

**Moving into Sustaining Intervention Systems:**  
*Study of the PROSPER*  
*Community-University Partnership Model*

Presentation for  
NIDA's Intervening Early Workshop

*Richard Spoth*  
September 19, 2007

# Overview of Presentation

- 1. PROSPER Context**—Challenges and Opportunities in “Scaling Up”
- 2. PROSPER Background and Design**
- 3. PROSPER Early Findings**—Implementation, Outcomes, Sustainability
- 4. PROSPER Future Directions**—Long-term Outcomes, Next (4<sup>th</sup>) Generation Partnership Network

- 1. PROSPER Context—  
Challenges and Opportunities  
in “Scaling Up” Through  
Community-University  
Partnerships**

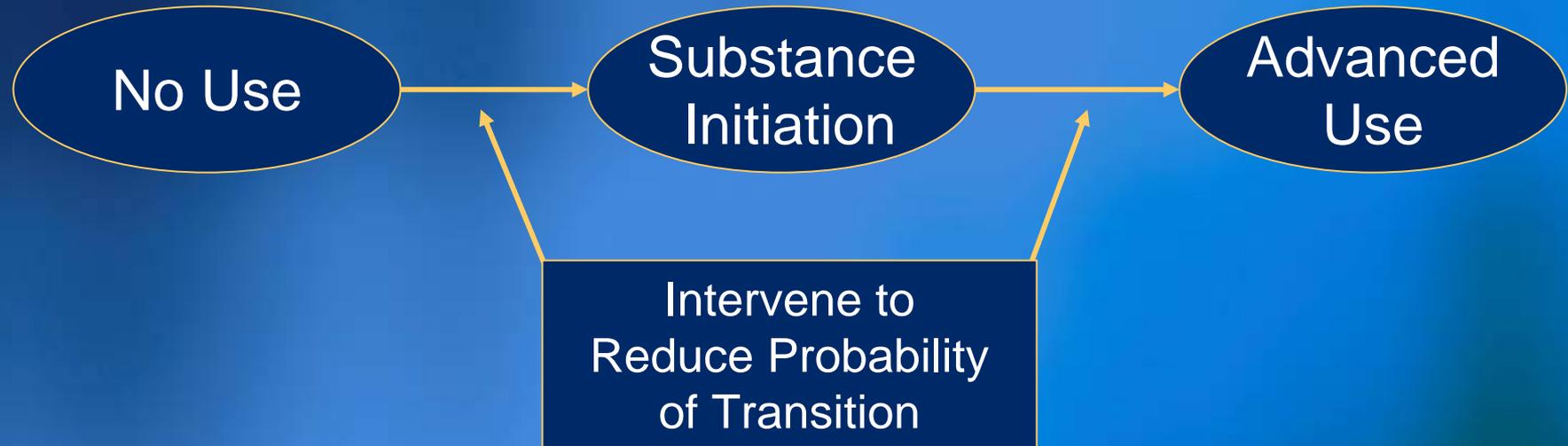
# Challenge of General Population Intervention—Substance Initiation

- Monitoring the Future Study, 2005—among 8<sup>th</sup>-12<sup>th</sup> graders, lifetime use prevalence rates

	<u>8<sup>th</sup> Grade</u>	<u>10<sup>th</sup> Grade</u>	<u>12<sup>th</sup> Grade</u>
Alcohol	41.0%	63.2%	75.1%
Drunkenness	19.5%	42.1%	57.5%
Cigarettes	25.9%	38.9%	50.0%
Marijuana	16.5%	34.1%	44.8%
Methamphetamines	3.1%	4.1%	4.5%

- Escalating rates of use from 8<sup>th</sup>-12<sup>th</sup> grades
- Early initiation linked with misuse/high social, health, economic costs

# Two Windows of Opportunity for Intervention with General Populations

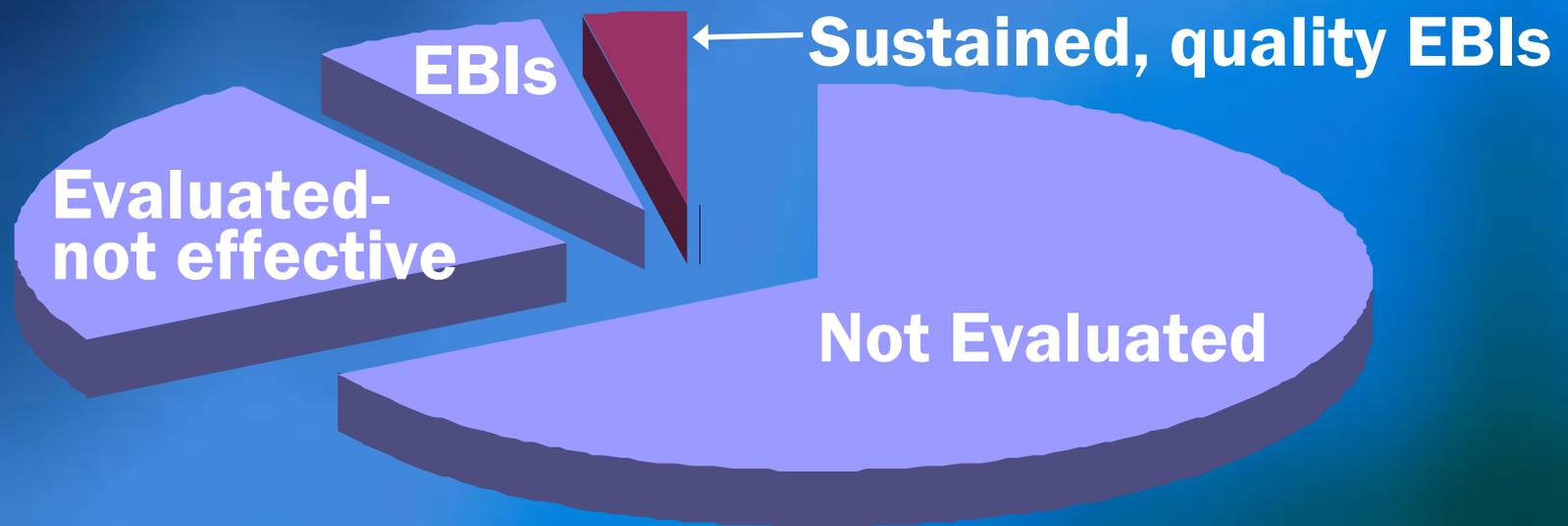


See Spoth, Reyes, Redmond, & Shin (1999). Assessing a public health approach to delay onset and progression of adolescent substance use: Latent transition and log-linear analyses of longitudinal family preventive intervention outcomes. *Journal of Consulting and Clinical Psychology*, 67, 619-630.

## What is Needed?

- Development of an armamentarium of evidence-based interventions (EBIs) to delay initiation/prevent transition
- Scaling up these EBIs for public health impact

## Challenge of Scaling Up



... and rigorously demonstrated, long-term  
EBI impact is very rare

## What is essential to scaling up?

- Community-based organizations (CBOs) that work with youth and families
- Collaborators with implementation and evaluation science expertise
- Systems to support and sustain quality EBI delivery through CBOs
- **Models for linking these together**
- **Evidence that the “linking” models work (PROSPER Study)**

## Models for Linking with Support Systems...

- Cooperative Extension System
  - Largest informal education system in the world
  - Over 3,150 agents in nearly every county
  - Science with practice orientation
- Public School System
  - Universal system reaching nearly all children
  - States have networks for programming support
  - Increasing emphasis on accountability/empirical orientation

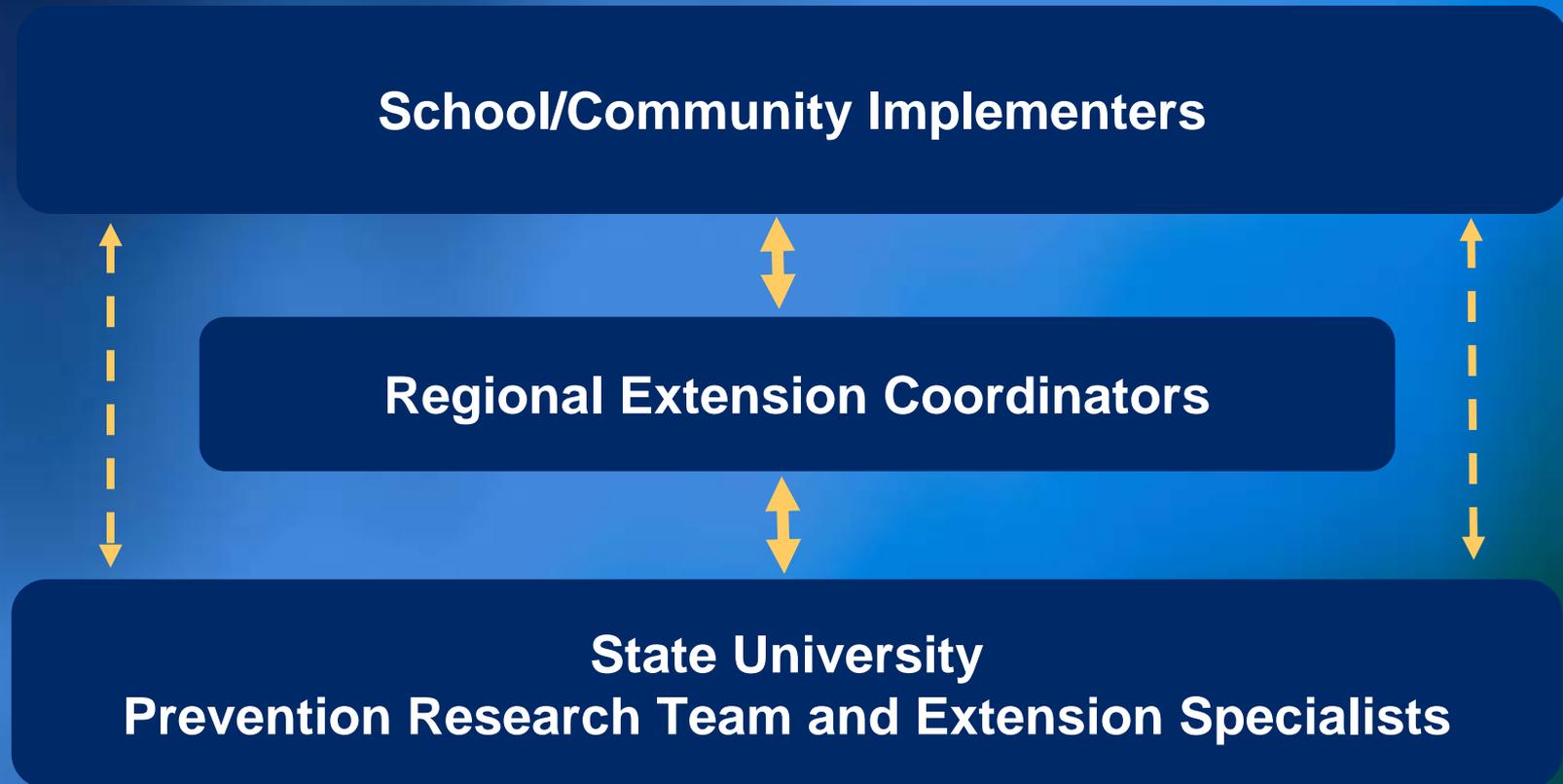
# Models for Linking with Support Systems— First Generation Partnership Design

**School/Community Implementers  
Assisted by Extension**

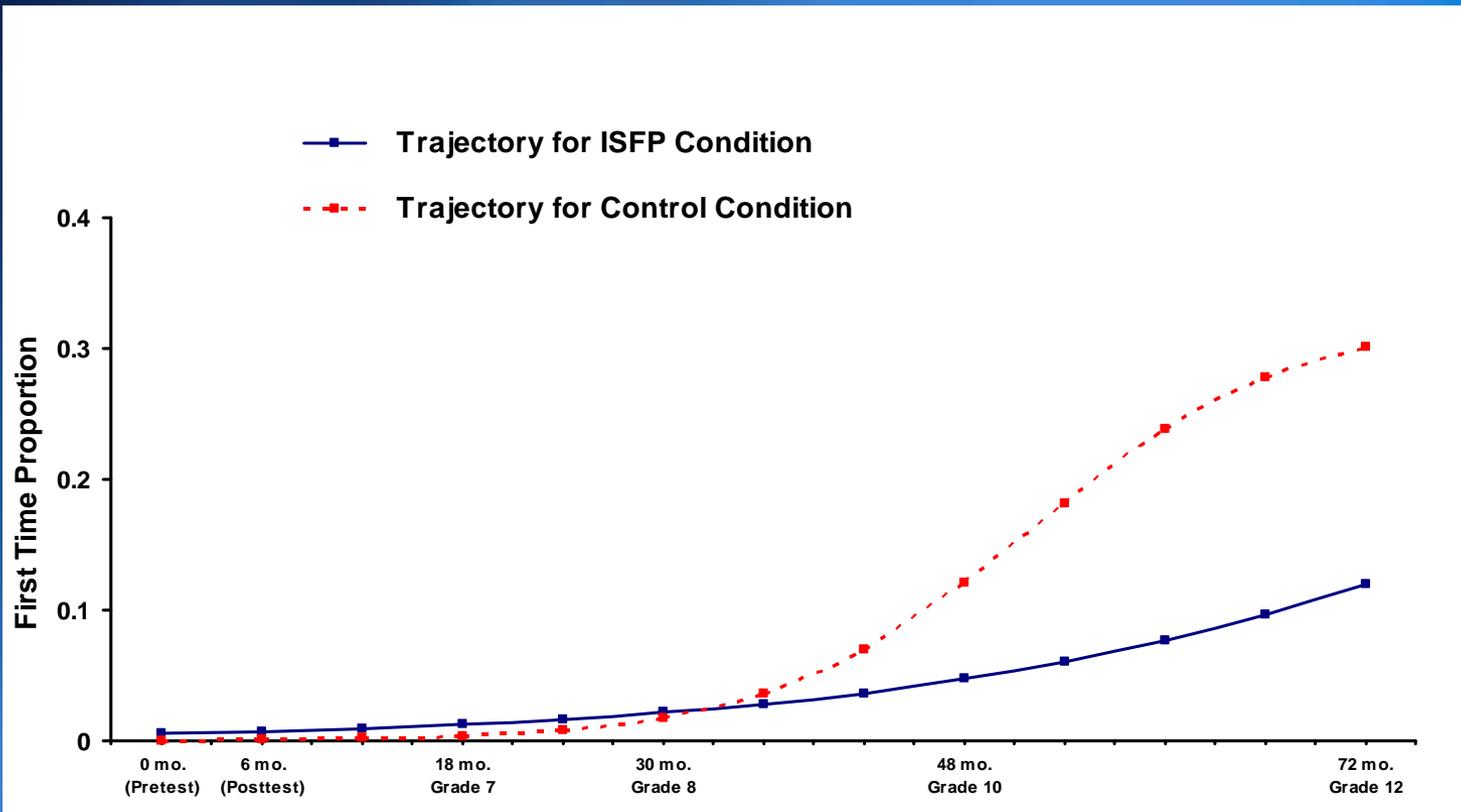


**State University  
Prevention Research Team and Extension Specialists**

# Models for Linking with Support Systems— Second Partnership Prevention Trial Design

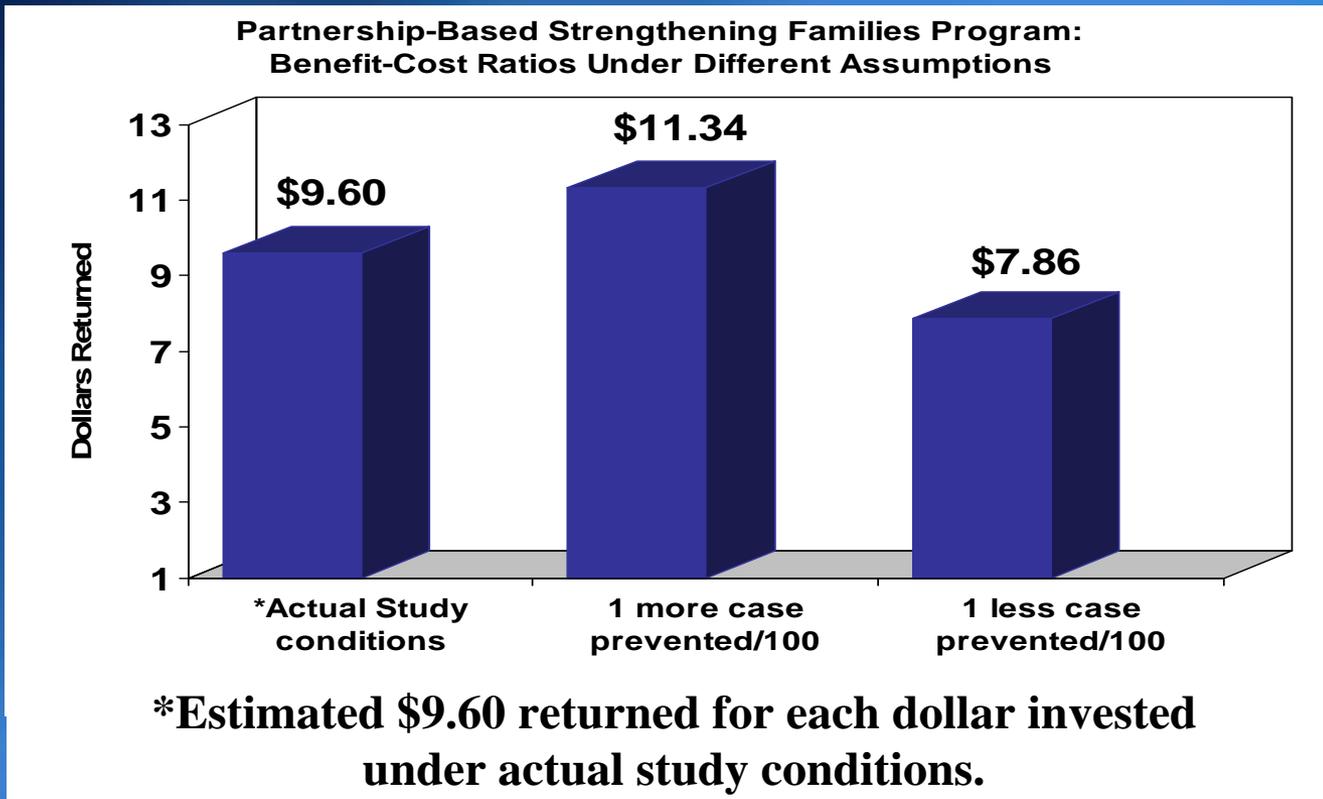


# Illustrative Evidence for Partnership-Based Interventions



Source: Spoth, Redmond, Shin, & Azevedo (2004). Brief family intervention effects on adolescent substance initiation: School-level curvilinear growth curve analyses six years following baseline. *Journal of Consulting and Clinical Psychology*, 72, 535-542.

# Illustrative Evidence for Partnership-Based Interventions—Economic Benefits



Source: Spoth, Gyll, & Day (2002). Universal family-focused interventions in alcohol-use disorder prevention: Cost-effectiveness and cost-benefit analyses of two interventions. *Journal of Studies on Alcohol*, 63, 219-228.

**So, what more do we need?**



**For one, a test of a model for  
sustainable, community-based  
EBI delivery...**

## 2. PROSPER Background and Design

(Promoting School-community-university Partnerships  
to Enhance Resilience)



# Third Generation Partnership Trial Design (Sustainability Design)

Local Community Teams—  
Extension Agent, Public School Staff,  
Social Service Agency Representatives, Parent/Youth Representatives

Prevention Coordinator Team—  
Extension Prevention Coordinators

University/State-Level Team—  
University Researchers, Extension Program Directors



# What are the phases of PROSPER implementation?

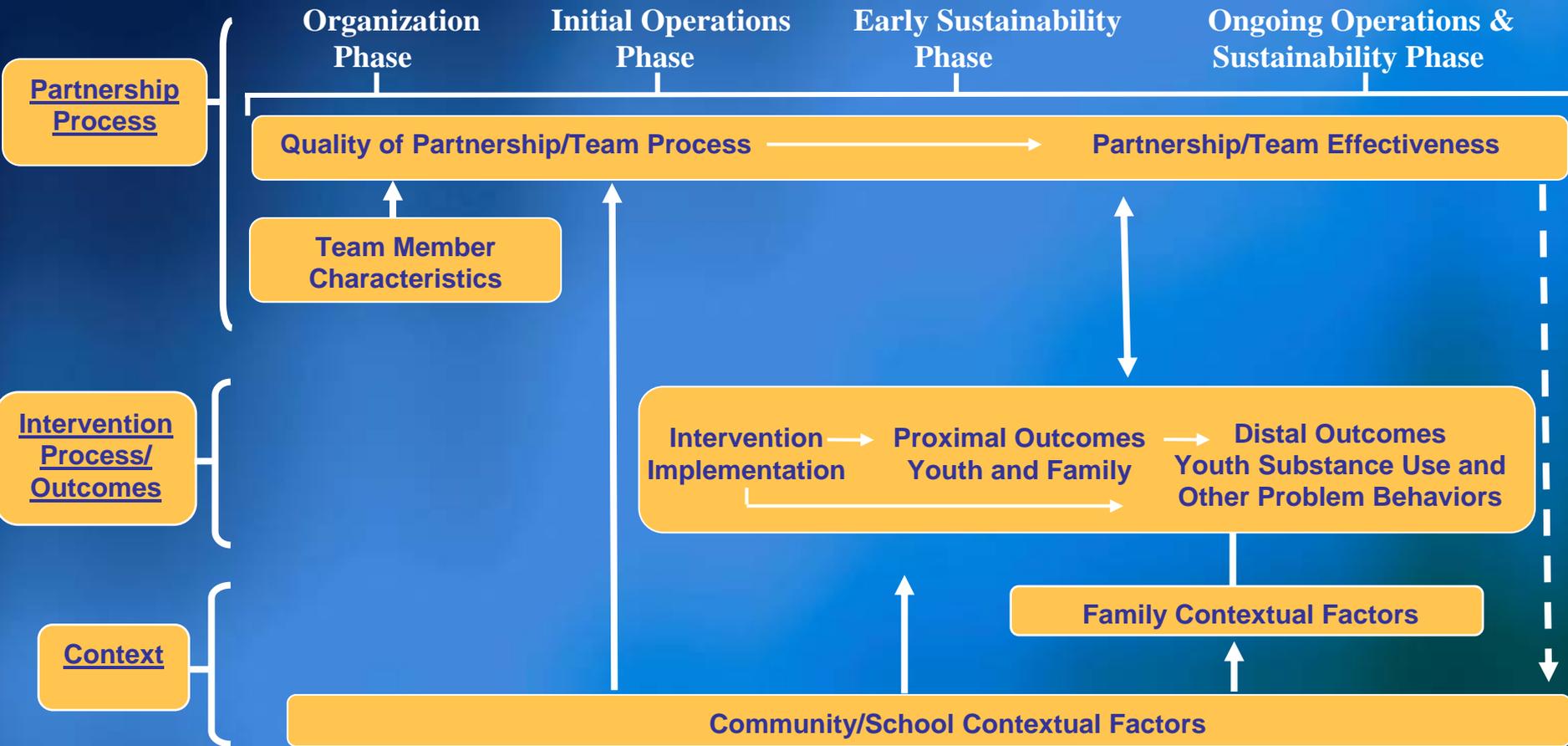
- Phase 1: Organization—team formation/planning (6-8 months)
- Phase 2: Initial operations—EBI implementation (6-8 months forward), following EBI selection from menu
  - 6<sup>th</sup> grade family-focused EBI
  - 7<sup>th</sup> grade school-based EBI
- Phase 3: Early sustainability planning (Year 3 forward)
- Phase 4: Ongoing operations/sustainability—  
institutionalization within Extension (current)

# PROSPER Study Overview\*

- Aims
  - Evaluate the effectiveness of partnership implementation of EBIs on youth and family outcomes
  - Learn what factors are most important in partnership effectiveness, particularly sustained, quality implementation
- Design
  - RCT of 28 school districts (14 IA, 14 PA) assigned to full partnership and “delayed intervention” (comparison) conditions
- Participants
  - Two cohorts of 6th grade children (approximately 6,000 students per cohort)

\*Funded by NIDA and conducted in collaboration with Pennsylvania State University (Mark Greenberg, Mark Feinberg, Co-PIs)

# PROSPER Partnership Process-to-Outcome Model for Implementation of Evidence-Based Youth and Family Competence-Building Interventions



Source: Spoth & Greenberg, 2005. Toward a comprehensive strategy for effective practitioner-scientist partnerships and larger-scale community benefits. *American Journal of Community Psychology*, 35, 107-126.

### 3. Early Findings— Local team recruitment of families



- Comparison study rates range from 1%-6%
- 17 % attended at least one session (N = 1,064; est. 2,650 family members)
- High end of researcher –based recruitment
- Intent-to-treat analysis

Source: Spoth, Clair, Shin, & Redmond (2007). Toward dissemination of evidence-based family interventions: Maintenance of community-based partnership recruitment results and associated factors. *Journal of Family Psychology*, 21, 137-146.

## 3. Early Findings—Implementation Study

- Average over 90% adherence with family EBIs
- Average over 90% adherence with school EBIs
- High ratings on other quality indicators
- Quality maintained across cohorts

Source: Spoth, Gyll, Lillehoj, Redmond, Greenberg (In press). PROSPER study of evidence-based intervention implementation quality by community-university partnerships. *Journal of Community Psychology*.

## 3. Early Findings—Proximal Outcomes

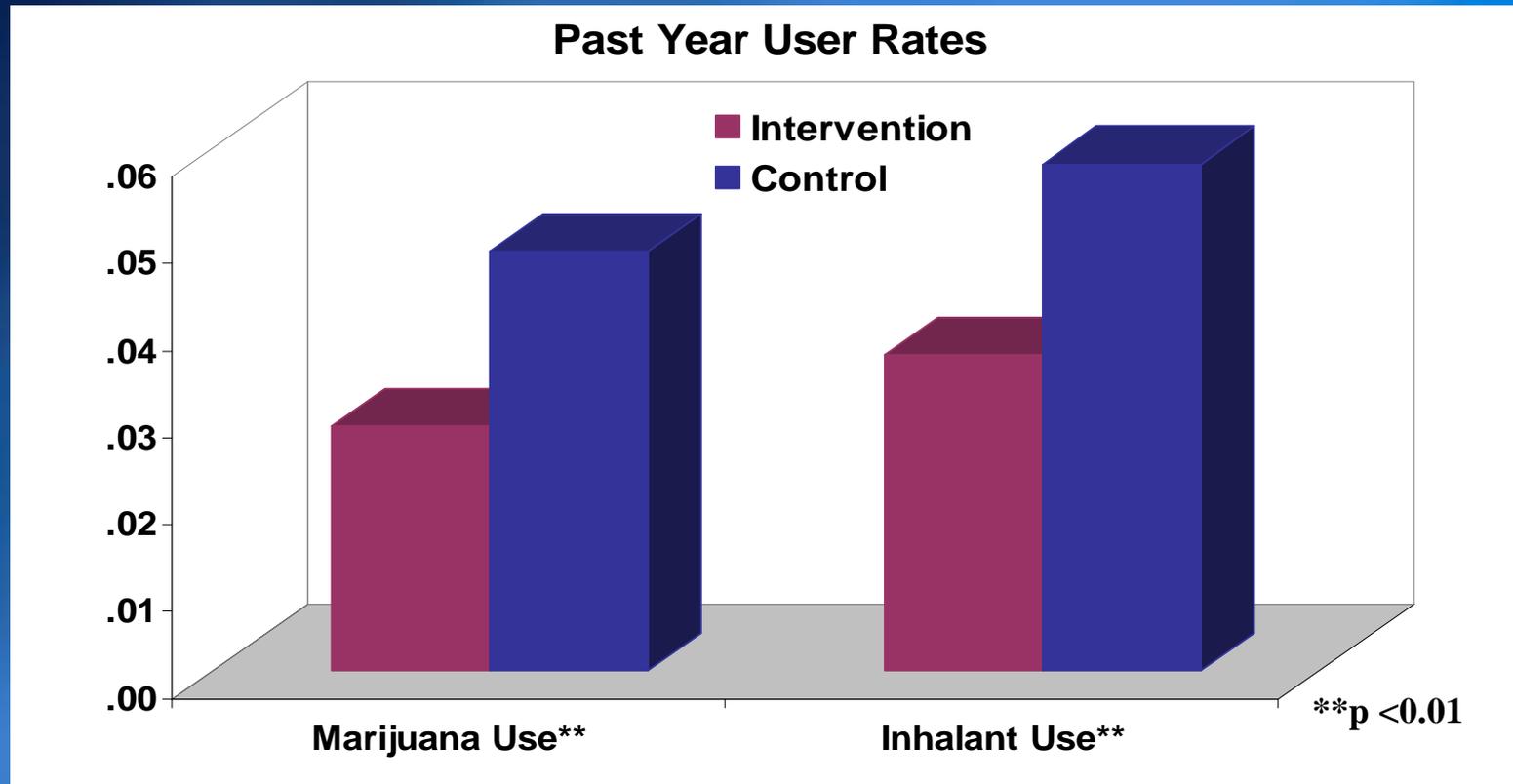
Selected Outcomes	Intervention LS Mean	Control LS Mean	F-value (1,12)
Parent-Child Activities	3.82	3.68	12.28**
Family Cohesion	3.53	3.44	16.89**
Substance Refusal Intentions	4.68	4.64	5.26*
Substance Refusal Efficacy	4.41	4.37	1.00
Substance Use Expectancies	4.66	4.57	21.00**
Antisocial Peers	1.67	1.78	14.45**
Deviant Behaviors	1.26	1.28	4.80*
Problem Solving	3.62	3.46	24.08**
Assertiveness	4.22	4.16	10.04**

7th Grade Multi-Level ANCOVA Results – Intent-to-Treat Analysis

\*p<0.05; \*\*p<0.01

Source: Redmond, Spoth, Shin, Schainker, & Greenberg (2006). Proximal outcomes of an evidence-based universal family-focused intervention implemented by community teams. (Manuscript under review.)

### 3. Early Findings— Illustrative Substance-Related Outcomes at 1½ Years Past Baseline



Source: Spoth, Redmond, Shin, Greenberg, Clair, & Feinberg (2007). Substance use outcomes at 1½ years past baseline from the PROSPER community-university partnership trial. *American Journal of Preventive Medicine*, 32(5), 395-402.

### 3. Early Findings— Initial Financial Sustainability

- 100% of PROSPER teams obtained external funding within a year
- Funds obtained from a variety of sources – state, city, business, religious and service organizations, and private individuals.
- Collectively, over \$600,000 for sustained EBI, as of last year

## 4. Future Directions



# Next Steps in Evaluating the PROSPER Model (Funded Continuation Phase)

- Longitudinal follow-up of youth through high school to assess substance use
- In-depth examination of youth at high-risk for substance abuse re whether universal interventions impact these youth
- Evaluation of institutionalization of teams and EBIs
  - Long-term functioning of teams
  - Sustainability of original EBIs
  - Implementation and sustainability of new EBIs
- Formative studies to evaluate adaptation to obesity prevention (R21)

# Key Scaling-up Challenges for PROSPER Partnership Model\*

- The high level of sustained effort required for EBI implementation
- Need for ongoing support from all levels of the organizations involved
- Local preferences for tailor-fitting vs. standardized approaches to programming
- Competing demands on key personnel and on resources required
- Leadership and other team member turnover (maintaining team investment and continuity)

\*Sources: Hallfors et al., 2002; Mihalic et al., 2002; Spoth & Molgaard, 1999

# Addressing Challenges Through a PROSPER Partnership Network



# Fourth Generation Partnership Design— PROSPER Network (Proposal Submitted)

**PROSPER Network Team for Scientific and EBI Technical Assistance**  
Prevention Scientists, PROSPER TA Providers, IT and Research Data Managers/Analysts  
(Overall project management, Scientific and EBI TA management and coordination,  
information and data management and analysis)



## PROSPER State Partnerships

### Community Teams in State Site

Extension Agent, Public School Staff, Social Service Agency Representatives,  
Parent/Youth Representatives, other Community Stakeholders



### State-level Prevention Coordinator Team

Extension Prevention Coordinators



### State-level PROSPER Management Team

Extension-Based Data Coordinator/Evaluators, Project Director, Extension Administrator/Liaison





## Acknowledgement of Our Partners in Research

### Investigators/Collaborators

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