Measuring community change for comprehensive community initiatives

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Objectives

- Discuss a measurement system for understanding community change brought about in comprehensive community initiatives
- Explore an example of applying the measurement system
Addressing “wicked problems”

• Caused by complex set of factors that span personal and environmental conditions and are challenging to address\(^1\)

• Requires multi-level, multi-strategy intervention or comprehensive community initiatives working at the population level\(^2\)

\(^1\) Kreuter et al., 2004
\(^2\) Institute of Medicine, 2012
Challenges in evaluating comprehensive community initiatives

• Many evaluation frameworks focused on a single program, policy, or environmental change

• Difficult to isolate the impact of a single program, policy, or environmental change in this context
  • Attempts to do so may leave out important parts of the intervention that influenced the observed outcomes
Challenges in evaluating comprehensive community initiatives

- Emphasis on collective impact at the population level
- Emphasis on “moving the needle”
- Intermittent availability of data reflecting longer-term outcomes
- Need for usable evaluation information for understanding and adjustment
Components of a measurement system

- Focuses measurement on the many programs, policies, practices and environmental changes taking place
- Applies a weighting so that all things are not measured equally
- Provides information for improvement and adjustment
- Supports understanding of contribution
Components of a measurement system

- **A**: Assessing, Prioritizing & Planning
- **B**: Implementing Targeted Action
- **C**: Changing Community Conditions & Systems
- **D**: Achieving Widespread Change in Behavior & Risk Factors
- **E**: Improving Population Health & Development
Components of a measurement system

• **An operationalized definition for a primary type of activity:**

• **Community/System changes** - New or modified programs, policies, environmental changes, or practices in the community, system, or organization, related to the initiative’s goals and objectives.

  • Have occurred (and be the first occurrence)
  • Are related to the initiative’s goals and objectives
  • Brought about by people who are part of the initiative or are acting on behalf of the initiative
Components of a measurement system

Community/System Change (Intermediate Outcome)
- Programs
- Policies
- Practices

Population-Level Outcome (Longer-Term Outcome)
- BMI Levels
- Engagement in physical activity

When of sufficient:

Intensity
- Goals
- Strategy
- Duration

Penetration
- Reach
- Targets
- Sectors
- Places
## Components of a measurement system

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Item</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy  3, 4, 5</td>
<td>Providing information &amp; enhancing skills</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>Enhancing services &amp; support</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>Modifying access, opportunities, &amp; barriers</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Changing consequences</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Modifying policies &amp; systems</td>
<td>1.0</td>
</tr>
<tr>
<td>Duration  4, 5, 6</td>
<td>One-time event</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>More than once</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>Ongoing</td>
<td>1.0</td>
</tr>
<tr>
<td>Reach     5</td>
<td>Low (0-5% of the population)</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>Medium (6-20% of the population)</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>High (21% of the population)</td>
<td>1.0</td>
</tr>
</tbody>
</table>

3 Institute of Medicine, 2003  
4 Institute of Medicine, 2005  
5 Roussos and Fawcett, 2000  
6 Frieden, 2010
### Components of a measurement system

<table>
<thead>
<tr>
<th>CPP</th>
<th>Years</th>
<th>Strategy</th>
<th>Duration</th>
<th>Reach</th>
<th>Individual Intensity Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research &amp; Extension distributed nutrition information at the annual health fair</td>
<td>2008-2011</td>
<td>Providing information &amp; enhancing skills (0.1)</td>
<td>One-time event (0.1)</td>
<td>Low (0.1)</td>
<td>(0.1+0.1+0.1)=3 0.1</td>
</tr>
<tr>
<td>School adopted a policy eliminating vending machines</td>
<td>2005-Present</td>
<td>Modifying policies (1.0)</td>
<td>Ongoing (1.0)</td>
<td>Medium (0.55)</td>
<td>(1+1+0.55)=3 0.85</td>
</tr>
<tr>
<td>After-school program established a Marathon Club that takes place once a week</td>
<td>2010-Present</td>
<td>Enhancing services and support (0.55)</td>
<td>More than once (0.55)</td>
<td>Medium (0.55)</td>
<td>(0.55+0.55+0.55)=3 0.55</td>
</tr>
<tr>
<td>The Boys and Girls Club conducts a yoga program twice a week</td>
<td>2004-2007</td>
<td>Enhancing services and support (0.55)</td>
<td>More than once (0.55)</td>
<td>Low (0.1)</td>
<td>(0.55+0.55+0.1)=3 0.4</td>
</tr>
<tr>
<td>The school district passed a policy prohibiting loss of recess as a punishment.</td>
<td>2008-Present</td>
<td>Modifying policies (1.0)</td>
<td>Ongoing (1.0)</td>
<td>High (1.0)</td>
<td>(1.0+1.0+1.0)=3 1.0</td>
</tr>
</tbody>
</table>
Components of a measurement system

Distribution of Community Changes Over Time

- Community Changes
  - 2004: 0
  - 2005: 5
  - 2006: 10
  - 2007: 15
  - 2008: 20
  - 2009: 25
  - 2010: 30
  - 2011: 35
  - 2012: 40
  - 2013: 45
  - 2014: 50

Distribution of Community Changes by Duration

- One-time event: 19.6%
- More than once: 32.5%
- Ongoing: 47.9%

Example Community

- Annual Intensity Score
  - Prior to 2003: 0
  - 2003: 5
  - 2004: 10
  - 2005: 15
  - 2006: 20
  - 2007: 25
  - 2008: 30
  - 2009: 35
  - 2010: 40
  - 2011: 45
  - 2012: 50
  - 2013: 55
An example: Latino Health for All Coalition

Background:

- Created in 2008 to address health disparities in CVD and diabetes experienced by Latinos in Kansas City, KS
- Focus on nutrition, physical activity, access to health services
- 48% of Latino adults engage in no leisure time activity; 16.4% consume 5 or more servings of fruits and vegetables;
- Partners have documented policy, programs, practices and environmental changes over the history of the Coalition
### Illustrative Community and Systems Changes

<table>
<thead>
<tr>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerator units and baskets with low-cost fruits and healthy foods were placed in local tiendas (corner stores) to promote access to healthy foods.</td>
</tr>
<tr>
<td>A previously unused space at the 8th St. Park was converted to a soccer field; this was a collaboration between the Coalition and the City Parks and Recreation Department.</td>
</tr>
<tr>
<td>A training was provided to community members to promote advocacy for policy change and implementation.</td>
</tr>
<tr>
<td>Coalition staff provided training to community members and organizations on grant-writing to build capacity for sustaining their efforts.</td>
</tr>
<tr>
<td>The Coalition and the Housing Authority collaborated to implement a service to transport elderly residents to farmers’ markets and community gardens in Kansas City.</td>
</tr>
<tr>
<td>Celebrating Healthy Families held a large health fair for Latino families that provided health screenings for diabetes and linkages to follow-up services for those who need them.</td>
</tr>
</tbody>
</table>
Resulting data about implementation
Intensity of community changes and reported engagement in no leisure time activity

Percentage of adults reporting NO leisure time activity

Annual summative impact score

2009 2010 2011 2012

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Implications for research and evaluation

- A method for understanding the contributions of many stakeholders
- Opportunity to better understand the many programs, policies, practices, and environmental changes
- Future refinement of the intensity score formula through existing work