



CPCRN
Cancer Prevention and
Control Research Network

Using the Stages of Implementation Completion Measure as a Model for Health Policy Interventions

Jennifer Leeman, DrPH

Associate Professor, School of Nursing

Kathleen Knocke, MPH

Doctoral Student, Gillings School of Global Public Health

University of North Carolina at Chapel Hill

Allison Myers, PhD, MPH

2017-2018 Health Policy Fellow, Robert Wood Johnson Foundation

Executive Director, Counter Tools



This presentation was supported by Cooperative Agreement Number U48-DP001944 from the Centers for Disease Control and Prevention. The findings and conclusions in this presentation are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Policy interventions are critical to improving health behaviors

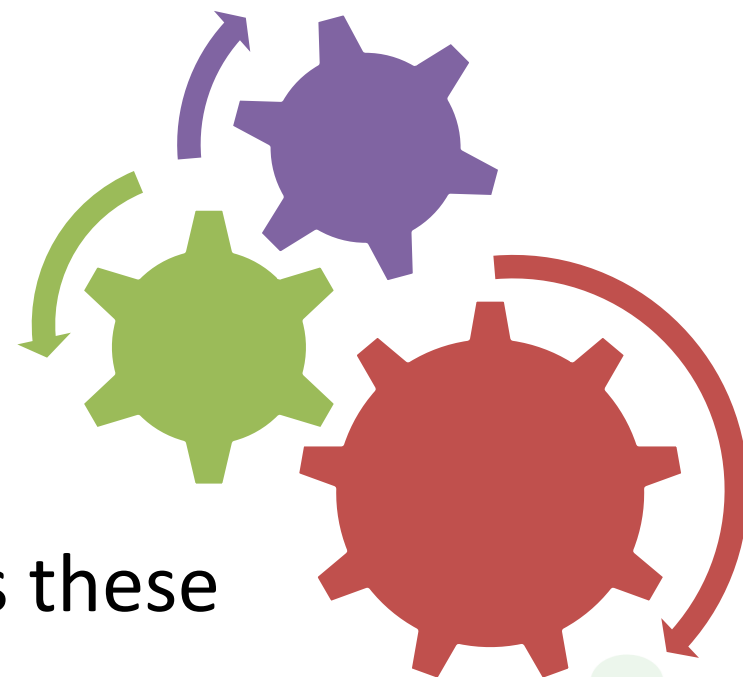


Development of policy implementation strategies is limited by a lack of measures of their effectiveness

Limits to policy enactment as measure of success

- Is uncertain
- May takes years to achieve
- Results from many inter-related factors

Measuring **intermediate outcomes** overcomes these challenges



Our Evaluation Model

Policy Implementation Strategies

- Training
- Technical Assistance
- Tools

**Coordinator
Self-Efficacy**

Intermediate Outcomes (Mechanisms)

Partnership Policy Change Process Completion (PCPC)

Document local problem
Formulate evidence-
informed solutions
Engage partners
Raise awareness
Persuade decision makers

Longer Term Outcomes

- Media coverage
- Policy drafted
- Policy proposed
- Policy enacted

Leeman, Myers, et al. 2017

Policy Change Process Completion: Measure Development

Modeled on Saldana et al.'s **Stages of Implementation Completion Measure** which

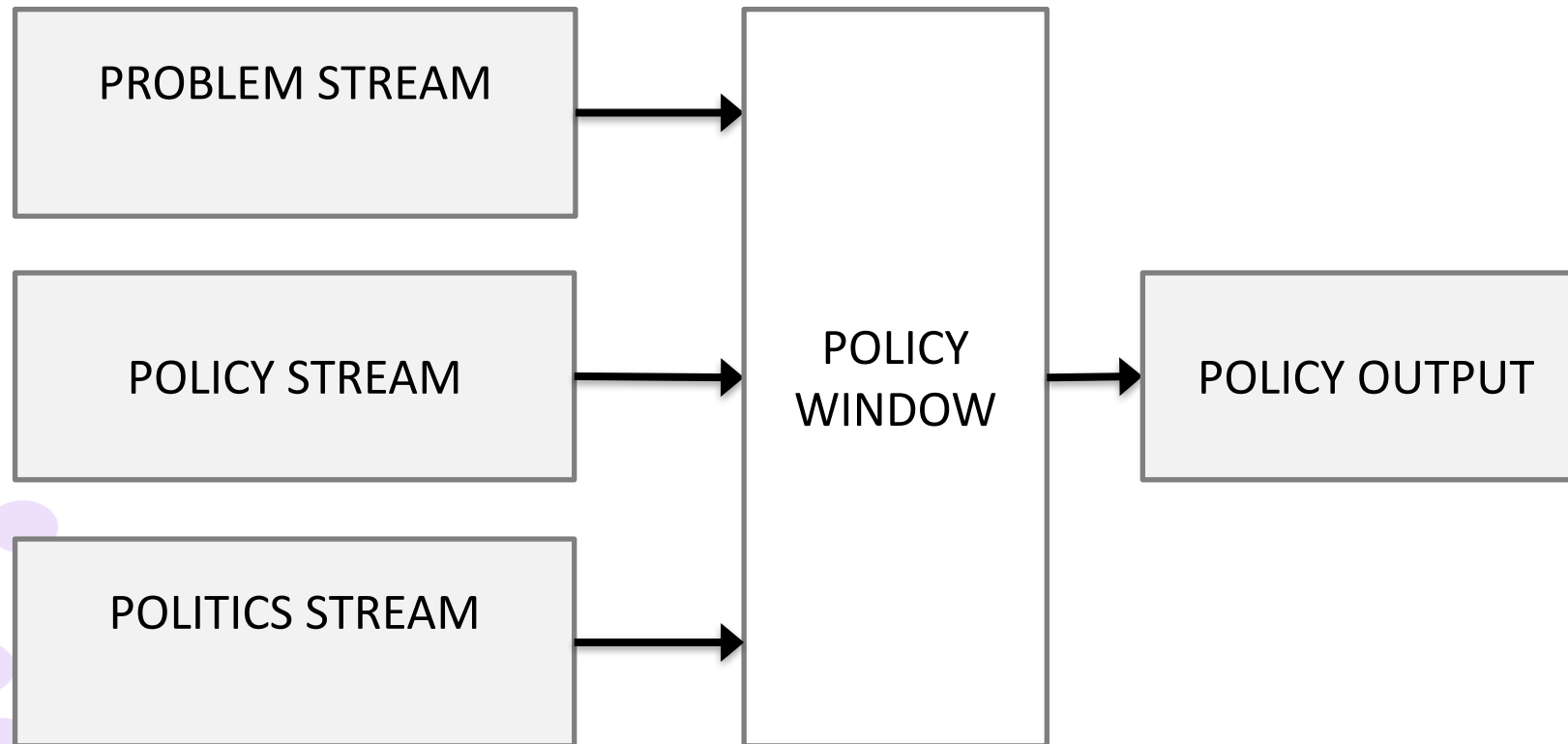
- Assesses movement through stages: plan, implement, sustain intervention
- Good reliability overall
- Successfully differentiates groups that did or did not receive implementation strategies
- Predicts full implementation when early stages are completed more quickly
- Broad applicability across different programs/settings

Chamberlain, Brown, & Saldana, 2011; Saldana et al. 2014; .Brown et al. 2014; Saldana et al. 2012

How we developed our measure of Policy Change Process Completion

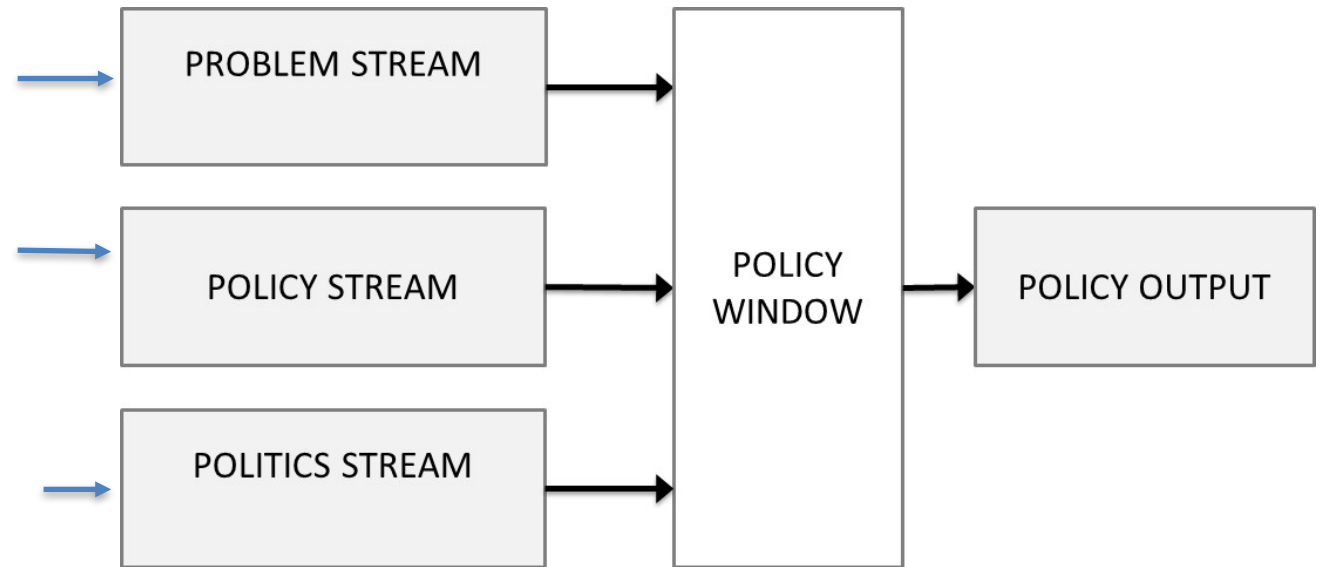
1. Identified core processes
2. Conducted formative work to specify activities within each process
3. Pilot tested to refine
4. Developed proposal to assess construct and predictive validity

Step 1 - Identified Core Processes



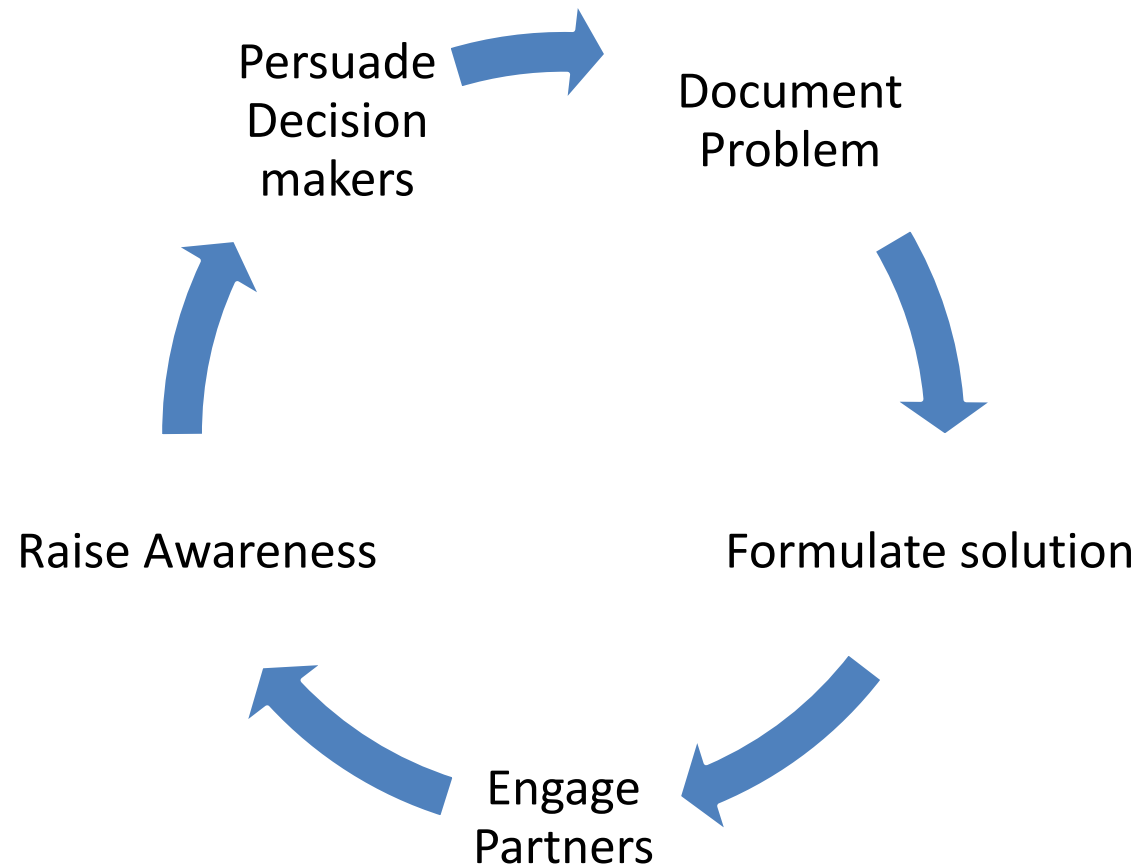
Step 1 - Identified 5 Policy Change Processes Needed to Activate Kingdon's 3 streams

- Document local problem
- Formulate policy solutions
- Engage strategic partners
- Raise awareness of problems & solutions
- Persuade decision makers

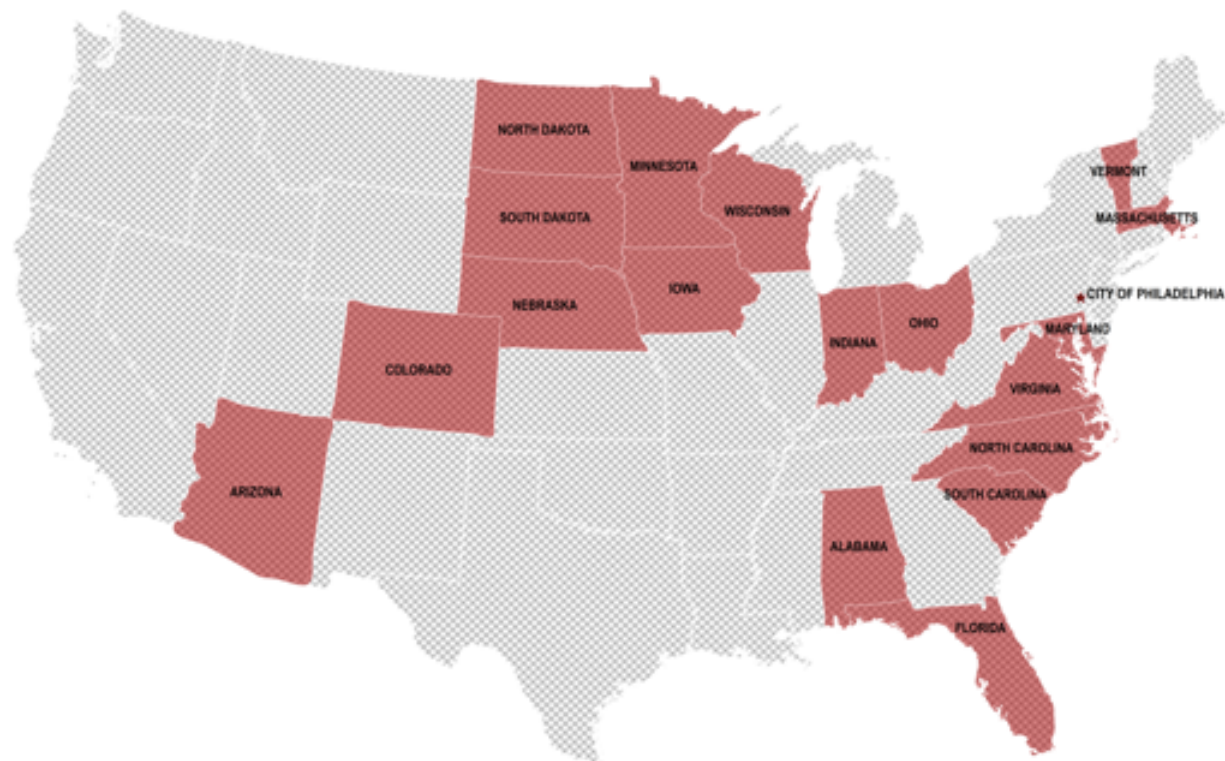


Leeman et al. 2012, 2015, & 2017

Step 1. Processes rather than stages



Steps 2-4. Partnered with Counter Tools



Counter Tools provides implementation strategies to communities in 18 states



**COUNTER
TOBACCO.ORG**

Countering Tobacco Marketing in the Retail Environment

- US tobacco industry spends **\$8.2 billion** annually on marketing in the retail environment
- Evidence-based policy interventions are available to counter POS tobacco marketing



Policy Interventions to Counter Retail Tobacco Marketing

Laws, ordinances, or resolutions to

- Regulate tobacco advertising, price, price promotion, and placement
- Reduce retailer density
- Prohibit tobacco retailers near schools and other youth-oriented facilities
- Restrict sales of flavored products



Counter Tools provides implementation strategies to support the 5 policy change processes

- Tools to collect local data (store audit and mapper)
- Guidance on evidence-based policy solutions (interventions)
- Toolkits of activities to engage partners
- Photo galleries and communication templates to raise awareness and persuade decision makers
- Training and technical assistance



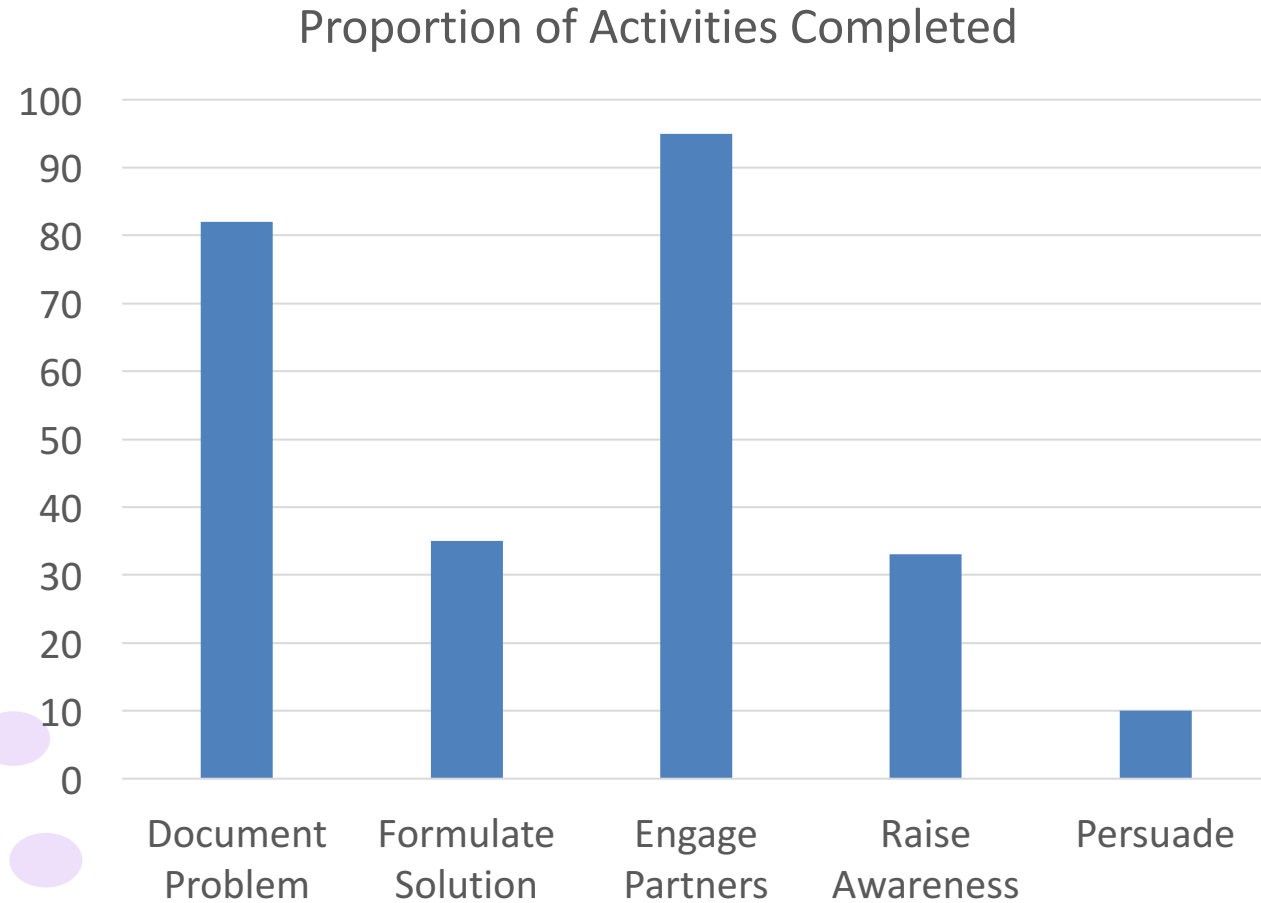
Step 2. Formative work to specify activities within each process

- One Midwestern state
- In-depth interviews with 30 individuals working to counter tobacco marketing at the point-of-sale
- Iterative meetings with Counter Tool's staff
- Drafted lists of activities related to each process
- Developed interview guide and refined through cognitive interviews with 8 tobacco control staff

Step 3. Pilot Tested to Refine

- 30 tobacco control coalitions in one southern state
- State provided funding for coalitions to work on POS tobacco marketing and contracted with Counter Tools to provide implementation strategies
- Phone interviews of partnerships' completion of policy change processes at 6 and 12 months (Dec. 2015, June 2016)
- Coded activity completion (95% interrater reliability at 12 months)

Findings –Policy Change Process Completion (100% 12-month response rate)



Examples of Findings –Policy Change Process Completion

- Document problems (4 items)
 - Completed store audits = 97%
 - Analyzed local data = 63%
- Formulate evidence-informed solutions (4 items)
 - Assess local policy = 80% completed
 - Draft policy proposal = 3% completed
- Raise awareness (4 items)
 - Participate in/hold events = 87% completed
 - Create/distribute press release = 13% completed

Leeman, Myers, et al. 2017

Year 2 of Pilot Study – Converted interview questions to an electronic survey

Process	Activity
Engage Partners	1. Created a team or subcommittee to work on promoting POS tobacco EBPIs
	2. POS tobacco EBPI is on meeting agenda of prevention or tobacco coalition or partnersh
	3. Volunteers have participated in collecting local data on the problem (e.g., store audits)
	4. One-on-one meetings have been held to engage additional partners (e.g., churches)
	5. Presentations have been made to groups to engage additional partners
Document local problem	6. Data compiled on community health behaviors and related death and disease rates
	7. GIS methods used to map local access (e.g., number and locations of tobacco retailers)
	8. GIS methods used to assess relationships between access data and demographics
	9. Audit methods used to document availability/marketing of healthy/unhealthy options
	10. Local data from all sources summarized and integrated
Formulate Evidence-Informed Solution	11. Assessed existing local and state policies
	12. Consulted with legal or policy experts to understand existing policy
	13. Consulted with legal or policy experts to select best EBPI solutions
	14. Assessed local officials' opinions of EBPI solutions
	15. Assessed community members' opinions of EBPI solutions
	16. Selected one or more EBPI solutions
	17. Drafted a policy proposal
Raise awareness	18. Planned or participated in events to raise awareness of local problem/solution
	19. Generated a press release and/or other media contact
	20. Made presentations to groups describing the local problem/solution
	21. Employed other communication strategies (e.g., promotional materials, social media)
Persuade decision makers	22. Developed a strategic plan
	23. Created a policy brief
	24. Consulted with state-level leadership about elements of policy proposal/strategic plan
	25. Met with local decision makers
	26. Presented policy proposal/strategic plan to local decision makers

Step 4. Proposal to assess construct and predictive validity

- Prospective, longitudinal design
- Collect data from 150 community partnership coordinators in 18 Counter Tools' states that have contracts with Counter Tools at four time points (baseline, 12, 24, and 36 months)

Aim 1. Establish measure's factor structure, reliability, and pragmatic value

- Categorical confirmatory factor analysis (CFA)
- CFA selected over item response theory (IRT) because better fit structural equation modeling (SEM) and study's relatively small sample (N=150)
- SIC used Rasch models to address challenges related to assessing time required to complete each "stage"
- PCPC assesses completion speed as proportion of activities completed at each time point (for each process and overall)

Pragmatic value

- Relevant to stakeholders
- Actionable findings
- Limited burden
- Sensitivity to change
- Broad applicability

Glasgow & Riley, 2013

Aim 2. Determine measures' concurrent and predictive validity

- Structural Equation Modeling: Higher-order factors of self-efficacy and PCPC fit to series of cross-lagged panel models to assess effects on long-term outcomes (media coverage, policy drafted, policy proposed, policy enacted)
- Control variables
 - Coordinator turnover
 - State's tobacco retail policy
 - State
 - Partnership funding diversity

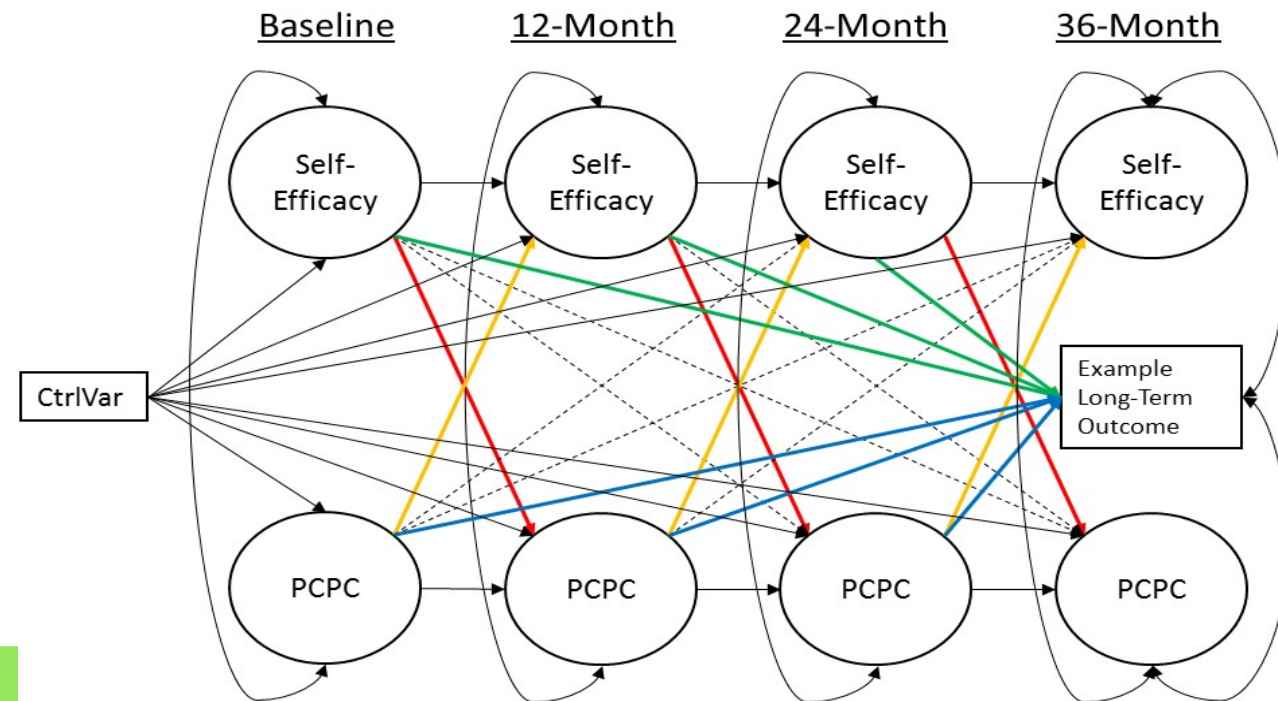


Figure 3. Path diagram of the full cross lagged panel model.

Aim 2. Determine measures' concurrent and predictive validity

- Assess whether completion of specific PCPC processes is associated with specific long-term outcomes and fit logistic regression models separately to test association of
 - “formulate evidence-informed solution” (process) to strong policy drafted (outcome)
 - “raise awareness” (process) to media coverage (outcome)
 - “persuade decision makers” (process) to policy proposed (outcome)

Practice implications of research findings

- Develop a pragmatic, broadly applicable measure to identify
 - Which policy change processes are key to success
 - Where gaps persist in those processes
 - What implementation strategies are most effective at closing the gaps
- Use to target, tailor, and refine implementation strategies for a range of health supporting policy interventions (e.g., smoke free spaces and access to healthy foods and places for physical activity).

References to our most relevant work

- **Leeman, J.**, Myers, A., Grant, J., Wangen, M., & Queen, T. (2017). The effects of implementation strategies to promote community-engaged efforts to counter tobacco marketing at the point of sale. *Translational Behavioral Medicine*. Epub ahead of print
- **Leeman, J.**, Myers, A., Ribisl, K., & Ammerman, A. (2015). Disseminating policy and environmental change interventions: Insights from obesity prevention and tobacco control. *International Journal of Behavioral Medicine*, 22, 301-311.
- **Leeman, J.**, Sommers, J., Vu, M., Jernigan, J., Payne, G., Thompson, D...Ammerman, A. (2012). An evaluation framework for obesity prevention policies. *Preventing Chronic Disease*, 9, E120.