



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



Pathways to Determining if Health Promotion Works:



Campaign as a Case Example

Marian Huhman, PhD
National Oral Health Conference
Denver, CO
May 1, 2007

The findings and conclusions presented here are those of the author and do not necessarily represent those of Centers for Disease Control and Prevention. (CS110734)

Objectives of Today

- Challenges in evaluation of health promotion or education initiatives
- How one initiative—the VERB. *It's what you do.* campaign addressed the challenges
- Outcomes of the VERB campaign



VERB is a national mass media campaign guided by social marketing to encourage children 9 -13 years old to be physically active everyday.



SAFER • HEALTHIER • PEOPLE™



Overview

- 2002 - 2006
- Targeted all US tweens
- Individual level focus—increasing and maintaining PA
- Parents were secondary audience
- Well-funded \$339M



TV ad “Bounce”



SAFER • HEALTHIER • PEOPLE™



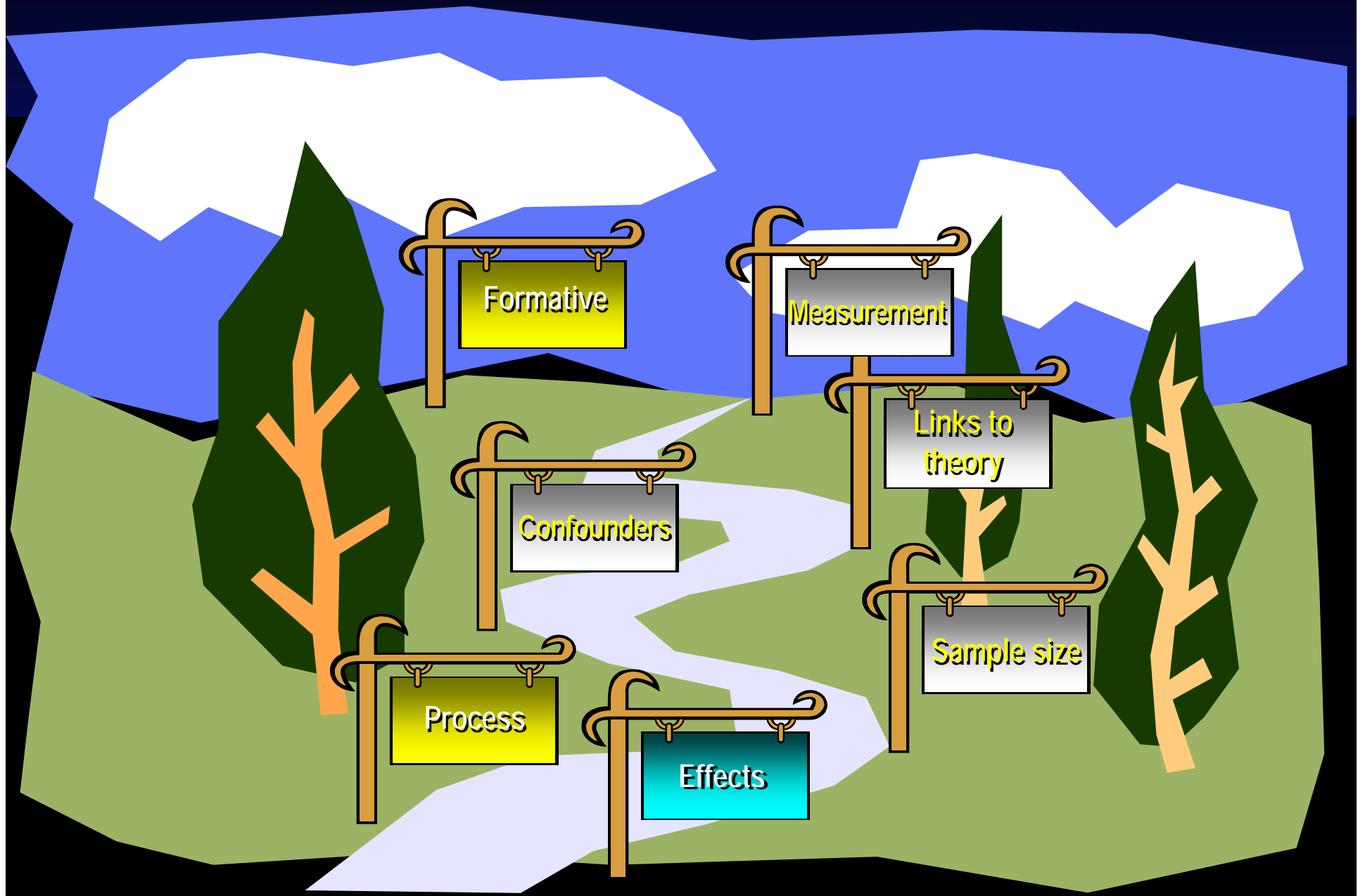
VERB Evaluation Overview

- National, longitudinal random-digit dial survey of children 9-13 years old and parents
- Measured children's beliefs, behaviors, and awareness and understanding of VERB
- Data collected prior to campaign launch (2002) and each subsequent year (2003 – 2006)
- Analyzed for annual effects and trends after adjusting for confounders

General Evaluation Planning

- Who are your stakeholders?
- How much to spend on evaluation?
- Matching the evaluation to the intervention
- Support outcomes with other tools
 - Process evaluation
 - Theory
 - A priori hunches

Evaluation Minefield



Formative

Measurement

Links to
theory

Confounders

Sample size

Process

Effects

Mines in the Field

- Grounded in theory

- Logic model for VERB™¹

- o Linked intervention → attitudes, beliefs → behavior
- o Measures matched logic model boxes

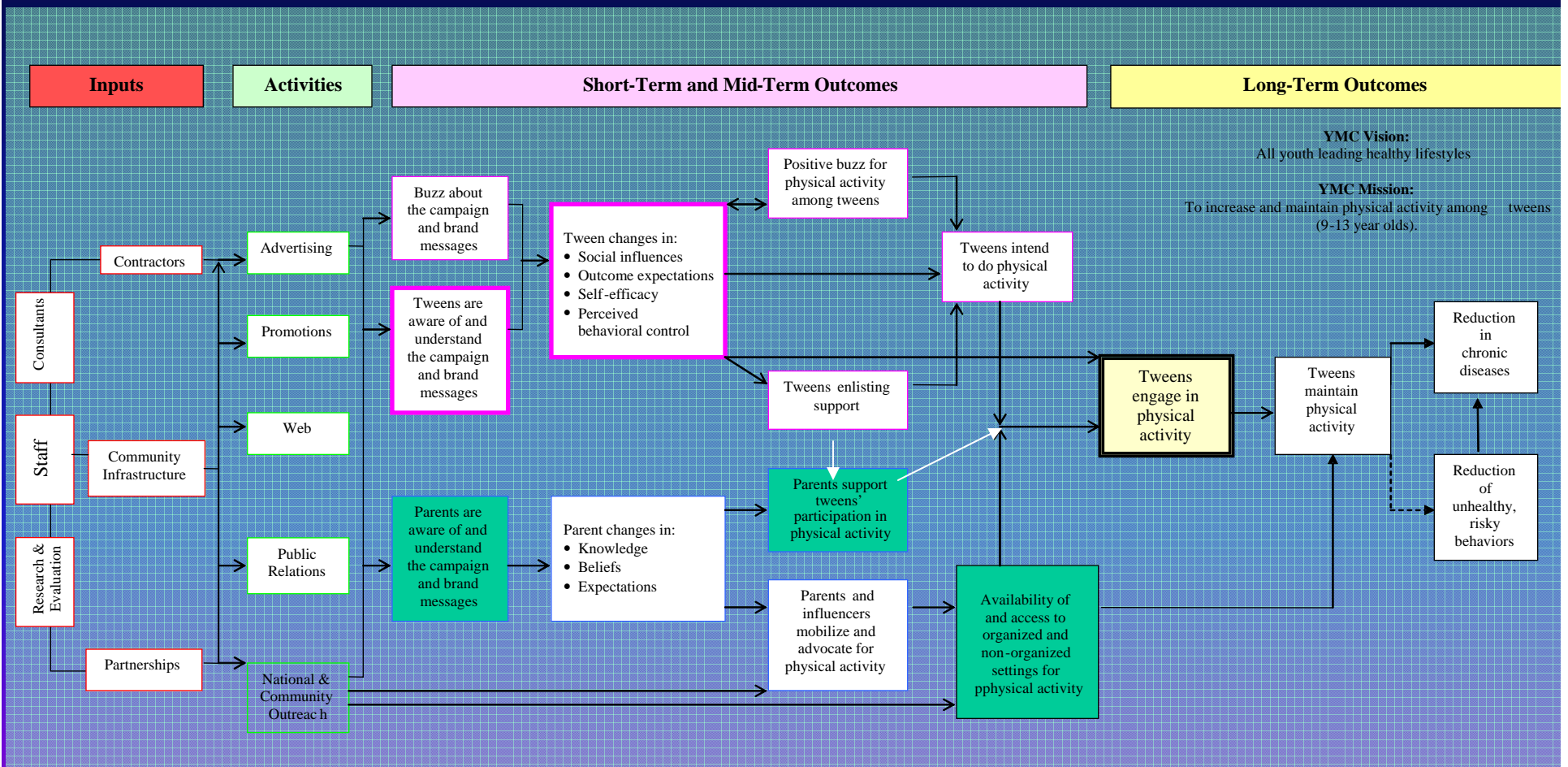
¹ Huhman M, Heitzler C, Wong F. The VERB campaign logic model: a tool for planning and evaluation. *Preventing Chronic Disease* [serial online]. July 2004. Available at: <http://www.cdc.gov/pcd/issues/2004/jul/toc.htm>



SAFER • HEALTHIER • PEOPLE™



VERB Campaign Logic Model



Mines in the Field

■ Measurement

- Measures linked to logic model outcomes
- Telephone survey of children and parent dyads
- Reliability and validity study of the survey (Youth Media Campaign Longitudinal Survey)

1 Huhman M, Heitzler C, Wong F. The VERB campaign logic model: a tool for planning and evaluation. *Preventing Chronic Disease* [serial online]. July 2004. Available at: <http://www.cdc.gov/pcd/issues/2004/jul/toc.htm>



SAFER • HEALTHIER • PEOPLE™



VERB Measures

- Awareness or recall of VERB
- Understanding of the message
- Attitude and belief scales
 - Outcome expectations of being physically active
 - Self-efficacy to be physically active
 - Social norms
- Physical activity behaviors

Mines in the Field—Sample Size

- Sufficient sample size to find effects
 - VERB began with $n = 3,000$ child/parent dyads
 - Attrition of 15% per year
 - Used cash incentives

Mines in the Field: Confounder Control

- Confounder: variables that are present prior to the intervention and associated with both treatment and outcome
- Confounders mean can't determine if outcomes are due to intervention or to prior conditions
- VERB's longitudinal research design was key

Longitudinal Surveys

- Lower the cost of surveying rare populations
- Allowed us to examine the temporal nature of effects
 - Instant or delayed
 - Persistent or temporary
- When evaluating an on-going intervention, e.g., a media campaign, a longitudinal survey provides the opportunity to assess the effects of cumulative or incremental exposure

Analytic Method Propensity Scoring

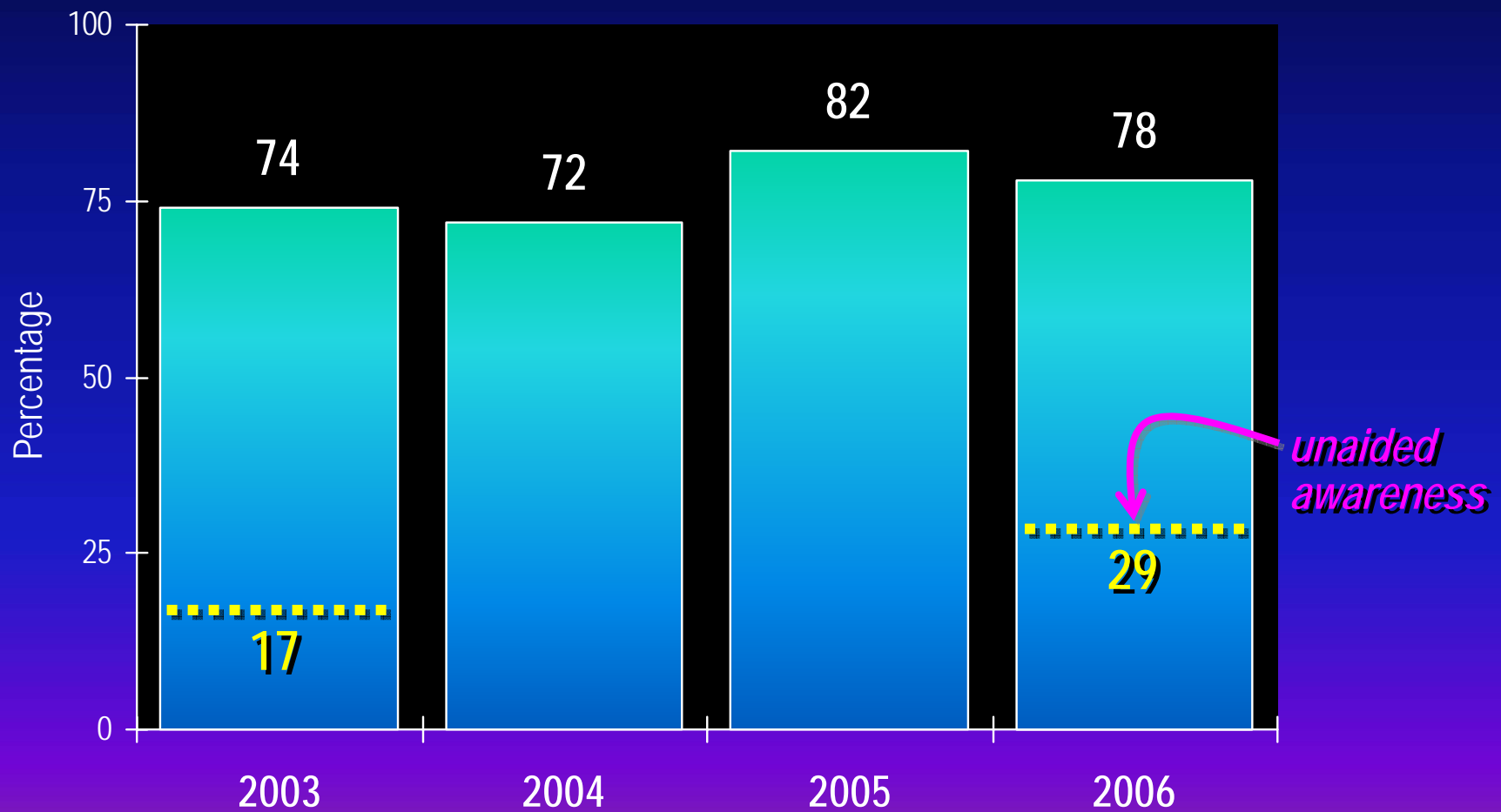
- Observational studies when have many variables
- Uses predictive modeling and weighting
- Baseline measures used to control for confounders at follow-up
- Associations between exposure to VERB and outcomes are practically free of the confounding effects of measured covariates

VERB Evaluation Strategies Review

- Basics: Theory guided logic model, message content, measurement
- Formative evaluation guided advertising execution
- Process evaluation: Determined fidelity of the intervention
- Outcome evaluation: Quasi-experimental, but rigorous

Results

Tween's Awareness of VERB



Understanding of VERB

In each year studied,
more than 90% of tweens aware of VERB
could report at least one of the
key messages of the campaign.



SAFER • HEALTHIER • PEOPLE™



VERB Campaign Outcome Results

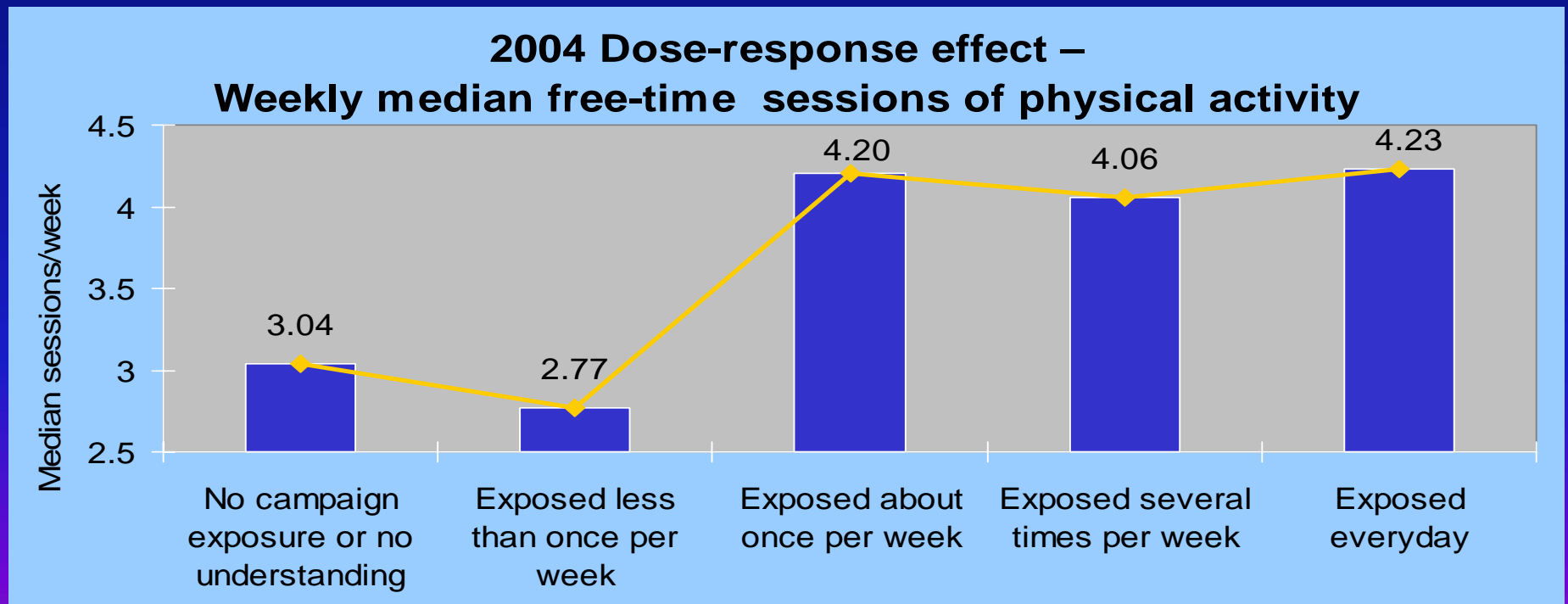
- Year 1 (2003): effects on behavioral outcomes were detected for population subgroups--girls and younger tweens.
- Year 2 (2004): positive effects were detected on 6 of 7 outcomes for the entire target population.

Results, continued

- 6 outcomes **positively affected** by VERB:
 - Sessions of free-time activity in past 7 days
 - Percent physically active on day prior to survey
 - Total physical activity sessions in past 7 days
 - Expected benefits of being physically active
 - Social norms about physical activity
 - Social influences on physical activity

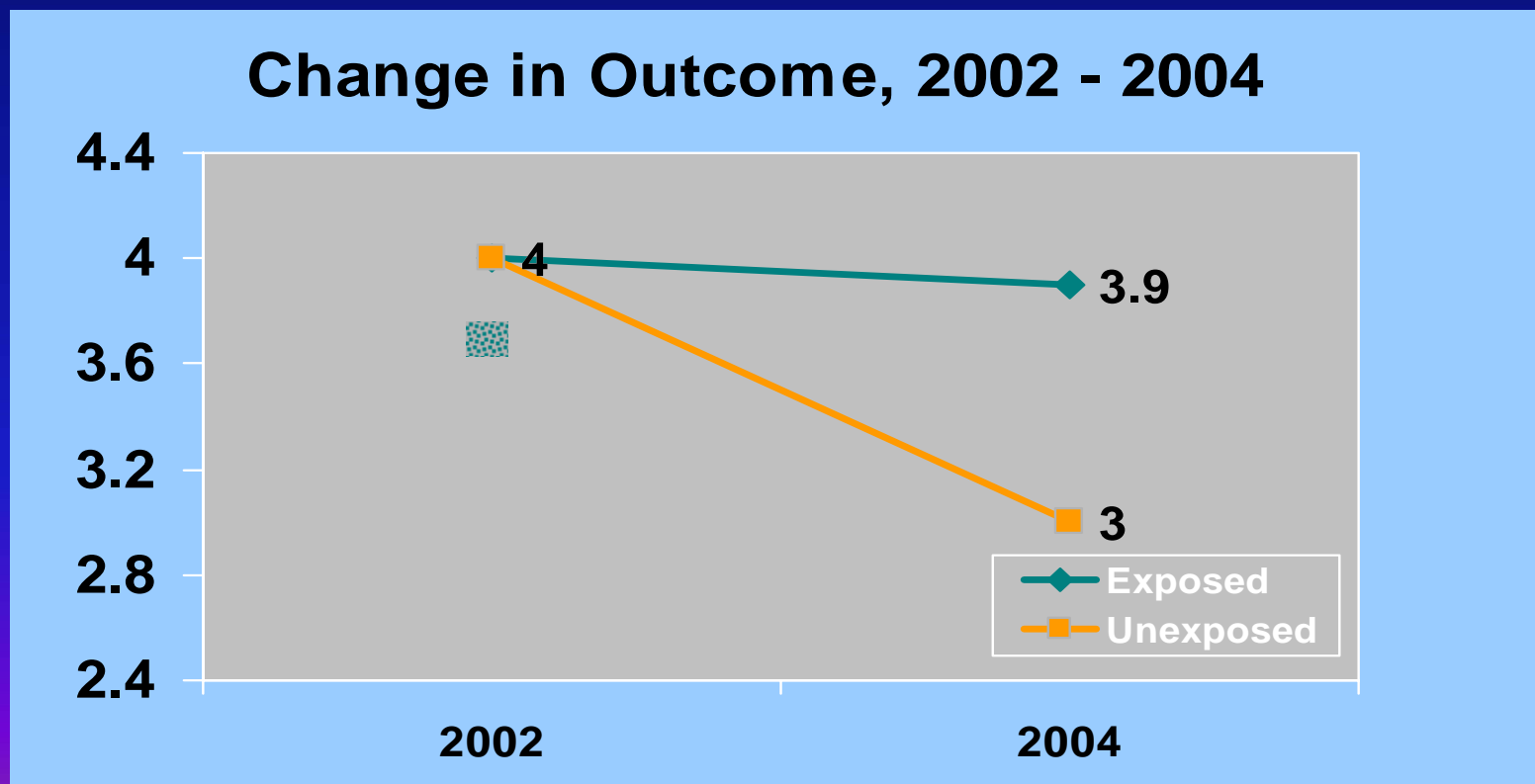
VERB Evaluation Results--2004

- In 2004, more exposure to VERB, more physically active they were in their free-time (dose-response)



Change Analysis for Free-time Physical Activity

Children exposed to VERB declined slightly in weekly free-time PA sessions; those unexposed declined .9 session.



Conclusion: The VERB campaign was a success

- Most US tweens recognized and understood the campaign
- VERB positively influenced tweens' physical activity attitudes and behaviors

More Information. . .

Evaluation outcome publications

- Huhman M, Potter LD, Wong FL, Banspach SW, Duke JC, Heitzler CD. Effects of a mass media campaign to increase physical activity among children: year-1 results of the VERB campaign. *Pediatrics* 2005; 116(2):e277-e284.
- Huhman ME, Potter LD, Duke JC, Judkins DR, Heitzler CD, Wong FL. Evaluation of a National Physical Activity Intervention for Children: VERB Campaign, 2002-2004. *Am J Prev Med*; 2007; 32 (1): 38-42.

VERB Campaign Special Issue

- American Journal of Preventive Medicine ((10-12 papers drafted to be published in 2007)

Other Resources: www.cdc.gov/verb



SAFER • HEALTHIER • PEOPLE™

