



Community-level Impact of a Strategic Prevention Framework The CTC Model and Evidence-based Programs in Pennsylvania

Mark Greenberg
NIH D & I Conference
March 2011



Investigators and Authors:

Mark Feinberg	Mark Greenberg
Brian Bumbarger	Wayne Osgood
Louis Brown	Nate Riggs
Ty Ridenour	Damon Jones
Jennifer Sartorious	Daniel Bontempo
Brendan Gomez	Richard Puddy
Michael Cleveland	

Collaborative Policy Innovators:

Mike Pennington Clay Yeager

This research is supported by a grant from the Pennsylvania Commission on Crime and Delinquency

Special thanks to the staff at PCCD



PENNSYLVANIA
COMMISSION ON CRIME AND DELINQUENCY

Why don't communities see greater success in prevention?

- Chasing money rather than outcomes
- Reliance on untested (or ineffective) programs
- Poor implementation quality
- Inability to sustain programs
- No single guiding philosophy (many separate but disconnected efforts)
- Little accountability
- The lack of good data to drive decision-making and resource allocation

There are a number of proven-effective delinquency prevention programs

- Effectiveness demonstrated in rigorous scientific evaluations (randomized controlled trials)
- Large longitudinal studies or multiple replications (results that are generalizable)
- Significant effects on aggression, youth violence, delinquency, substance use, school failure

These evidence-based programs give us great confidence that if implemented well they will be effective at promoting better youth outcomes

But.....

- EBPs still represent the minority of prevention programs
- Research has shown that many (most?) aren't being implemented with sufficient quality or fidelity
- Few programs measure or monitor implementation fidelity and quality
- Policy work is needed to capture & redistribute dollars saved through prevention
- Programs are often “pull-out” and operate singularly
- Sustainability remains a challenge – no permanent infrastructure

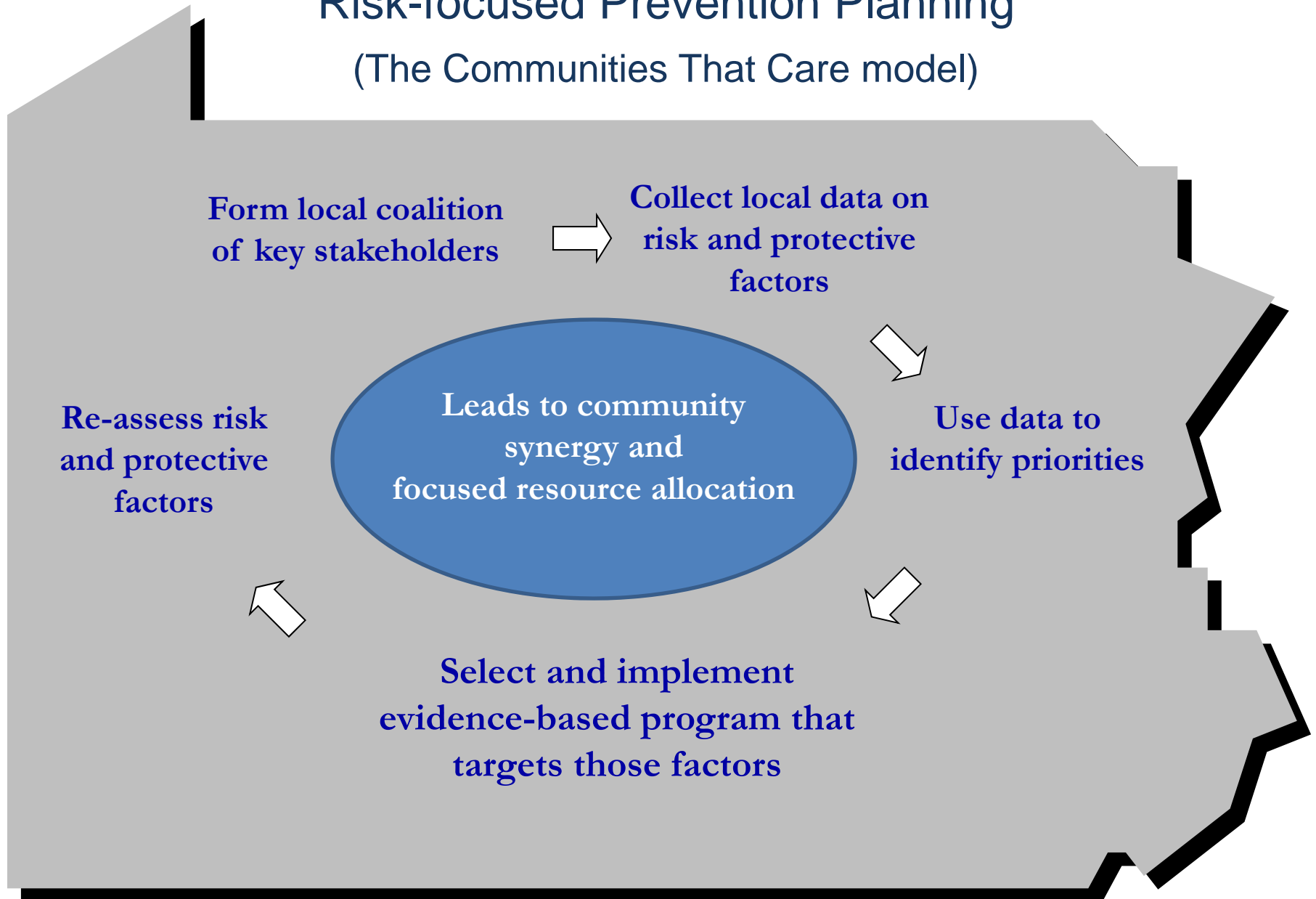
The challenges

- Having community-based prevention work be more focused and strategic
- Increase (carefully planned) adoption of EBPs by more communities
- Ensure high quality implementation
- Sustain programs long-term

Creating Fertile Ground for EBPs

Risk-focused Prevention Planning

(The Communities That Care model)



What is CTC?

- An “operating system” to mobilize communities and agency resources
- Follows a public health model of preventing poor outcomes by reducing associated risk factors and promoting protective factors
- Coalition model that is data-driven and research-based
- Follows a specific sequence of steps
- Focuses on the use of targeted resources and evidence-based prevention programs

Outcomes Targeted by CTC

- Delinquency
- Substance Abuse
- Violence
- Academic Failure & Dropout
- Teen Pregnancy

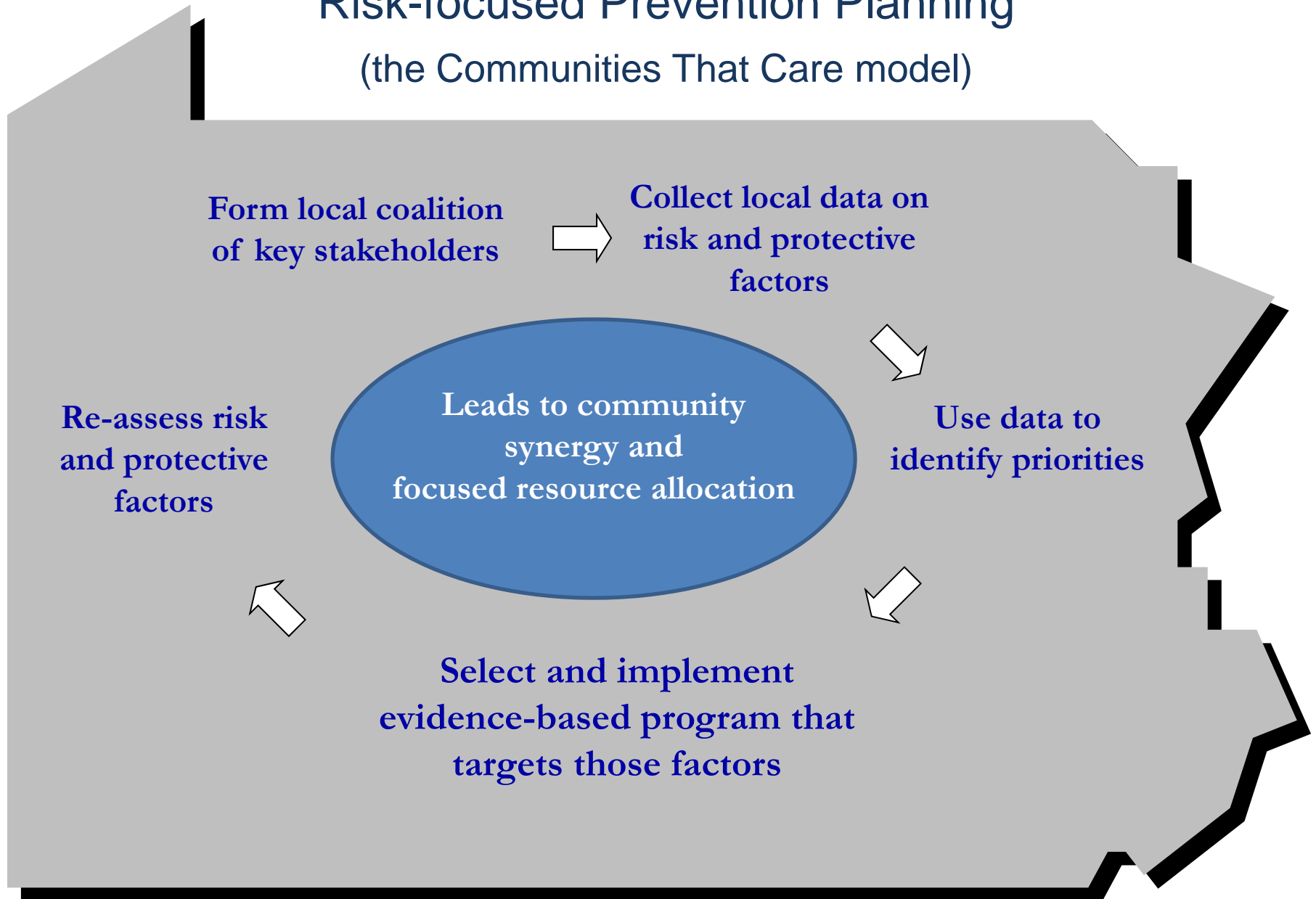
How is CTC different?

- Uses local data to set priorities and focus resources
- Starts with quantifiable goals
- Engages the whole community
- Focuses on the use of proven-effective programs
- Has a built-in process of assessment and accountability

Creating Fertile Ground for EBPs

Risk-focused Prevention Planning

(the Communities That Care model)



Assessing and Prioritizing Risk and Protective Factors

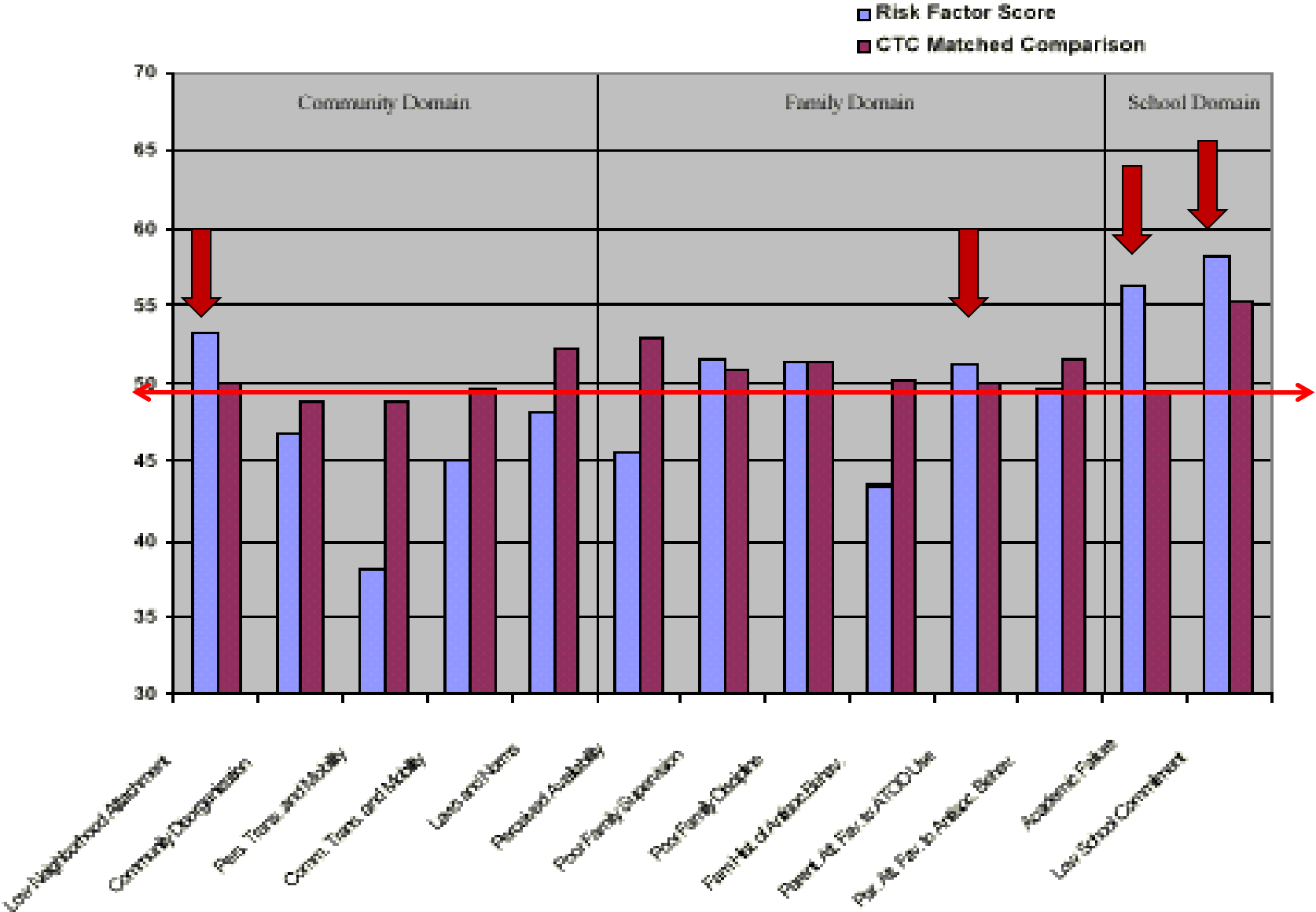
- Which factor(s) does the community want to address?
- Which are most prevalent?
- Which can be addressed with available resources?
- Which are most amenable to change?
- Which are politically popular?
- Which will have the greatest impact on outcomes?

Pennsylvania Youth Survey

PAYS

- A voluntary survey conducted in schools every other year for youth in 6th, 8th, 10th, and 12th grades.
- Adapted from the *Communities That Care Youth Survey*, with additional questions added to gather data on areas such as gambling, prescription drug abuse and other anti-social behaviors.
- Administered Every Two Years to ~ 20,000 students in PA.
- All CTC Sites (in addition) are required to use it.

Graph 7: Risk Factor Scores for Centre County: Community, Family, and School Domains.



Resource Assessment

- What resources currently exist to address the prioritized risk and protective factors?
- Are these research- or evidence-based?
- Is there evidence that existing efforts are working?

PA Communities That Care

1994 PCCD releases first CTC funding announcement

1 year planning

3 years program implementation

Later: Additional "sustainability" funding available

By 2010, Over 120 CTC Sites have receiving training, TA, and 3 years of support

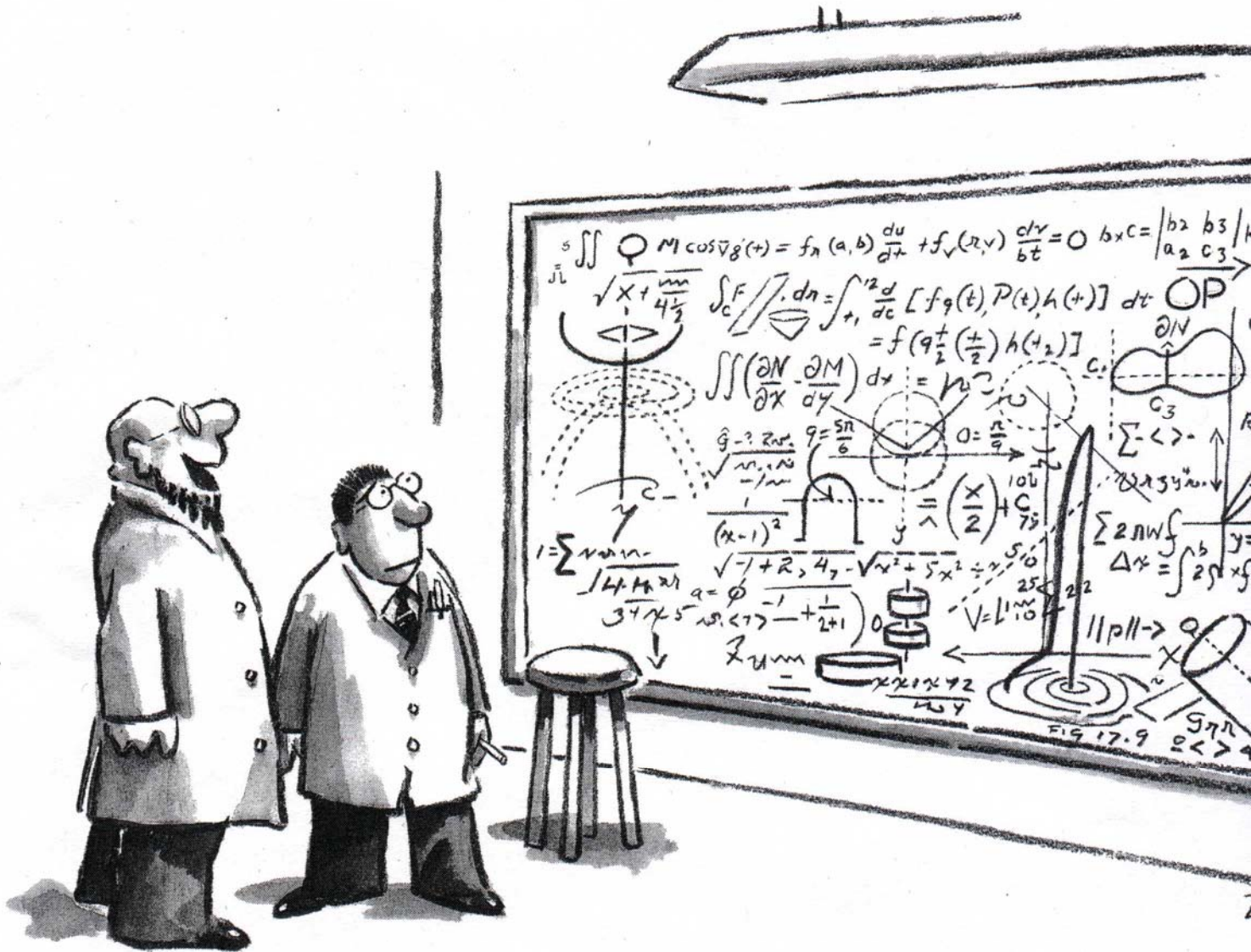
Persisted through 4 Governors & PSU PRC's first decade

CTC in Pennsylvania

- PA has become a leader in the development of science-based prevention programming
- It has the largest implementation of CTC in the U.S.
- Dedicated regional technical assistance for CTC to improve coalition functioning
- New technical assistance infrastructure for evidence-based programs (EPISCenter)
- It afforded our research group the opportunity to study both processes and outcomes of CTC in wide dissemination of the model

Research At Multiple Levels (1998-2011)

- Reports of Local CTC Team Members
- Reports by State Technical Assistants
- Youth Report of Risk, Protective Factors and Outcome



"Hey, no problem!"

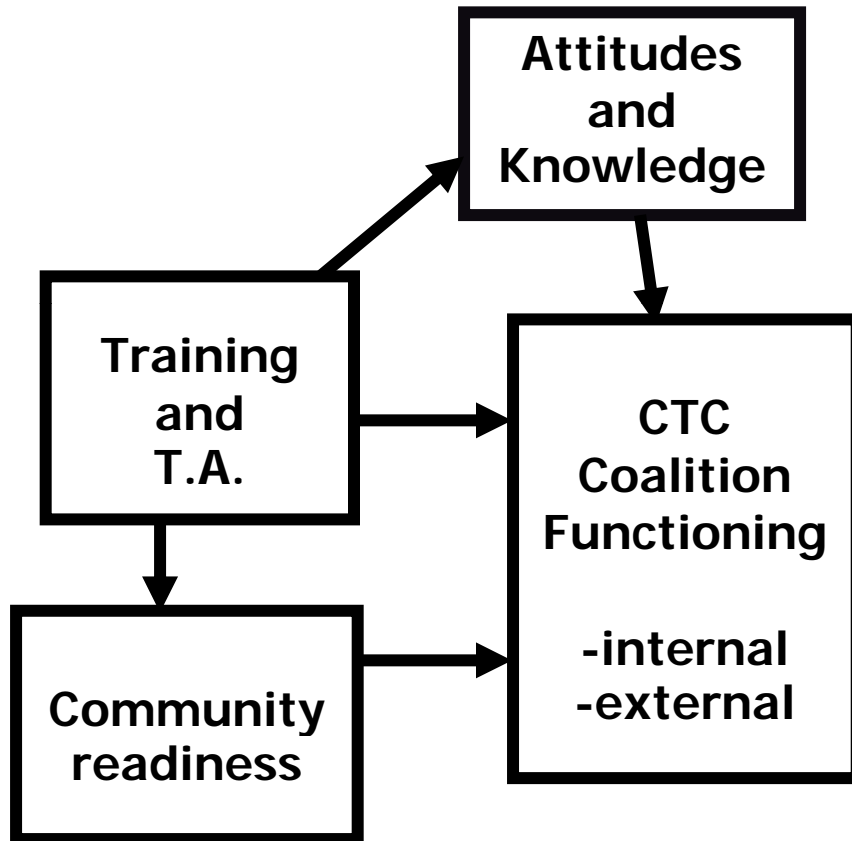
Evaluation 1

PSU Evaluation began in 1998

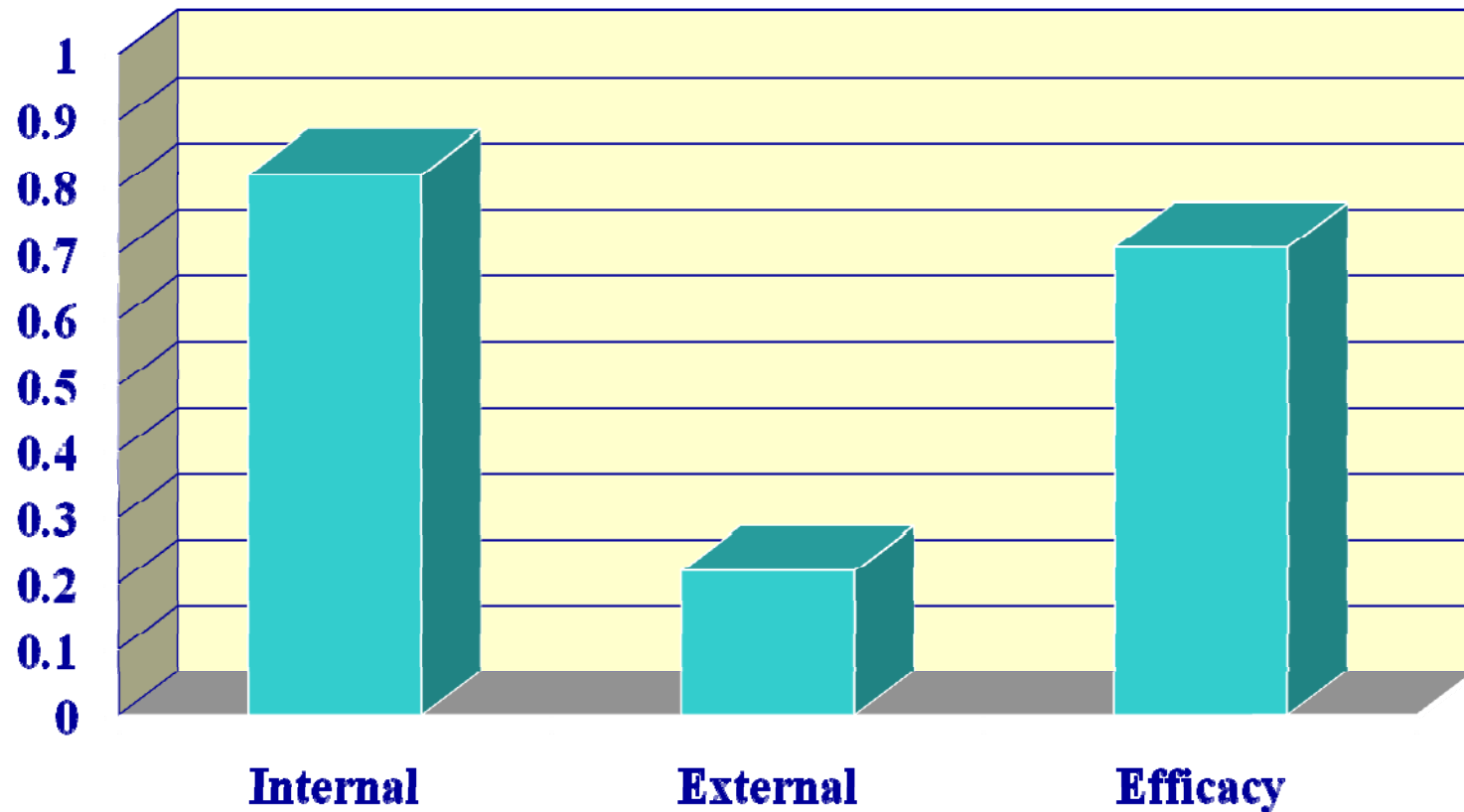
Process study of first 21 sites

Interview 10-15 key leaders per site

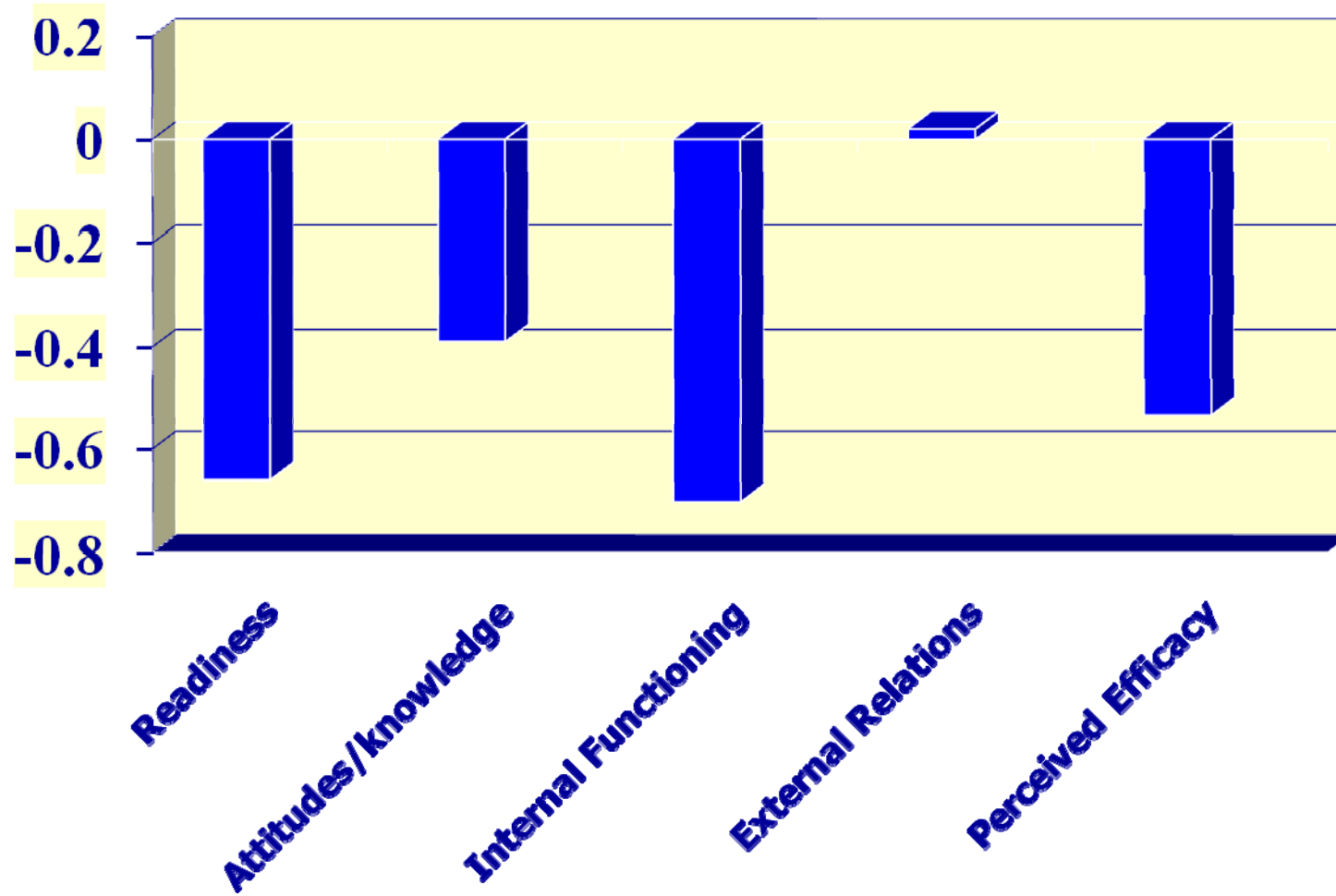
PSU Model of CTC: Version 1.0



Community Readiness: Correlations with Functioning/Efficacy



Barriers to Implementation: Turnover

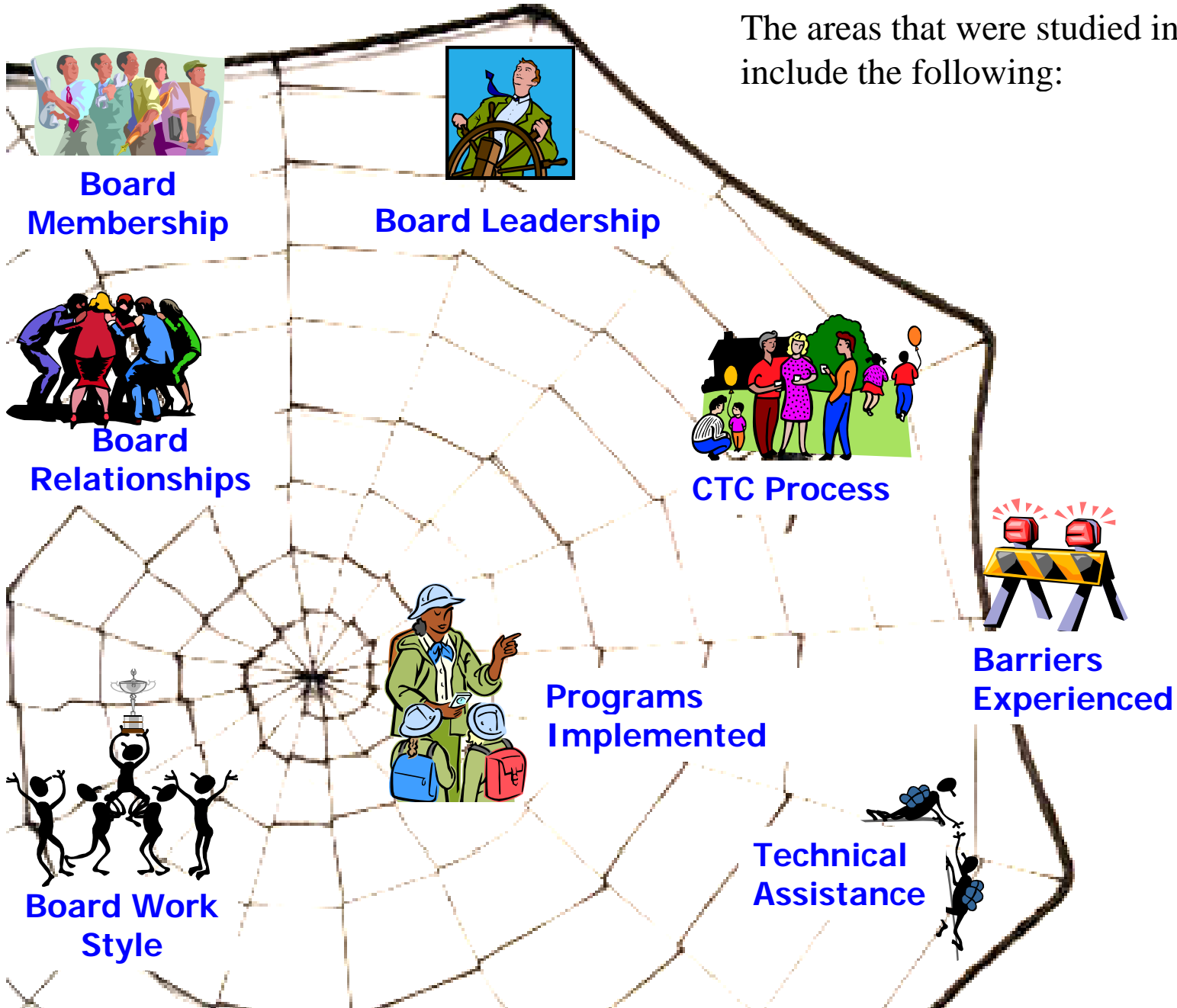


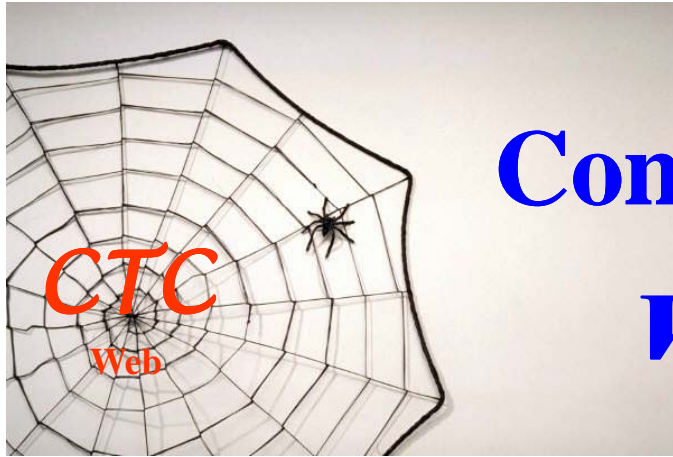
Evaluation 2

1. Web-based data collection from CTC board members
2. Provide feedback to sites
 - Summary Report to TA
 - TA presents to CTC site
 - Used for strategic planning

CTC Domains

The areas that were studied in CTC-Web 2008 include the following:





Communities That Care

Web-Based Survey

	2003	2004	2005	2006	2007	2008
# of CTC Sites	68	79	75	73	72	67
# of participants	570	867	799	929	988	946
% individual participation	-	46%	50%	60%	62%	62%

Sponsored by



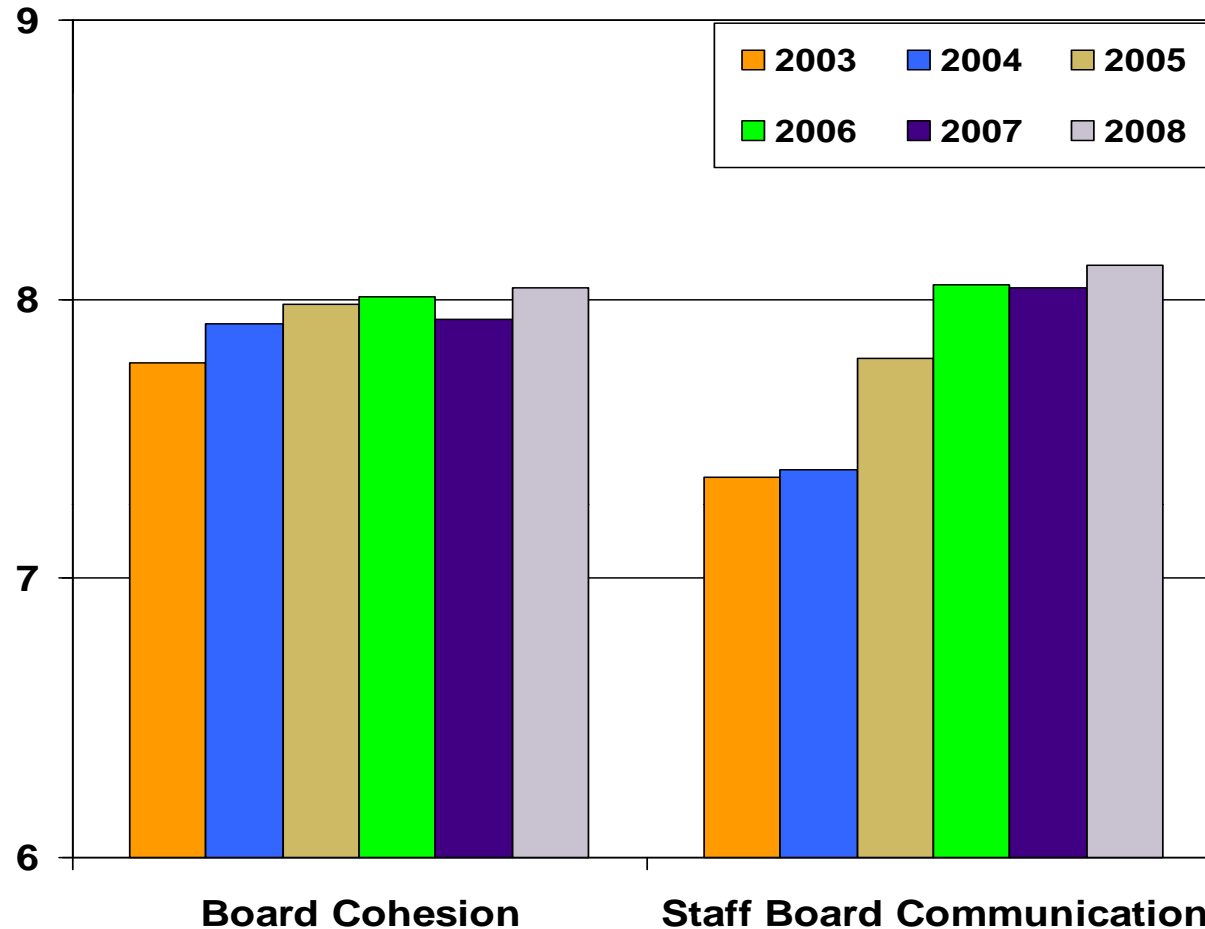
CTC Research Team, Prevention Research Center

Pennsylvania State University





Board Relationship



Board Cohesion

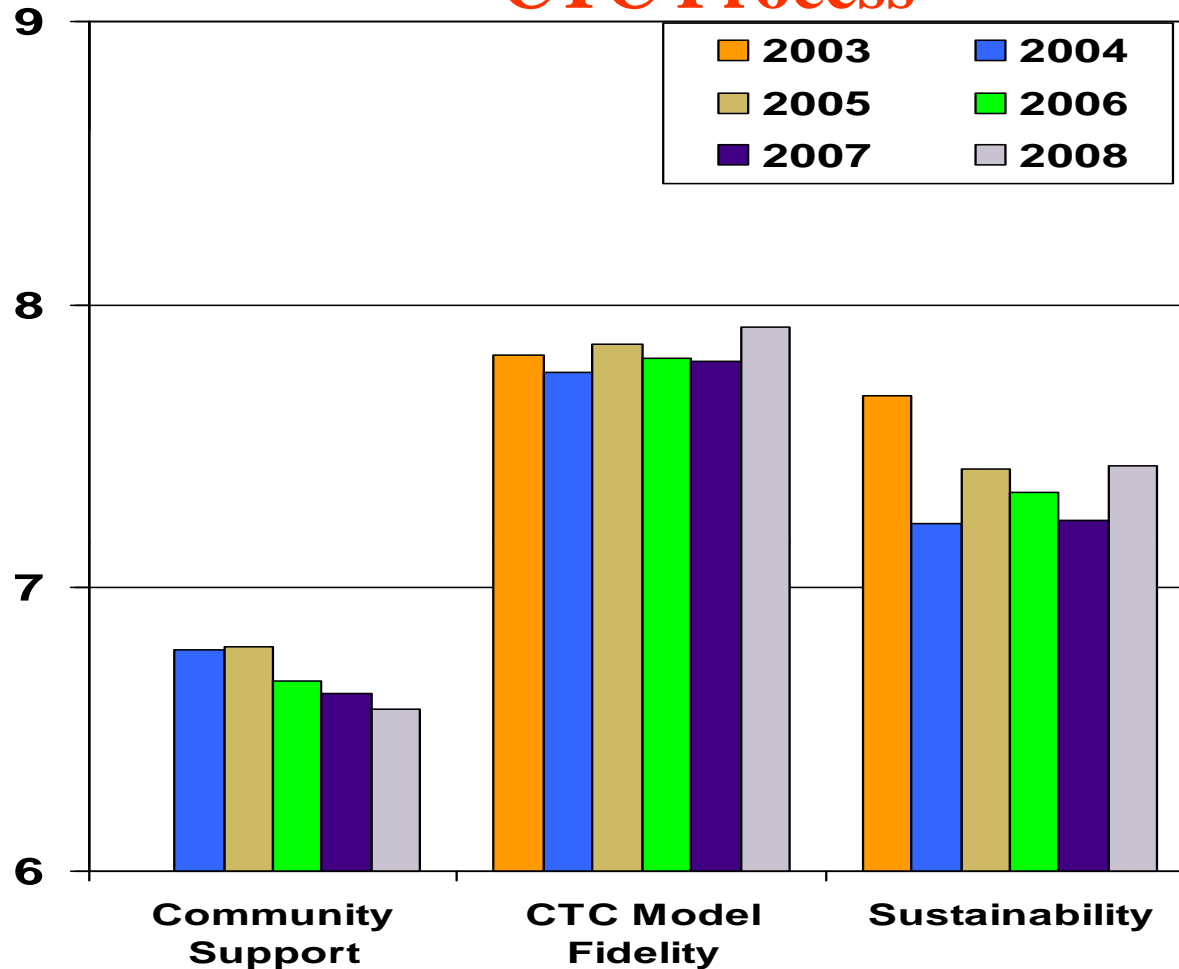
Unity and group spirit felt within the board

Staff-Board Communication

Frequency and productiveness of communication between CTC staff and board members



CTC Process



Community Support

Understanding & supportive relationships from community leaders and institutions for CTC

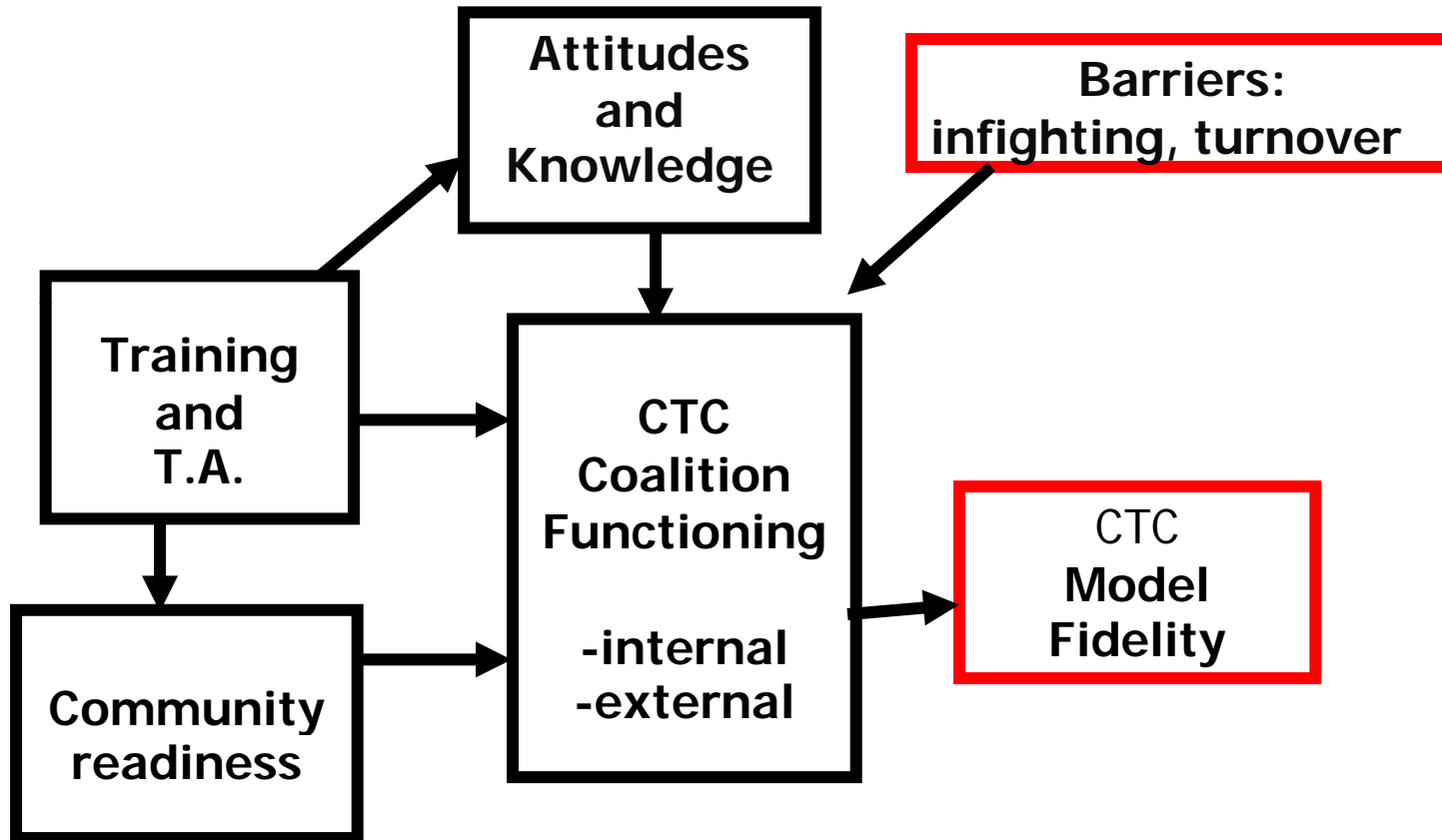
CTC Model Fidelity

Board is able to follow CTC model elements and programs are implemented well

Sustainability

Board has explored financing and resource development strategies, and believes the CTC process will continue beyond PCCD funding

PSU Model of CTC: Version 2.0



Overall Implementation Support

Definition - the degree to which a CTC site supports high-quality implementation of EBPs

Composite created by multiplying $A \times B \times C$:

- A. Number of EBPs supported
- B. Level of involvement in supporting EBPs
- C. Level of fidelity support available for each EBP
 - Availability of certified training
 - Availability of ongoing training and technical assistance
 - Amount of fidelity monitoring

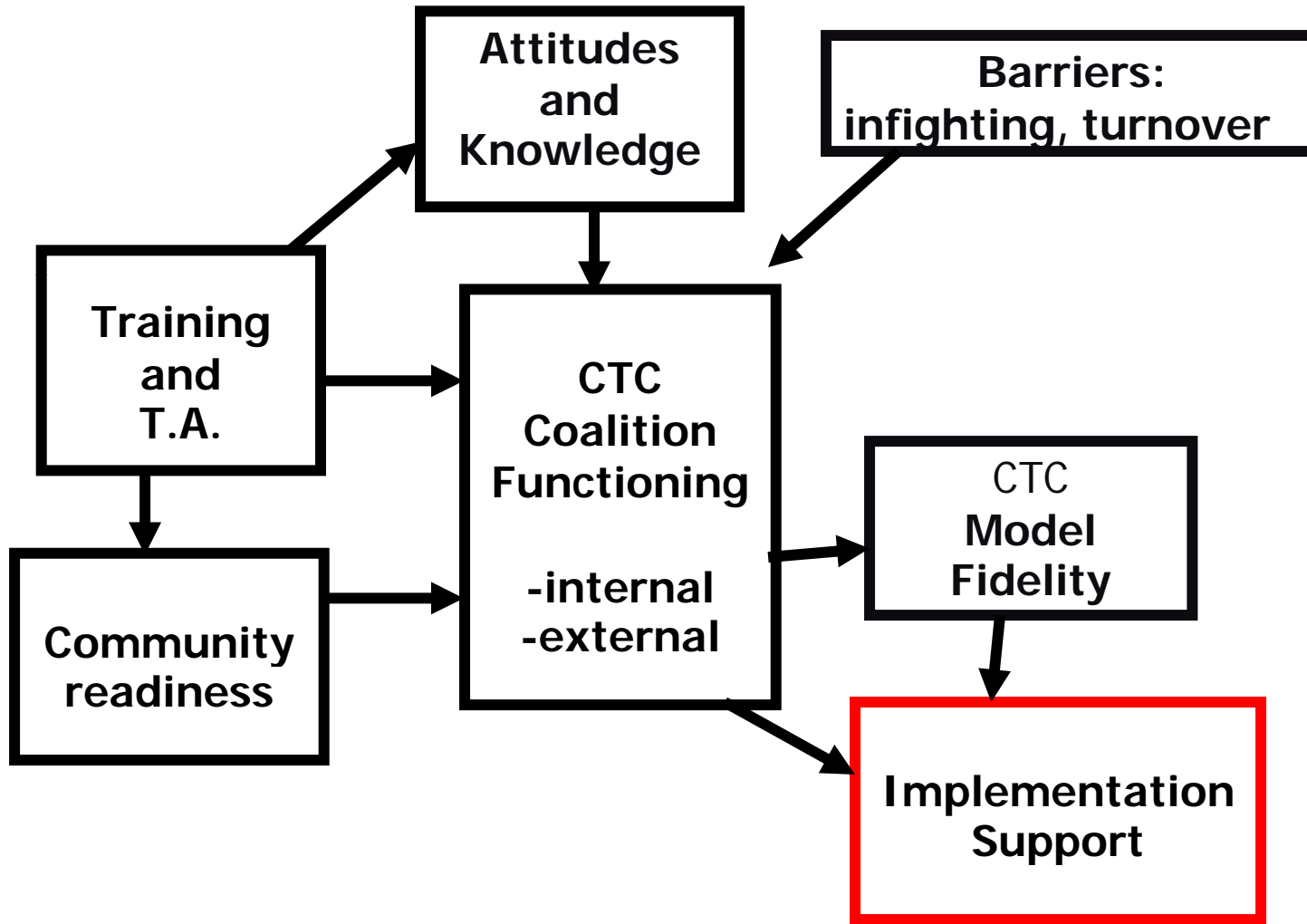
Predictors of Overall Implementation Support

Variable Name	Zero order All years	Partial ¹ All years
Community Poverty	-.27*	NA
Coalition Age	-.35**	NA
Coalition Funding 04-07	.30*	.34**
Fidelity to CTC Process 03-07	.43**	.31*
Leadership Strength 03-07	.32*	.32*
Board Efficiency 03-07	.42**	.36**
Board Cohesion 03-07	.29*	.26*
Community Relations 03-07	.32*	.26*

¹Partial correlations control for coalition age and community poverty.

*p < 0.05, **p < 0.01

PSU Model of CTC: Version 3.0



Evaluation 3

- Does CTC matter for youth?
- Compared risk factors and substance use in CTC vs. non-CTC communities longitudinally
 - Quasi-experimental design
 - Over 231,000 student self-reports
 - 419 age/grade cohorts over a 5-year period
 - Earlier waves of data act as a control, allowing examination of within-unit change over time

Longitudinal Study Sample

Grade	6th	8th	10th	12th	Total
Non-CTC	18,116	25,766	25,094	13,726	82,702
CTC	39,988	43,230	38,466	26,996	148,680
Expected Impact (subsample of CTC)	15,917	18,158	15,525	9,721	59,321
TOTAL	58,104	68,996	63,560	40,722	231,382

Year (# schools)	2001 (91)	2003 (154)	2005 (174)
6 th	4	5	6
8 th	3	4	5
10 th	2	3	4
12 th	1	2	3

LONGITUDINAL STUDY RESULTS

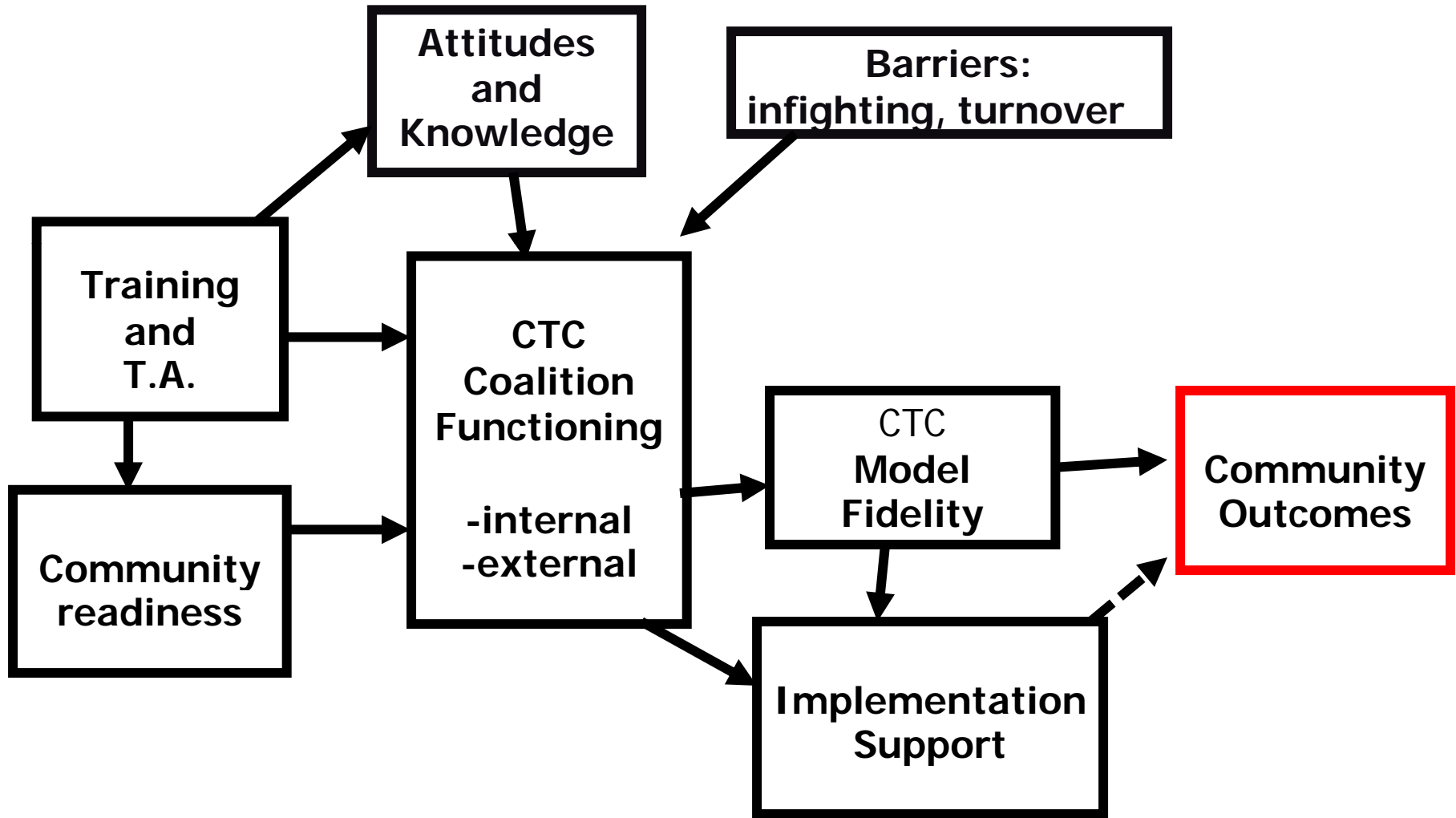
Youth in CTC communities report less negative change over time than youth in comparison districts on the following :
(all p < .05)

	Average score at 6 th grade, comparison districts	Annual change, comparison districts	% reduction in change due to CTC
Community Cohesion	.36	-.14	4.6
Drug-Firearms Availability	.56	-.20	3.0
School Prosocial Support	.22	-.12	16.4
Family Cohesion	.29	-.12	7.7
Family Risk Factors	1.67	.37	6.7
Antisocial Attitudes/Behavior	-.36	.12	6.7
Antisocial Peer Influence	1.59	.40	10.8
Academic Grades	2.25	-.09	33.2
Delinquency	0.18	.21	10.8

Summary of Findings

- **Overall, CTC communities showed lower levels of risk factors**
- **CTC community youth exposed to universal prevention programs showed slower increase in risk and delinquency, and slower decrease in protection and academic grades.**

PSU Model of CTC: Version 4.0

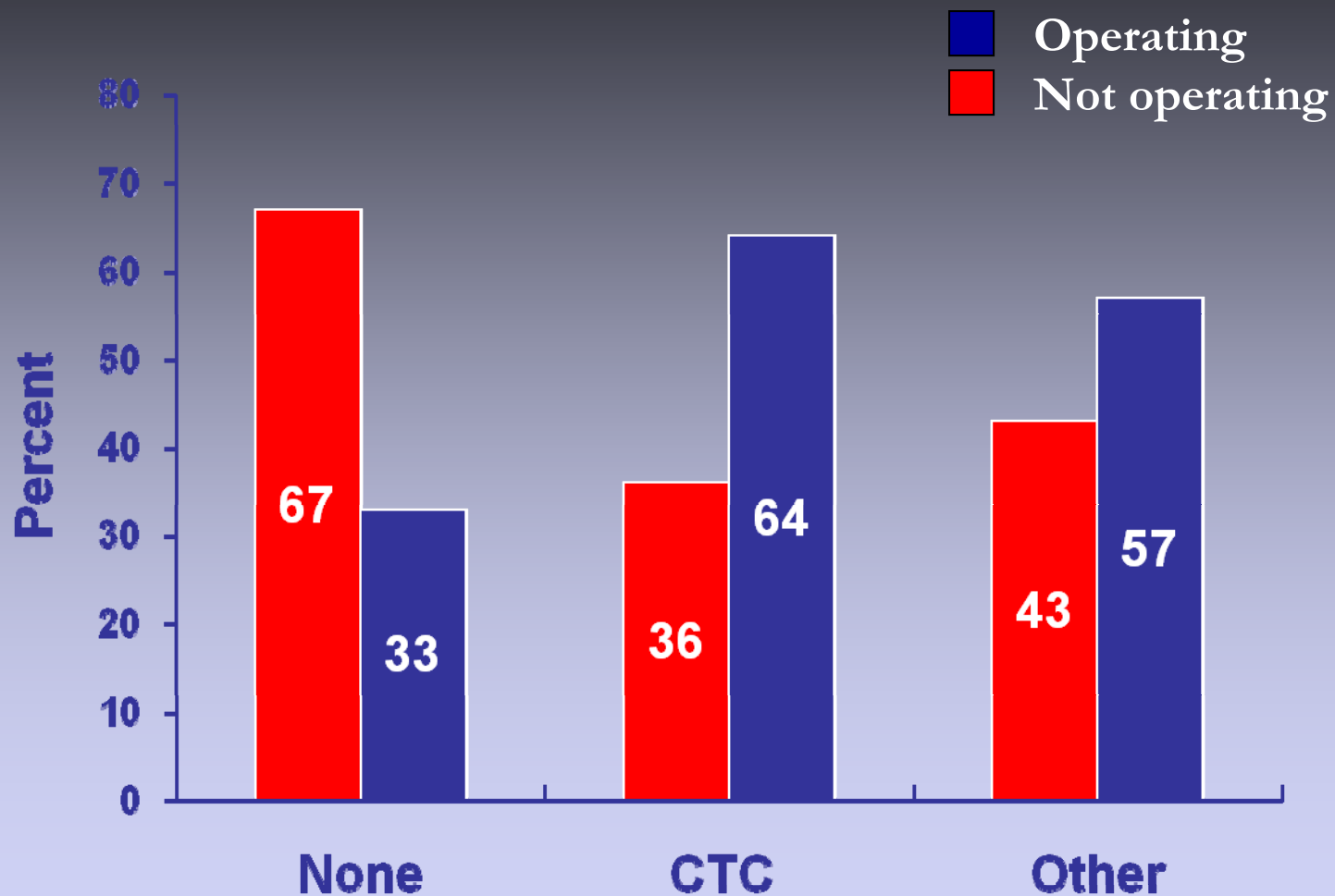


Evaluation 4

CTC and Sustainability

- **Does CTC aid in sustaining programs?**
- **Are CTC sites themselves sustainable?**
- **What fosters CTC sustainability?**

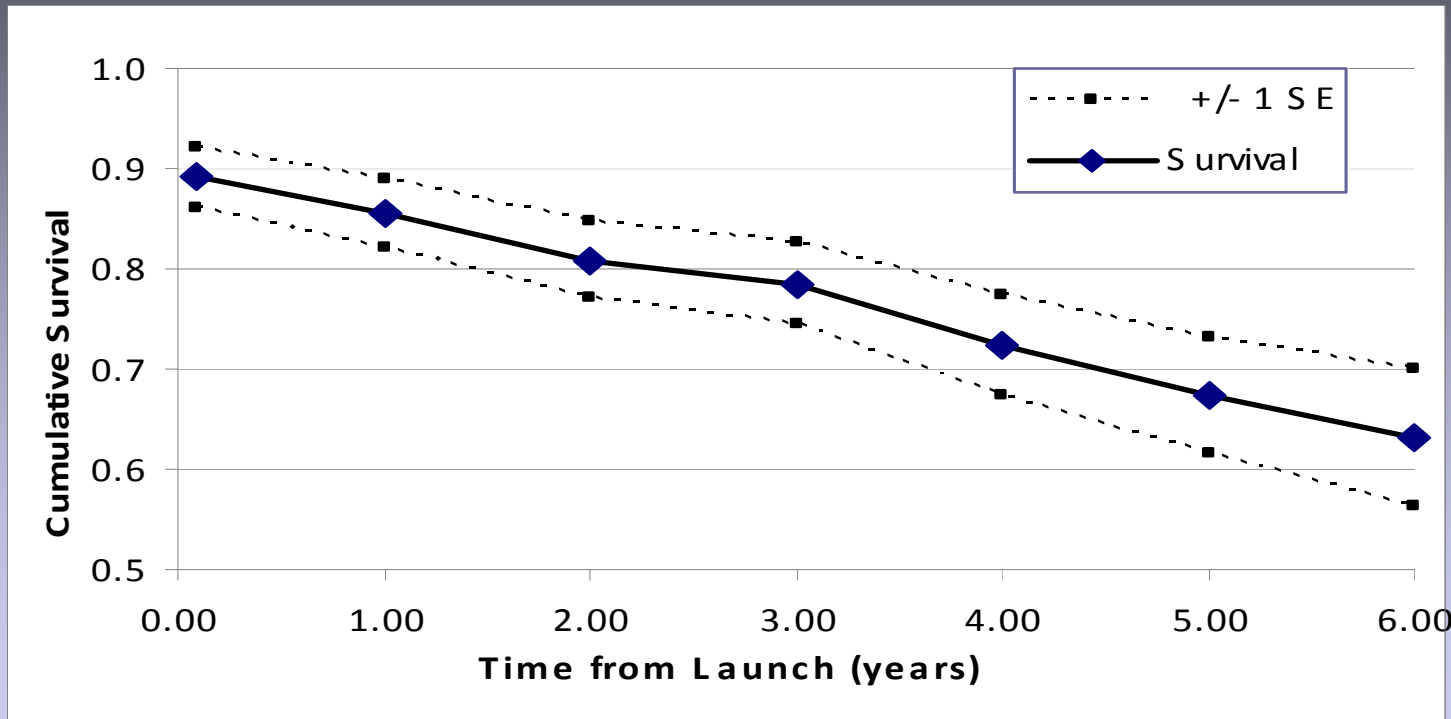
Is Coalition Connection Related to Program Sustainability?



Program Grantees off of funding 2 or more years, percentages

PA Communities That Care

CTC Sustainability: Survival Post State Funding - N=110 Sites



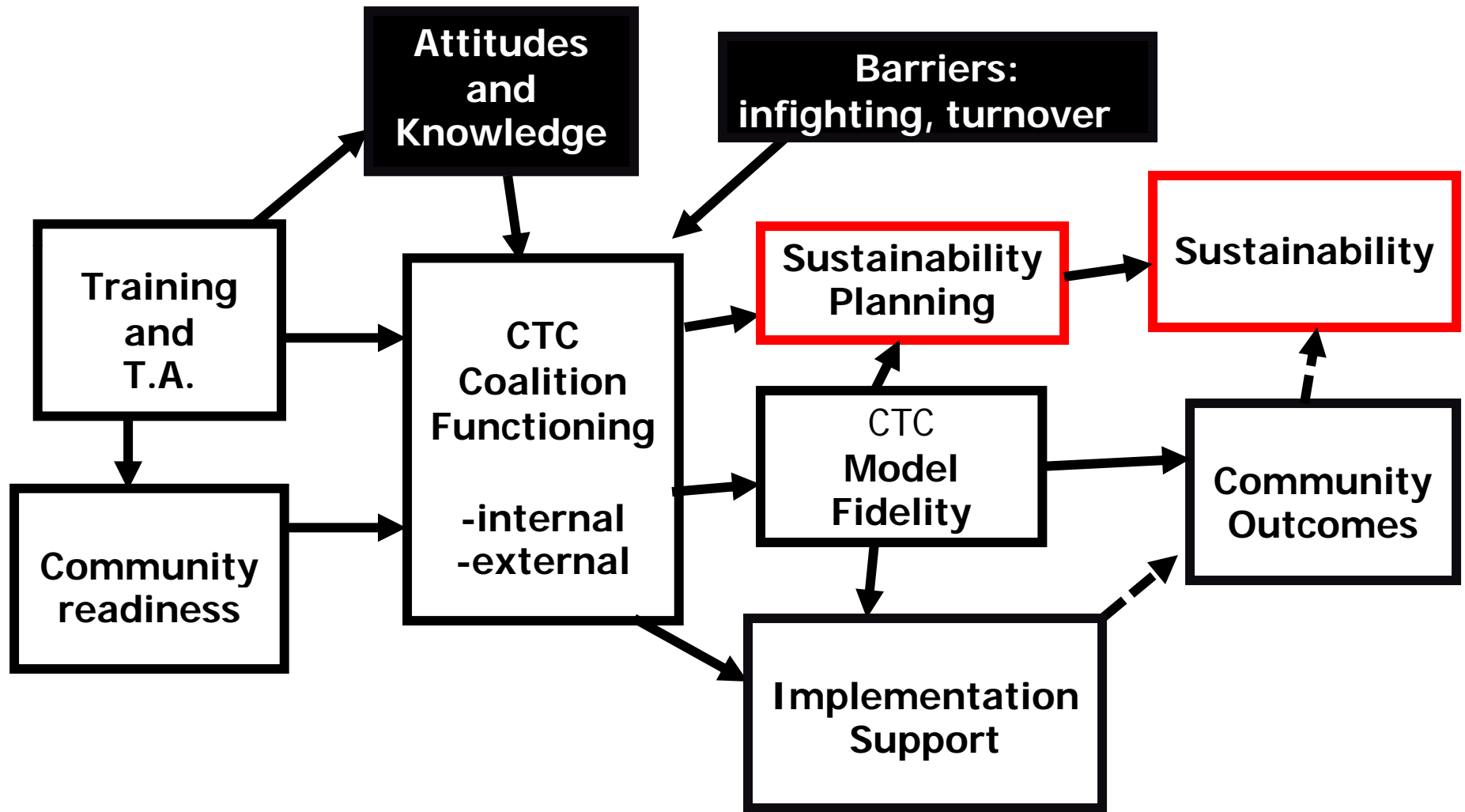
90% of CTC coalitions continued after the three-year initial funding period, over 60% sustained 6 years post-funding

PA Communities That Care

Four factors predicted sustainability

- Quality of Board Functioning (Culture and Leadership)
- Fidelity of CTC Implementation
- Management of Changing Board Membership
- Effective Sustainability Planning

PSU Model of CTC: Version 5.0



The take-home message...CTC works!

Community readiness

- + Data-driven local decision making
 - + Evidence-based prevention programs
 - + High-quality implementation & sustainability
-

= Reduce rates of delinquency and ATOD use
AND
Considerable cost savings

Feinberg, M.E., Greenberg, M.T., Osgood, W.O., Sartorius, J., Bontempo, D.E. (In Press). Can Community Coalitions Have a Population Level Impact on Adolescent Behavior Problems? CTC in Pennsylvania, Prevention Science.

Jones, D., Bumbarger, B., Greenberg, M., Greenwood, P., and Kyler, S. (2008). The Economic Return on PCCD's Investment in Research-based Programs: A cost-benefit assessment of delinquency prevention in Pennsylvania. Prevention Research Center, Penn State University.

Limitations of CTC Model

- Views all risk and protective factors as equal
- Assumes there is an effective program or policy for every risk and protective factor
- Somewhat more focus on adolescence than early childhood
- Requires community readiness - acceptance of both prevention and science
- Represents a substantial change in thinking - requires ongoing technical assistance

Even with those limitations...

- CTC has been an very effective tool for promoting a public health approach to prevention
- Has promoted the use of research-based prevention strategies
- Has helped move prevention from "art" to "science"

Thank You!

For more information on our research and services, contact:

Evidence-based Prevention and Intervention Support Center (EPISCenter)

Prevention Research Center

Penn State University

206 Towers Bldg.

University Park, PA 16802

EPISCenter@psu.edu

(814) 863-2568

