Transportation Behavior Change

Breakout Session

Dr. Reuven Sussman, Behaviour and Human Dimensions Program
American Council for an Energy-Efficient Economy, Washington, DC
Co-Chair of Behavior, Energy and Climate Change (BECC) conference

Scoping workshop Sept 12, 2018:
Behaviour Change for Energy Efficiency: Opportunities for International Cooperation in the G20 and beyond
A little about me...

The 2018 International Energy Efficiency Scorecard

Reuven Sussman, Ph.D.
Senior Research Manager

Behavior and Human Dimensions Program

R Sussman rsussman@aceee.org
A little about you...

- How familiar are you with behavioral science?
- How many of you have worked on some type of behavior change program or campaign?
- How familiar are you with transportation behavior change programs specifically?
Behavior Change Programs in Transportation

• Three Domains
  • Frequent personal ground transportation (cars, motorcycles, buses, walking, etc.)
  • Infrequent personal transportation (airplane travel, boats, trains, etc.)
  • Freight transportation (moving things, not people)

• Three Types of Behavior
  • Using transportation more efficiently (less idling, maintaining tire pressure, etc.)
  • Buying efficient vehicles (buying an efficient car, truck, boat, etc.)
  • Choosing more efficient modes, or choosing to travel less (less single-person driving, less airplane travel, etc.)
### Behavior Change Programs in Transportation

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<th>Action</th>
<th>Frequent personal ground transportation</th>
<th>Infrequent personal transportation</th>
<th>Freight transportation</th>
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Puget Sound *In Motion* Program

• Target behaviors: ↑ off-peak transit use; ↓ driving alone

• Intervention:
  • Put up posters and bus route maps in neighborhood
  • Local partners (e.g., schools) and 35 businesses helped
  • Created a website and hotline for information and enrollment
  • Direct mail
  • Solicit commitment through direct mail, website, etc.
    • I will change two trips per week from driving alone to other
    • I will put a “count me in” sign on my lawn
  • Incentives for commitment and participation
    • E.g., $5 voucher for alternative transportation

• Participants self report change (24 to >50%)
  • Support from counts at bus stop (9% increase in bus riding)
Virgin Atlantic Airlines Captains

• Target behavior: Change airplane captain behavior to reduce fuel consumption

• Intervention
  • Feedback about recent fuel efficiency (with targets)
  • A donation to the captain’s chosen charity if they reach target
  • The act of measurement itself

• Monitored 335 Captains, across 42,012 flights over 8 months; Saved:
  • 266,000-704,000 kg of fuel
  • $209,000-$553,000
  • 838,000-2,220,000 kg of CO$_2$
Customization and Evaluation

1. Start with a target behavior and population
2. Do preliminary research
3. Choose a strategy
4. Implement and evaluate
Special considerations during preliminary research

- Funding sources
- Stakeholder consultations
- Third party evaluators
- Partners and collaborators
Selecting Strategies: Barriers/Benefits

(Schultz, 2014)

Barriers

Benefits

High

Low

Incentives
Contests
Social Modeling
Social Norms
Make it Easy
Commitments
Education
Feedback
Prompts
Cognitive Dissonance

Also:

Punishment (laws, taxes, etc.)
Changing defaults or physical structure
Public Observability/accountability
Labeling/Benchmarking
Selecting Strategies: Stages of Change

- Precontemplation
- Contemplation
- Preparation
- Action
- Maintenance
Session Objective

• Develop program ideas and how we can collaborate to test them

• Questions for today:
  1. What are some creative program ideas for changing transportation behaviors?
  2. How can we work together to test and implement these programs?
Your turn... Part 1: frequent personal transport

• Write down an idea for a program to change a transportation-related behavior
  • Specify the behavior type (purchase, efficient use, mode change)
  • Do you know a program already? Do you have a new idea for a program?
  • Specify one way that G20 can collaborate on this idea (e.g., sharing data, working together, running parallel programs at the same time)
  • 5 minutes

• Share your idea with your neighbour
• Share with the group

Part 2 and 3:
• Repeat with Freight Transportation, and Infrequent Personal Transportation

• Incentives
• Contests
• Make it easy
• Social norms
• Commitment
• Education
• Feedback
• Prompts
• Laws or taxes
• Public observability
• Labeling
• Gamification
• Changing defaults
Your turn... Part 1: Freight

• Write down an idea for a program to change a transportation-related behavior
  • Specify the behavior type (purchase, efficient use, mode change)
  • Do you know a program already? Do you have a new idea for a program?
  • Specify one way that G20 can collaborate on this idea (e.g., sharing data, working together, running parallel programs at the same time)
  • 5 minutes

• Share your idea with your neighbour
• Share with the group
Breakout groups

- Move to an area of the room to work on a program for a specific domain
  - Frequent personal transportation
  - Infrequent personal transportation
  - Freight
- Share ideas and work together
- Try to come up with ideas for different types of behavior
  - Efficient use, purchasing, mode change
- For each idea, include idea for collaboration
- 20 minutes
- Present top 1-2 ideas to the whole group