CDC’s VERB Campaign: From Design to Evaluation

December 9, 2011
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Can We Change This?
To this.
Where are my playmates?
To this.
Can You Sell Physical Activity to Kids?
VERB was a national media and social marketing initiative to encourage children 9-13 to be physically active everyday.
• June 2002 – September 2006
• 21 million US tweens
• Paid advertising school & community promotions, Internet
• Well-funded- - $339 million
Design
From formative research, tweens valued...
Praise

Parents
Message Examples

• “Free children to play out their dreams”
• “Find your verb”
• Tested everything
• Sports celebrities often the messenger
Implementation
built a strong brand
Launch: Teaser Campaign

First 6 months
What is VERB anyway?
General Market Tween TV Launch “What’s your VERB?”

• Video of Verb commercial:
  http://www.youtube.com/watch?v=08Wr5BYu9ZI
Year 1: Find your VERB
General Market TV Ad: “Race”
Year 2 Print: “Volleyball”

Communication:

Bringing all that’s good in organized sports to the backyard
Places to Play

Game Generator
Events

VERB anyTour

[Images of various events and activities]
School and Community Programs & Promotions

VERB
ANYTIME
DOUBLETIME

Take 2 VERBS MAKE 1 GAME AND GO!

VERB
CROSSOVER

VERB
PLAY
without
borders
Evaluation
**YMC Vision:**
All youth leading healthy lifestyles

**YMC Mission:**
To increase and maintain physical activity among tweens (9-13 year olds).

**VERB Campaign Logic Model**

**Inputs**
- Contractors
- Staff
- Community Infrastructure
- Partnerships
- Research & Evaluation
- Contractors
- Community Infrastructure
- Partnerships
- Research & Evaluation

**Activities**
- Advertising
- Promotions
- Web
- Public Relations
- National & Community Outreach

**Short-Term and Mid-Term Outcomes**
- Buzz about the campaign and brand messages
- Tweens are aware of and understand the campaign and brand messages
- Parents are aware of and understand the campaign and brand messages
- Parent changes in:
  - Knowledge
  - Beliefs
  - Expectations

**Long-Term Outcomes**
- Tweens engage in physical activity
- Tweens maintain physical activity
- Availability of and access to organized and non-organized settings for physical activity
- Reduction in chronic diseases
- Reduction of unhealthy, risky behaviors

**Outputs**
- Positive buzz for physical activity among tweens
- Tweens intend to do physical activity
- Tweens enlisting support
- Parents support tweens’ participation in physical activity
- Parents and influencers mobilize and advocate for physical activity
- Tweens maintain physical activity
- Tweens intend to do physical activity
- Parents aware of and understand the campaign and brand messages
- Parents support tweens’ participation in physical activity
- Availability of and access to organized and non-organized settings for physical activity
- Reduction in chronic diseases
- Reduction of unhealthy, risky behaviors

**Verbs**
- Campaign
VERB Evaluation

• Telephone survey of children 9-13 years and a parent.

• Baseline, then annually April to June

• 3 nationally representative cohorts
Why Longitudinal Surveys?

• Distinguish confounding variables from mediating variables
  – Confounder: associated with both treatment and outcome
  – Mediator: on the causal path between the intervention and the effect

• Better control over confounding variables
  – Baseline-controlled
Confounders

- Confounders mean can’t determine if outcomes are due to intervention or to prior conditions
- VERB’s longitudinal research design was key
Why Longitudinal Surveys?

• When evaluating an on-going media campaign, a longitudinal survey allows assessment of the effects of cumulative or incremental exposure
## Methods: Study Population

<table>
<thead>
<tr>
<th></th>
<th>2002 Baseline</th>
<th>2003 Year 1</th>
<th>2004 Year 2</th>
<th>2005 Year 3</th>
<th>2006 Year 4</th>
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</thead>
<tbody>
<tr>
<td><strong>Cohort 1</strong></td>
<td></td>
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<tr>
<td>9-13 yrs N = 3,114*</td>
<td>10-14 yrs N = 2,729</td>
<td>11-15 yrs N = 2,257</td>
<td>12-16 yrs N = 1,946</td>
<td>13-17 yrs N = 1,623</td>
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<td><strong>Cohort 2</strong></td>
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<td>9-13 yrs N = 5,187</td>
<td>10-14 yrs N = 4,300</td>
<td>11-15 yrs N = 2,773</td>
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<td><strong>Cross-sectional sample</strong></td>
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<td>9-13 yrs N = 1,200</td>
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*Child/parent dyads*
Measures

• Awareness or recall of VERB
• Understanding of the message
• Attitude scales
  – Outcome expectations of being physically active
  – Self-efficacy
  – Social influences
• Physical activity sessions
Exposure Measure

- Frequency of exposure—5 point scale
  - Never
  - Less than once a week
  - About once a week
  - Several times a week
  - Everyday

- Collapsed for some analyses into aware--unaware
Analysis Choices

• Goal: Reduce threats to internal validity; attribute effects to campaign exposure and not confounders.
Analysis

- For non-randomized treatment assignment, selection bias is a major threat to inference
  - Otherwise associations between treatment and outcome may be due to differences between the treatment groups
  - Regression methods, propensity scores, or a combination
Propensity Scoring—why?

- When have many variables—fit 1 model
- Uses predictive modeling and weighting
- Improved confounder control
- Associations between exposure and outcomes are *practically* free of confounding effects of measured covariates
VERB Analysis

• A baseline controlled end-point analysis with propensity scoring was chosen:
  – Low correlations in the outcome variables (0.15 to 0.30)
  – Large number of covariates (including neighborhood, geographic, and baseline outcome measures)
  – Better power than change score analysis
• CDC’s Goal: Reduce threats to internal validity; attribute effects to campaign exposure
Results

Did tweens see and understand the campaign?
Results

Tween’s Awareness of VERB

2003: 74%
2004: 72%
2005: 82%
2006: 78%

Percentage:
0 25 50 75 100

Unaided awareness:
2003: 17%
2006: 29%
Results Summary

Children 9 – 13
Did tweens change their attitudes and amount of PA?
Results Year 1

• Year 1 (2003): effects on behavioral outcomes were detected for population subgroups--girls and younger tweens
Results Year 2 and Year 3

• 6 outcomes **positively affected** by VERB at population level:
  – Sessions of free-time activity in past 7 days
  – Percent physically active on day prior to survey
  – Attitudes about being physically active
  – Social norms
  – Social influences
Yesterday Physical Activity Year 3

Frequency of Exposure vs. Percent

- No campaign exposure
- Aware less than once per week
- Aware about once per week
- Aware several times per week
- Aware everyday

γ = .1*

Percent

Frequency of Exposure
Children aged 10-13

Percent engaged in physical activity on day prior to survey
Conclusions

• VERB significantly influenced tweens’ physical activity attitudes and behaviors across all years of the campaign
• Effects persisted for baseline tweens as they aged into their teen years (data not shown)
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
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