Geographic cross-community comparisons
 - Truth campaign evaluation [Farrelly et al.]
 - Media market anti-smoking commercials associated with lower smoking [Emery et al]

Televised state-sponsored anti-tobacco advertising



Emery et al, 2005.

But what are the alternatives?

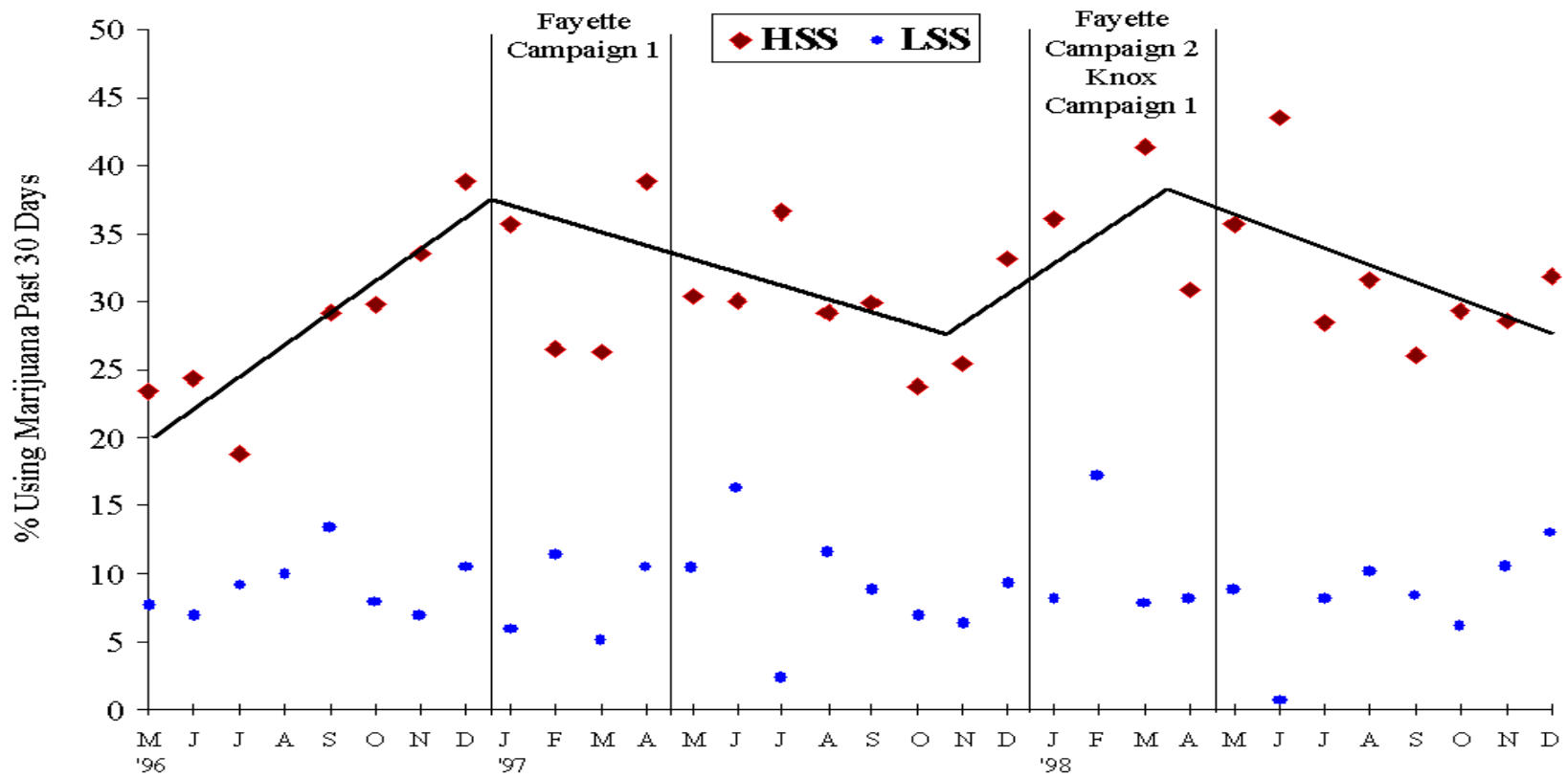
Interrupted time series studies

- National High Blood Pressure Education Program (Rocella)
- Ticket or Clickit evaluations (Williams et al)
- Brazil vasectomy campaigns (Kincaid et al)

- Kentucky anti-drug campaign evaluation (Palmgreen et al)

Interrupted Time series: Kentucky drug evaluation

Figure 5. Fayette County 30-day marijuana use time-series regression with wearoff trend for HSS and without non-significant intercept changes



But what are the alternatives?

Associational Time Series Studies

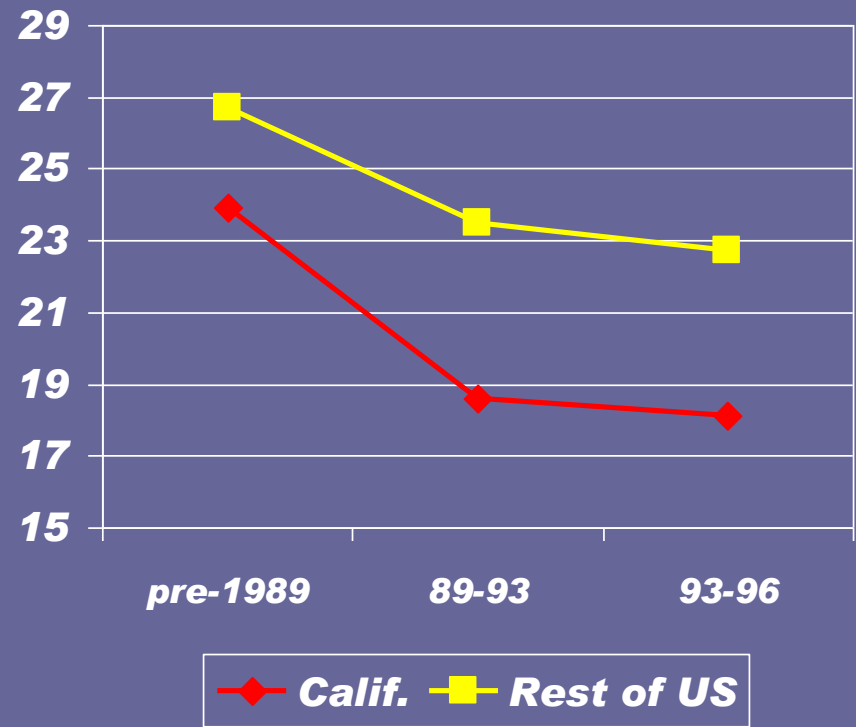
- Australian anti-smoking advertising (Wakefield et al)
- California Tobacco Control Program evaluation (Pierce et al.)

Natural experiments

California tobacco campaign

- Mass media expenditures on anti-tobacco advertising-part of multi-strategy program
- Early: 1989-93: \$15 million per year
- Later: 1993-1996:\$10.6 million per year

Smoking Prevalence %



But what are the alternatives?

- Quasi-experiments
 - Stanford Heart Disease Prevention Program (Farquhar et al)
 - Vermont-Montana Anti-smoking (Worden and Flynn)

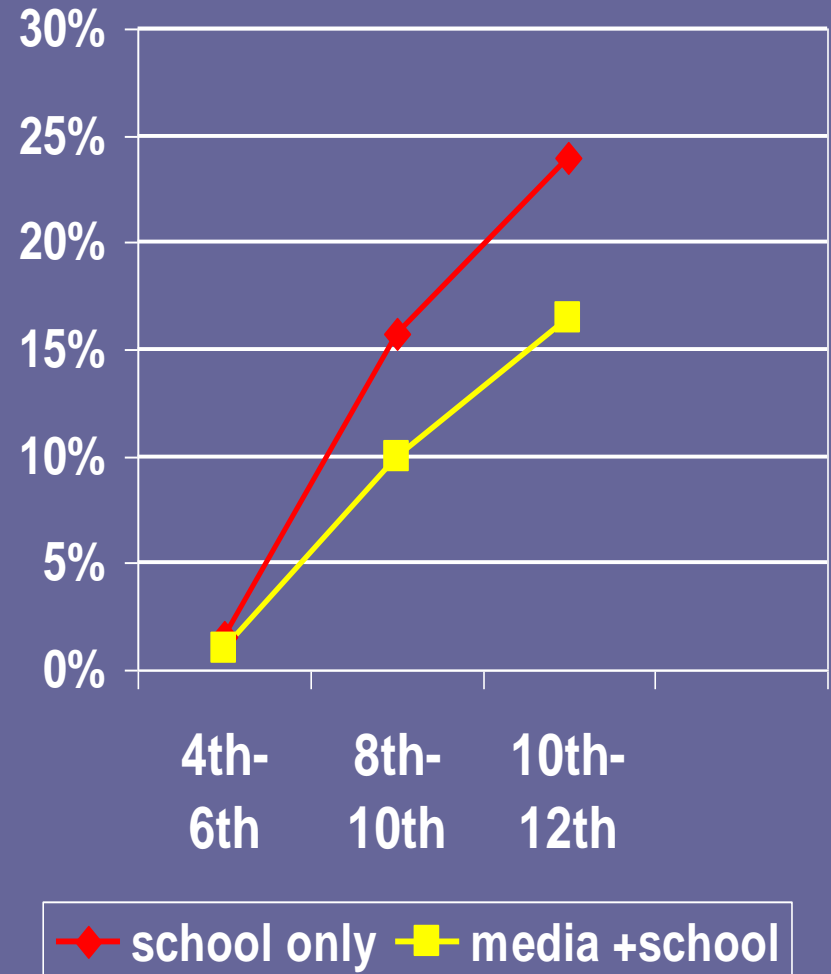
Field Experiments

Youth tobacco
campaign-

Media + school versus
school over 4 years
(4th-8th grade)

4 communities -2 per
treatment 6 surveys -
4/6th-10/12th

% Weekly Smoking



In sum

- Communication campaigns create special circumstances
 - Complex effect models
 - Slow and small individual effects
 - Evolving not fixed interventions
 - Exposure not assured
 - Inequity of effects always a concern
- Campaigns are often not well evaluated with RCTs

In sum

- There is growing experience with other approaches to evaluation of such programs
 - Pre-post studies
 - Long term cohort studies
 - Media market-level comparisons
 - Interrupted time series
 - Associational time series
 - Quasi experiments.
- Good evaluators and their sponsors must be able to tolerate a useful if imperfect answer to the right question