SPF-SIG Cross-site Evaluation

Linking State, Community, and Intervention Factors with Population Changes in the SPF SIG Cross-site Evaluation

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Strategic Prevention Framework (SPF) goals

1. Prevent the onset and reduce the progression of substance abuse, including childhood and underage drinking;
2. Reduce substance abuse-related problems in communities; and
3. Build prevention capacity and infrastructure at the state/territory and community levels

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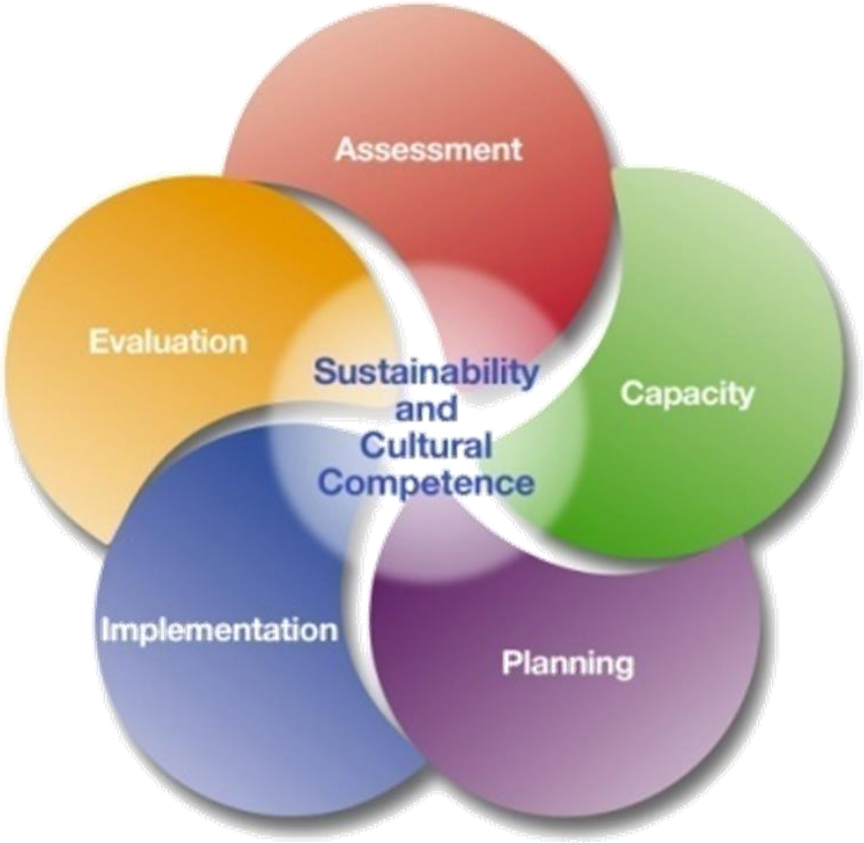
CSAP funded the States to implement the SPF model.

NIDA funded a national evaluation of SPF SIG through an interagency agreement.

The SPF model



How does SPF differ from prior Federal prevention efforts?

- There are many novel aspects of SPF, with two particularly relevant for the IOM conference theme:
  - the required use of epidemiological data to set state priorities and justify resource allocation to communities (so-called "data-driven planning")
  - reliance on population-based outcomes to estimate the initiative's effectiveness, in contrast to the more traditional reliance on program-level effects on individual participants

Who participated?

- 26 states and 2 territories
- 450 communities
- 2,534 interventions

Research questions relying on population data

- Both within and across states, did SPF-funded intervention activities lead to community-level improvements in the priorities targeted by those communities?
- What accounted for variation in outcome performance across funded communities?

Criteria used for including states and outcomes

- For Community-Level Analyses:
  - At least 3 communities[1] have at least 1 pre-intervention and one year post-intervention[2] data point
- For State-Level Analyses (high coverage states only):
  - State-level data available for at least one pre-intervention and one post-intervention[2] data point

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[1]Unless communities are matched

[2]Post intervention is the first year following initial exposure to activities

Summary of community-level outcomes analyses: Pre-post (by communities)

Outcome Measure	# States Pre-Post	Better	Sig. Better	Sig. Worse
30-day alcohol use – MS/HS	174	132	79	15
Binge drinking – MS/HS	154	100	56	18
Binge drinking – young adult	47	25	14	6
Drive after drinking – MS/HS	78	56	28	4
30-day marijuana – MS/HS	7	4	3	0
ARMVC measure – all ages	113	70	--	--
All other outcome measures[1]	141	83	36	8

[1]Communities counted according to the number of measures they contribute

Summary of community-level outcomes analyses: Pre-post (by states)

Outcome Measure	# States Pre-Post	Better	Sig. Better	Sig. Worse
30-day alcohol use – MS/HS	16	14	11	1
Binge drinking – MS/HS	12	10	8	2
Binge drinking – young adult	3	2	1	1
Drive after drinking – MS/HS	6	5	3	0
30-day marijuana – MS/HS	2	2	2	0
ARMVC measure – all ages	8	8	--	--
All other outcome measures[1]	21	16	10	1

[1]States counted according to the number of measures they contribute

Summary of community-level outcomes analysis results: Comparative (by states)

Outcome Measure	# states with comp comm data	# states means improved relative to comps	Sig. Better	Sig. Worse
30-day alcohol use – MS/HS	7	2	2	0
Binge drinking – MS/HS	4	3	1	0
Binge drinking – young adult	1	1	0	0
Drive after drinking – MS/HS	3	3	1	0
30-day marijuana – MS/HS	2	2	2	0
ARMVC measure – all ages	4	4	--	--
All other outcome measures[1]	15	11	2	0

[1]States counted according to the number of measures they contribute

Summary of State-level outcomes analyses: Pre-post *

Outcome Measure	N of States	N with greater rel. decrease than U.S.
30-day alcohol use – HS students	7	5
Binge drinking – HS students	7	5
Binge drinking – young adults or adults	7	7
Driving after drinking – HS students	4	4
% MVC Fatalities that are alcohol-related	4	2

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*For 7 high coverage states (Guam and Palau not included)

General assessment of patterns observed in outcomes

- Favorable community-level pre-post changes were observed across most targeting communities for most measures
- In many cases, similar pre-post changes were also observed in comparison communities (or statewide)
- Even so, about 2/3 of targeting communities and states improved relative to their comparison communities
- The 7 high coverage states improved relative to the U.S. on about 4/5 of the statewide outcome measures assessed

So what explains success?

- To the extent the SPF model was effective in reducing substance abuse and its consequences, what contributed?
- 3 levels of predictors:
  - State
  - Community
  - Intervention (aggregated w/i community)

State-level predictors *

- State-level implementation
- State-level infrastructure
- State population

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* State-level predictors entered at level 3 in the multilevel models, which also included intercept and slope terms to adjust for effects of secular trend and pre-implementation differences across communities, plus level 2 and 3 variance terms.

Community-level predictors *

- Funding and Organizational Support
- Coalition Capacity
- SPF Step Scores
- Intervention Variables

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* Community-level predictors entered at level 2 in the multilevel models, which also included intercept and slope terms to adjust for effects of secular trend and pre-implementation differences across communities, plus level 2 and 3 variance terms.

State-level predictors

- Of the implementation scores, only Step 3 (strategic planning) predicted significant change in a targeted outcome in the multilevel models.
  - The other step implementation scores tested (1, 2 and 5) and the summary score had no observable effect.
- Of the five state infrastructure domain and two integration scores, only the EBPPP domain score predicted outcome change in the fully weighted model, and not in the anticipated direction.
- Consistent with expectations, states with larger populations had weaker community effects.

Community-level predictors

- Funding and Organizational Support
  - In general, communities that received additional prevention $ beyond their SPF funding were more likely to achieve significant reductions on their targeted outcomes. However, the results depended on the funding source.
    - Specifically, federal SAPT funds and county or municipal funds predicted significant favorable outcome change.
    - Other sources had little or no observable effect.
  - With few exceptions, organizational support variables tested had no observable effect on outcome change.

Community-level predictors

- Coalition Capacity
  - Among CP's who self-identified as coalitions, higher scores on coalition attributes predicted significantly greater reductions in one or more underage drinking outcomes.
    - Specifically, coalitions with good structure and processes in place, paid leadership, funding from other sources, membership diversity, and supportive communities achieved better outcomes.
    - A summary coalition capacity score constructed from those items was also significant.

Community-level predictors

- Intervention Variables
  - Strategy selection
    - N or % of strategies in several strategy classes – including environmental -- predicted significantly greater reduction in one or more underage drinking outcomes.
    - N or % of strategies in several domains – including society/environmental – also predicted favorable change.
    - N of interventions implemented had no observable effect, nor did N or % of interventions identified as evidence-based.

Community-level predictors

- Intervention Variables (cont.)
  - Strategy adaptation
    - Reported modifications to dosage, duration, and setting – all traditional targets of adaptation in participant-based interventions -- had no observable effect.
    - Adaptations to better meet the needs of the target population or improve cultural appropriateness predicted a favorable change in one or more underage drinking outcomes, as did the overall N or % of interventions with any type of adaptation.

Implications for the conference theme

- Do this more
- Do it better
- Explain it simply
- Protect and expand the data systems that make it possible

Questions?

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