Measuring Implementation of Evidence-based Prevention to Improve Impact and Sustainability: Lessons from Communities that Care

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Objectives

- How can communities incorporate the research base for prevention science into local prevention programming?
- How can communities build prevention infrastructure to ensure implementation fidelity?
- How does Communities That Care achieve fidelity of implementation, choose evidence based prevention programs, and implement them at scale with fidelity?
Preventing Mental, Emotional and Behavioral Disorders Among Young People: Progress and Possibilities

A summary of the progress of prevention science
40 Years of Prevention Science Research Advances

Etiology/Epidemiology of Problem Behaviors
- Identify risk and protective factors that predict problem behaviors and describe their distribution in populations and communities.

Efficacy Trials
- Design and test preventive interventions to interrupt causal processes that lead to youth problems.

Prevention Services Research
- Understand how to build effective infrastructure to use prevention science to achieve community impact.

(O’Connell, Boat & Warner, 2009; Catalano et al., 2012)
Despite this Progress...

Prevention approaches that do not work or have not been evaluated are more widely used than those shown to be effective.

(Ringwalt, Vincus et al., 2009)
The Challenge

- How can we build prevention infrastructure to increase use of tested and effective prevention policies and programs **with fidelity and impact at scale**...

while recognizing that communities are different from one another and need to decide locally what policies and programs they use?
Building Prevention Infrastructure to Use the Prevention Science Research Base

Build capacity of local coalitions to reduce common risk factors for multiple negative outcomes through:

- Assessing and prioritizing epidemiological levels of risk, protection and problems
- Choosing proven programs that match local priorities
- Implementing chosen programs with fidelity to those targeted
Communities That Care: A Tested and Effective System for Community Wide Prevention

CTC is a proven method to build community commitment and capacity to prevent underage drinking, tobacco use, and delinquent behavior including violence.

- Idea developed in 1988, 15 years of implementation and improvement through community input prior to randomized trial
- CTC has been tested in a randomized controlled trial involving 12 pairs of matched communities across 7 states from Maine to Washington.
- CTC’s effects have been independently replicated in a statewide test in Pennsylvania.
Community Youth Development Study (CYDS): A Test of Communities That Care

24 incorporated towns
~ Matched in pairs within state
~ Randomly assigned to CTC or control condition

5-year implementation phase

3-year follow-up post intervention

Longitudinal panel of students
~ N=4,407- population sample of public schools
~ Surveyed annually starting in grade 5
Research Support from:

**Fundees**
- National Institute on Drug Abuse
- Center for Substance Abuse Prevention
- National Institute of Mental Health
- National Institute on Alcohol Abuse and Alcoholism
- National Cancer Institute
- National Institute on Child Health and Human Development

**State Collaborators**
- **Colorado** DHS Alcohol & Drug Abuse Division
- **Illinois** DHS Bureau of Substance Abuse Prevention
- **Kansas** Dept. of Social & Rehabilitation Services
- **Maine** DHHS Office of Substance Abuse
- **Oregon** DHS Addictions & Mental Health Division
- **Utah** Division of Substance Use & Mental Health
- **Washington** Division of Behavioral Health & Recovery

**Funders**
- National Institute on Drug Abuse
- Center for Substance Abuse Prevention
- National Institute of Mental Health
- National Institute on Alcohol Abuse and Alcoholism

**Support from**
- Colorado
- Illinois
- Kansas
- Maine
- Oregon
- Utah
- Washington
CYDS Timeline: Youth Outcomes

**April '03**
Start of Study

**Spring '06**
3 years of CTC
2nd year of programs

**Spring '07**
4 years of CTC
3rd year of programs

**Spring '08**
Completed Year 5 of the study
End of CYDS funding and TA

**Spring '09**
No CYDS funding or TA for 1 year

**Spring '11**
No CYDS funding or TA for 3 years

**Grade 7**
Targeted risk
Delinquency (initiation)

**Grade 8**
Increased protection
Delinquency (initiation & prevalence)

**Spring '08**

**Grade 10**
Targeted risk
Delinquency (initiation & prevalence)

**Grade 12**

Communities That Care
Builds Prevention Infrastructure

Develops capacity to:

- Build coalition of diverse stakeholders
- Assess and prioritize risk, protection, and behavior problems with a student survey
- Address locally prioritized risks with tested, effective preventive interventions
- Support/sustain high fidelity implementation of chosen tested, effective preventive interventions with impact at scale
Communities That Care: What is required?

- Commitment of key leaders/community members
- Funding for a community coordinator
- Training in CTC strategy and monitoring CTC implementation
- Weekly phone technical assistance, 2 site visits a year
- Assessment survey every two years
- Funding for selected programs
- Training in selected programs
- Fidelity and “reach” monitoring of selected programs
CTC Coalition Capacity Building Trainings

1. Key Leader Orientation
2. Community Board Orientation Training
3. Community Assessment Training
4. Community Resource Assessment Training
5. Community Planning Training
6. Community Program Implementation Training
## Communities That Care Process and Timeline

<table>
<thead>
<tr>
<th>Process</th>
<th>Evaluation</th>
<th>Measurable Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assess readiness, Mobilize the community</td>
<td>Increase in priority protective factors</td>
<td></td>
</tr>
<tr>
<td>• Assess risk, protection and resources,</td>
<td>Increase in positive youth development</td>
<td></td>
</tr>
<tr>
<td>• Develop strategic plan</td>
<td>Decrease in priority risk factors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reduction in problem behaviors</td>
<td></td>
</tr>
<tr>
<td>Implement and evaluate tested, effective prevention strategies</td>
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</tbody>
</table>

### Vision for a healthy community

<table>
<thead>
<tr>
<th>6-9 mos</th>
<th>1 year</th>
<th>2-5 yrs</th>
<th>3-10 yrs</th>
<th>10-15 yrs</th>
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**Communities That Care Process and Timeline**
1. Implementation Fidelity of CTC

CTC Milestones and Benchmarks Assess key components of CTC strategy

- Goals, steps, actions, and conditions needed for CTC implementation to build prevention infrastructure
CTC Milestones & Benchmarks
Capacity Building and Assessment

- Listed in CTC training manuals and discussed in training workshops
- Incorporated into the Community Coordinator job performance objectives
- Reviewed by technical assistance providers and Coordinators during weekly phone calls
- Assessed by community coordinator, CYDS TA Staff, CTC trainer
Examples of CTC
Milestones & Benchmarks

Phase 1: Readiness for CTC

- Milestone: The community is ready to begin CTC
  - Benchmark: A Key Leader “Champion” has been identified to guide the CTC process

Phase 5: Implementing the Community Action Plan

- Milestone: Implementers of evidence based programs, policies, or practices have the necessary skills, expertise, and resources to implement with fidelity
  - Benchmark: Implementers have received needed training and technical assistance
CTC Implementation Fidelity was Maintained over Time

<table>
<thead>
<tr>
<th>Phase</th>
<th>% of Milestones Completed Across Communities &amp; Raters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1.5</td>
</tr>
<tr>
<td>1</td>
<td>89</td>
</tr>
<tr>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>96</td>
</tr>
<tr>
<td>5</td>
<td>90</td>
</tr>
</tbody>
</table>
2. CTC Youth Survey

- Assesses young peoples’ experiences and perspectives.
- Provides valid and reliable measures of risk and protective factors across state, gender, age and racial/ethnic groups. (Arthur et al., 2002; Glaser et al., 2005)
- Identifies levels of risk and protective factors and substance use, crime, violence and depression for state, district, city, school, or neighborhood.
- Provides a foundation for selection of appropriate tested, effective actions.
- Monitors effects of chosen actions by repeating surveys every two years.

The CTC Youth Survey is in the public domain
www.communitiesthatcare.net
Why Assess Local Risk?

Risk Profile A

Survey Participation Rate 2002: 79.7%
Communities have Different Priority Risks

Risk Profile B

Percentage of Youth at Risk

- Low Neighborhood Attachment
- Community Disorganization
- Laws & Norms Favor Drug Use
- Perceived Availability of Drugs
- Perceived Availability of Handguns
- Poor Family Management
- Family Conflict
- Family History of Antisocial Behavior
- Parent Attitudes Favorable to ASB
- Parent Attitudes Favor Drug Use
- Academic Failure
- Low Commitment to School
- Rebeliousness
- Early Initiation of ASB
- Early Initiation of Drug Use
- Attitude Favorable to ASB
- Attitude Favorable to Drug Use
- Perceived Risk of Drug Use
- Interaction with Antisocial Peers
- Friends’ Use of Drugs
- Rewards for ASB
- Depressive Symptoms
- Intention to Use Drugs
- Gang Involvement
- Total Risk

Communities have different priority risks.
Communities Targeted a Variety of Risk Factors

<table>
<thead>
<tr>
<th>RISK FACTORS</th>
<th>CTC Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laws and norms favorable to drug use</td>
<td></td>
</tr>
<tr>
<td>Low commitment to school</td>
<td>X</td>
</tr>
<tr>
<td>Academic failure</td>
<td>X</td>
</tr>
<tr>
<td>Family conflict</td>
<td>X</td>
</tr>
<tr>
<td>Poor family management</td>
<td>X</td>
</tr>
<tr>
<td>Parental attitudes favorable to problem behavior</td>
<td>X</td>
</tr>
<tr>
<td>Antisocial friends</td>
<td>X</td>
</tr>
<tr>
<td>Peer rewards for antisocial behavior</td>
<td>X</td>
</tr>
<tr>
<td>Attitudes favorable to antisocial behavior</td>
<td>X</td>
</tr>
<tr>
<td>Rebelliousness</td>
<td>X</td>
</tr>
<tr>
<td>Low perceived risk of drug use</td>
<td>X</td>
</tr>
</tbody>
</table>
### Community Choice Results in CTC
Communities Implementing Different Tested-effective Programs

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School-Based</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Stars Core</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Life Skills Training (LST)</td>
<td>2</td>
<td>4*</td>
<td>5*</td>
<td>5*</td>
</tr>
<tr>
<td>Lion’s Quest SFA (LQ-SFA)</td>
<td>2</td>
<td>3</td>
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<td>3</td>
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<tr>
<td>Olweus Bullying Prevention Program</td>
<td>-</td>
<td>2*</td>
<td>2*</td>
<td>2*</td>
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<tr>
<td>Program Development Evaluation Training</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Project Alert</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Project Northland-Class Action</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1*</td>
</tr>
<tr>
<td>Towards No Drug Abuse (TNDA)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td><strong>After-School</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big Brothers/Big Sisters</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Participate and Learn Skills (PALS)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Stay SMART</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tutoring (generic programs)</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Valued Youth Tutoring Program</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td><strong>Parent Training</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Matters</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Guiding Good Choices</td>
<td>6</td>
<td>7*</td>
<td>8*</td>
<td>7</td>
</tr>
<tr>
<td>Parenting Wisely</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Parents Who Care</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Strengthening Families 10-14</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
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<tr>
<td><strong>Total number of programs</strong></td>
<td>27</td>
<td>38</td>
<td>37</td>
<td>39</td>
</tr>
</tbody>
</table>

*Program funded through local resources in some communities

(Fagan et al., 2009)
The Challenge:

- Measure fidelity across a range of programs
- Encourage local ownership, high fidelity, and sustainability of prevention programs
3. Program Implementation Monitoring

All CTC sites were expected to achieve high levels of fidelity:

- **Adherence**: implementing the core content and components
- **Delivery of Sessions**: implementing the specified number, length, and frequency of sessions
- **Quality of Delivery**: ensuring that implementers are prepared, enthusiastic, and skilled
- **Participant Responsiveness**: ensuring that participants are engaged and retaining material

(Fagan et al., 2009)
Fidelity Assessment Checklists

- Obtained from developers (9) or created by research staff (7)
- Provided similar information across programs
- Checklists were completed by program staff, coalition members, and reviewed locally as well as analyzed at the UW
Building Capacity to Achieve High Fidelity

- Local monitoring and action
  - Community Program Implementation Training
  - CTC coalitions routinely tracked implementation
  - CTC coordinators and agency administrators provided implementers with feedback
  - Changes were made as necessary

- External monitoring/technical assistance
  - Regular telephone, email, and in-person TA to CTC coordinators and coalitions
  - Semi-annual reports summarized program successes, challenges & potential solutions
Building Commitment to Fidelity through Observation

- Coalition members and local volunteers observed 10-15% of most programs.
- Completed fidelity checklists to assess adherence.
  - Rate of agreement w/implementers was 92-97%
Adherence Rates
Averaged across four years

Percentage of material taught or core components achieved

- School-based
- After-School
- Parent Training

60% fidelity standard
Participant Responsiveness  
Averaged across all years

Average score on 2 items reported by program observers

- School-based
- After-School
- Parent Training

<table>
<thead>
<tr>
<th>Program</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>LST</td>
<td>4.0</td>
</tr>
<tr>
<td>All Stars</td>
<td>4.5</td>
</tr>
<tr>
<td>SFA</td>
<td>4.0</td>
</tr>
<tr>
<td>Alert</td>
<td>3.5</td>
</tr>
<tr>
<td>BPP</td>
<td>5.0</td>
</tr>
<tr>
<td>SMART</td>
<td>5.0</td>
</tr>
<tr>
<td>PALS</td>
<td>4.5</td>
</tr>
<tr>
<td>SFP</td>
<td>4.0</td>
</tr>
<tr>
<td>GGC</td>
<td>4.0</td>
</tr>
<tr>
<td>PWC</td>
<td>3.5</td>
</tr>
</tbody>
</table>
Building Prevention Infrastructure: Capacity and Commitment Supports and Sustains Effective Prevention with Fidelity and Impact at Scale

- Build capacity and provide tools (e.g., CTC Milestones and Benchmarks) to achieve effective prevention infrastructure.
- Build capacity and provide tools to assess and prioritize local risk, protection, and youth outcomes, match priorities to evidence-based programs, and repeat assessment periodically.
- Build capacity and provide tools to ensure program fidelity and engagement of target population.
- Create citizen-advocates-scientists to affect risk, protection, substance use, delinquency, and violence community-wide.
CTC original materials are available for download and the new web streamed version of eCTC is described at:

http://www.communitiesthatcare.net

www.sdrg.org
What Percent of the Population Must Be Reached to Achieve Collective Impact?

CTC Results Achieved by Reaching 20-50%

<table>
<thead>
<tr>
<th>Program Type</th>
<th>2004-05</th>
<th>2005-06</th>
<th>2006-07</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>School-Based</td>
<td>1432</td>
<td>3886</td>
<td>5165</td>
<td>5705</td>
</tr>
<tr>
<td>After-school</td>
<td>546</td>
<td>612</td>
<td>589</td>
<td>448</td>
</tr>
<tr>
<td>Parent Training</td>
<td>517</td>
<td>665</td>
<td>476</td>
<td>379</td>
</tr>
</tbody>
</table>

Note: Total eligible population of 6th, 7th, and 8th-grade students in 2005-06 was 10,031.

(Fagan et al., 2009)
Should Public Systems, for example Juvenile Justice and Child Welfare, Care about Community-based Prevention?
Number Exposed to 10 or more Risk Factors
Foster Care and Juvenile Justice v. General Population
Medium Sized City

6th, 8th, 10th, 12th grade youth
Total N surveyed = 4842

Ever FC or JJ, High risk, 242
71% of system involved kids are high risk
Never FC or JJ, High risk, 1582
35% of non-system involved kids are high risk

Never FC or JJ, Low risk, 2918
Ever FC or JJ, Low risk, 100

FC=Foster care
JJ= Juvenile justice
87% of Youth Exposed to 10 or more Risk Factors are not in Foster Care or Juvenile Justice

- Never in FC or JJ, High risk, 242
- Never in FC or JJ, Low risk, 1582
- Ever in FC or JJ, Low risk, 2918
- Ever in FC or JJ, High risk, 100

High risk youth
- Ever in FC or JJ
  - High risk youth
  - Ever in FC or JJ 13%
Without Effective Prevention, the Public System may be Overwhelmed: Need to Reduce the Size of the Community Risk Reservoir
Current Efforts Underway to Disseminate CTC more Broadly in the U.S.

• CTC for youth 0-10 to promote child well-being and reduce abuse and neglect
• Providence, RI combining CTC processes with system reform for public child serving agencies and schools
• Created eCTC materials for web delivery
• Piloting eCTC in SW Practicum Agencies, Utah, Chicago
• Established Center for CTC at UW
CTC coalitions selected evidence based programs to address their priority risk factors from a menu of programs* that all:

- Were evaluated in at least 1 high-quality study
- Showed significant effects on risk/protective factors, drug use, delinquency, or violence
- Targeted schools, families and children in grades 5-9 [the age focus of the study]
- Provided materials and training

*As described in the CTC Prevention Strategies Guide; now recommending the Blueprints for Healthy Youth Development list