Linking efforts with outcomes: The Strength of Community Health Programming Index

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Background

In 2004, the Missouri Foundation for Health (MFH) initiated a nine-year effort to reduce tobacco-related morbidity and mortality in Missouri through statewide tobacco control and prevention efforts. Characteristics the Tobacco Prevention and Cessation Initiative (TPCI) are as follows:

- **Multi-site initiative**- Since the first grant award, over 50 agencies and organizations have received funding.
- **Multiple strategies**- TPCI has funded several strategies including building support for a tobacco tax increase, advocating for smoke-free workplaces, implementing youth prevention programs, and increasing access to cessation resources.
- **Initiative-level evaluation**- As the initiative's evaluator, the Center for Tobacco Policy Research (CTPR) is collecting process and outcome data over the life of the Initiative.

Challenge:

How do we determine if observed health outcomes are related to this complex health initiative?

Response:

We created the *Strength of Community Health Programming Index* (SCHPI) to:

- Assess the extensiveness of TPCI efforts at the county level; and
- Link each county's SCHPI score to its tobacco-related outcomes.

Methods

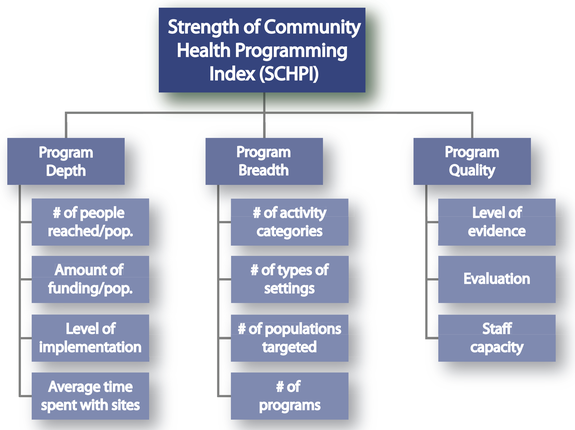
- Work group determined three constructs to assess community health programming:

Depth-	The *amount* of programming
Breadth-	The *variety* of programming
Quality-	The *evidence* for and *capacity* of programming

- Indicators were identified to measure each construct. The *number of people reached* and *amount of funding* indicators were divided by county population. All indicator variables were range standardized (RS), where:

RS case value = (case value - variable minimum)/variable range

SCHPI Constructs & Indicators



Results

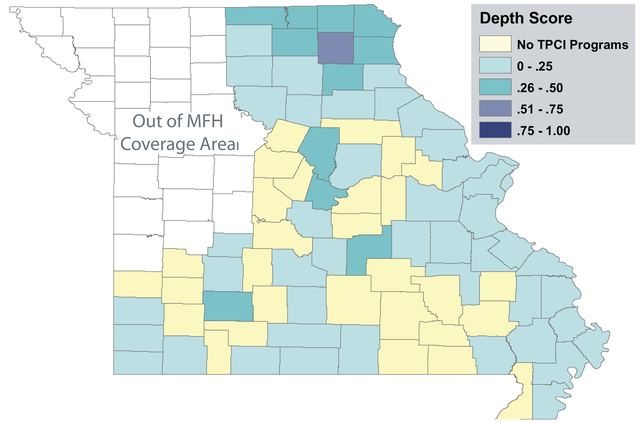
Depth and Breadth Constructs Have Good Reliability

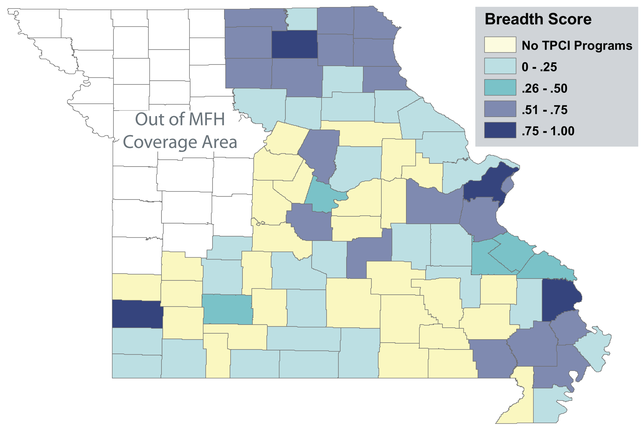
TPCI evaluation data from 2007 were used to examine the reliability of the Depth and Breadth constructs to determine whether the indicators within them are sufficiently interrelated to justify their combination in the construct. For the Depth construct, the alpha value of .720 is acceptable. The Breadth construct alpha value of .927 suggests the Breadth indicators have relatively high internal consistency.

Construct	Cronbach's Alpha	Standardized Cronbach's Alpha	Mean Inter-Item Correlations
Depth	.720	.731	.405
Breadth	.927	.925	.755

Missouri Counties Show Important Differences in Depth and Breadth

The following maps present the Depth and Breadth construct scores for each Missouri county in the MFH coverage area during 2007. Scores for each construct are the average of all respective indicators. The two maps show variance across Missouri counties. This provides evidence that the Depth and Breadth constructs are sufficiently different from each other.





Next Steps

1) Finalize Quality Construct

- Proposed indicators:

Level of evidence-	1 = No evidence for program components 2 = Evidence in the literature for program components 3 = Recommended in at least one evidence-based guideline
Evaluation-	1 = No evaluation conducted on program 2 = Monitoring of program activities 3 = Process OR outcome evaluation conducted 4 = Process AND outcome evaluation conducted
Staff capacity-	Years of experience in field Training Turnover

2) Link SCHPI Scores with Outcomes

- Calculate final SCHPI score for each county by averaging the Depth, Breadth, and Quality construct scores.
- Utilizing data from the Missouri County-level Study, link each county's SCHPI score to its tobacco-related outcomes (*e.g.*, tobacco use prevalence).
  - This will contribute to validation of the model; the higher a county's SCHPI score the better health outcomes they should have.

3) Incorporate SCHPI into TPCI evaluation plan

- Calculate the Index on a yearly basis.

Utilization

The Strength of Community Health Programming Index can be calculated for other community health interventions and across a range of geographic boundaries. Additionally, SCHPI can be useful to a variety of stakeholders.

Often the direct impact of an effort within a community is difficult to measure and changes cannot be attributed to any one intervention or activity. Through the use of SCHPI there is the potential to now segment activities and create ties between efforts that link to program and effort outcomes in a way that has not been possible before. This will allow for quicker and more responsive information as it relates to investment in programming by foundations and funders, better understanding of the impact of state health investments, and stronger evaluations that link local activities with local outcomes.

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