

# Community-University Partnership-Based Support for Preventive Interventions for Rural Youth: The PROSPER Model

National Research Center on Rural Education Support:  
Supporting Rural Schools & Communities Research Conference

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# Part 1. Challenges



# Opportunities



# The Larger Context — Our Core Challenges

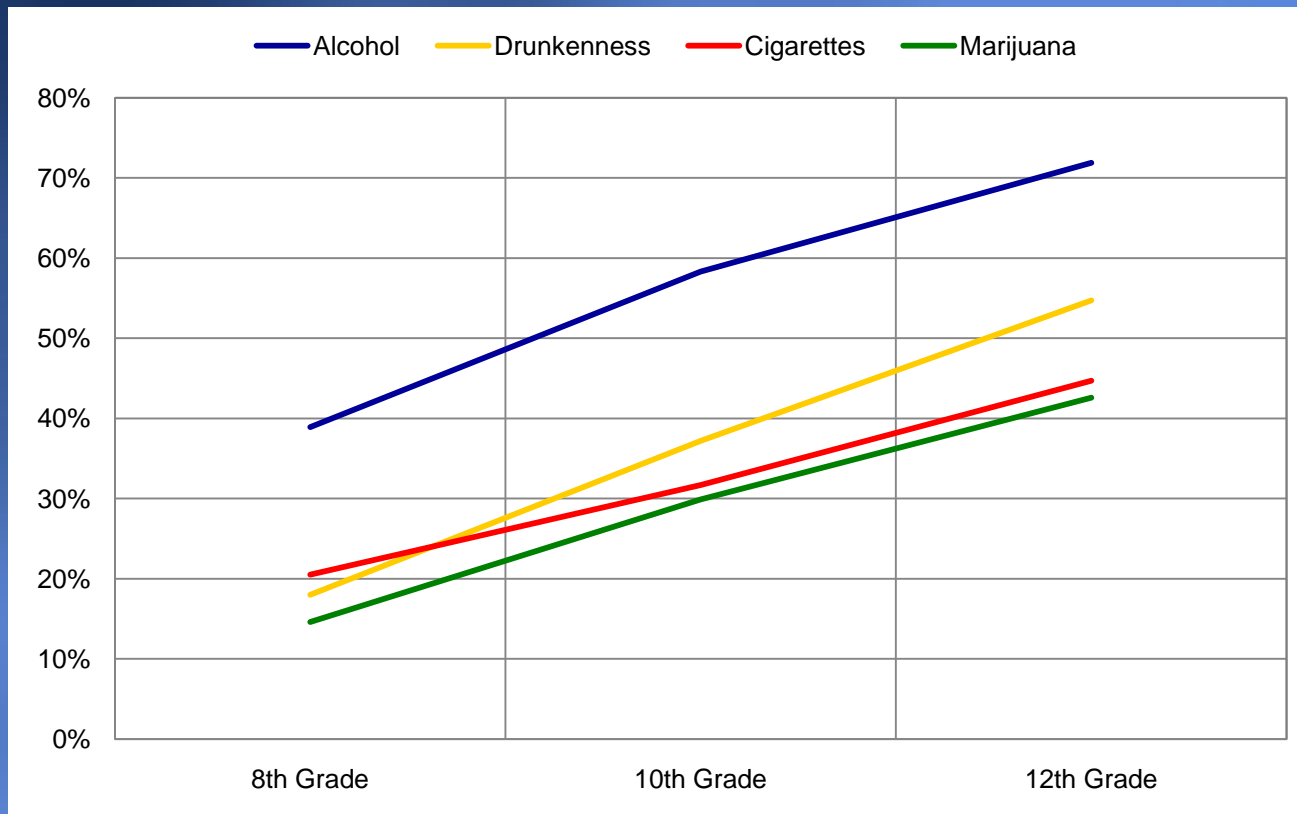
## Core Challenges

- I. Scope of Public Health Problems
- II. EBPs Lost in Translation

# Core Challenge I

## Scope of the Problems That Must Be Addressed for General Population Impact

U.S. Monitoring the Future Study, 2008—among 8th-12th graders, lifetime use prevalence rates

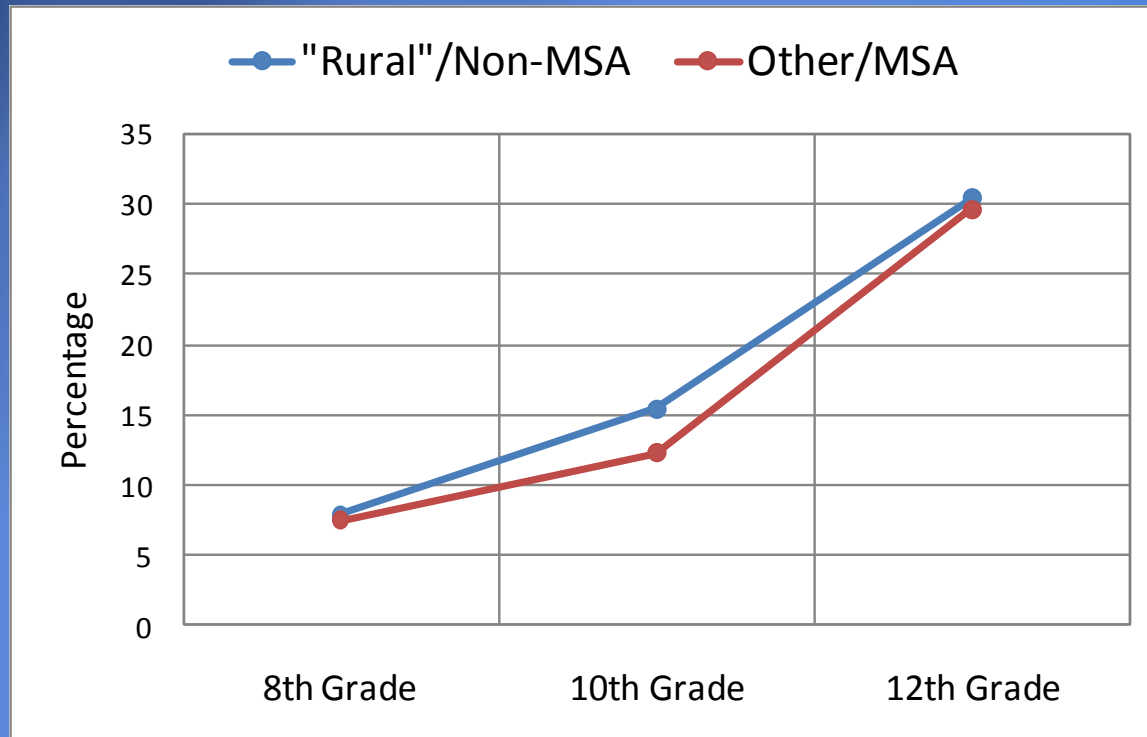


- Escalating rates of use from 8<sup>th</sup>-12<sup>th</sup> grades
- Early initiation linked with misuse/high social, health, economic costs

# Core Challenge I

## Scope of the Problems in "Rural" Populations

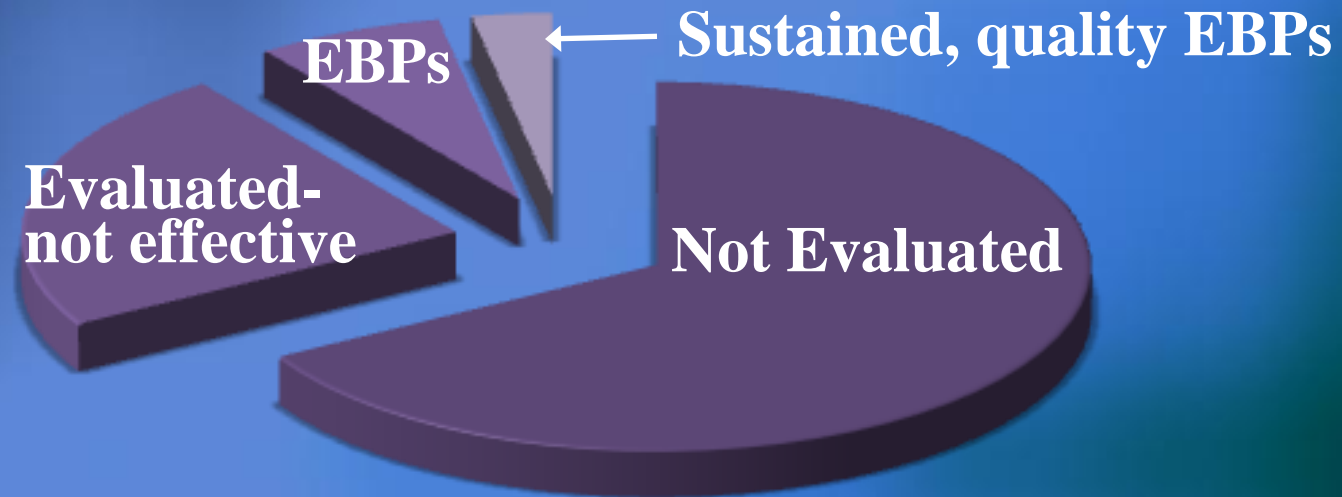
U.S. Monitoring the Future Study, 2008—among 8th-12th graders,  
30 day cigarette use



# Core Challenge II

## Evidenced-Based Programs Are Lost in Translation

Requires...a larger “piece” of evidence-based interventions (EBPs)  
to delay two types of transition with general community populations  
...sustained, quality implementation on a large scale



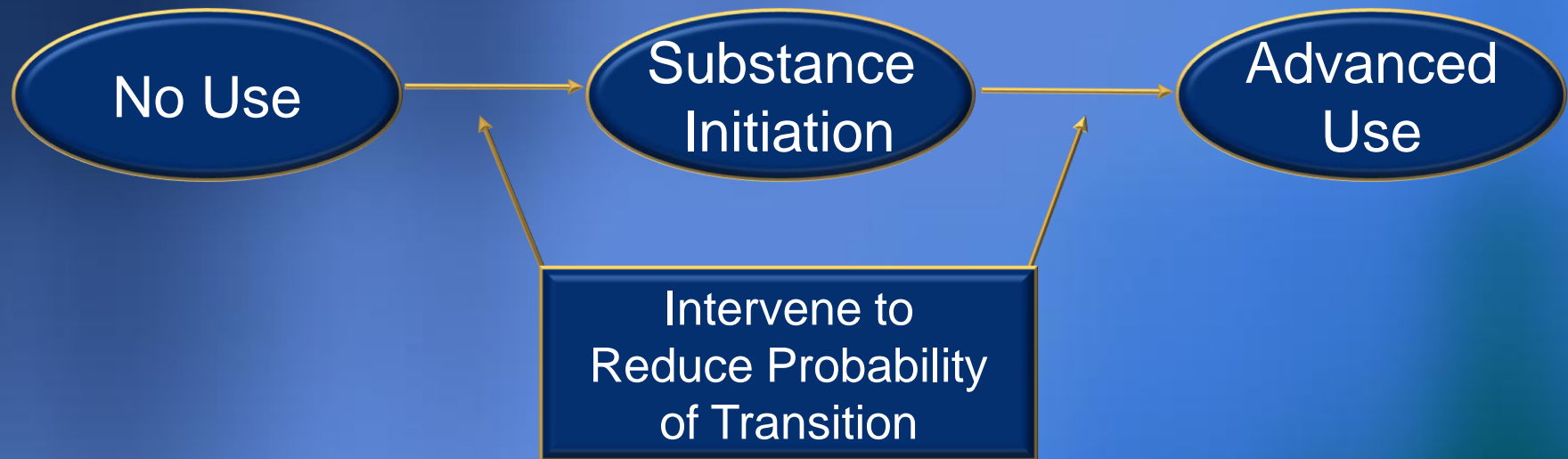
Rigorously demonstrated, long-term EBP impact is very rare (Foxcroft et al., 2003).

# Challenges Specific to Rural Population Translational Research, Cited in NIH Reviews

- Need for more *practitioner-scientist partnerships*
- Need for *rural community capacity-building* that addresses unique barriers
- Need for *consideration of diversity of rural settings* — e.g., limited clarity on “what about rural really matters” and how that varies across rural settings
- Need for higher rates of EBP implementation in rural areas

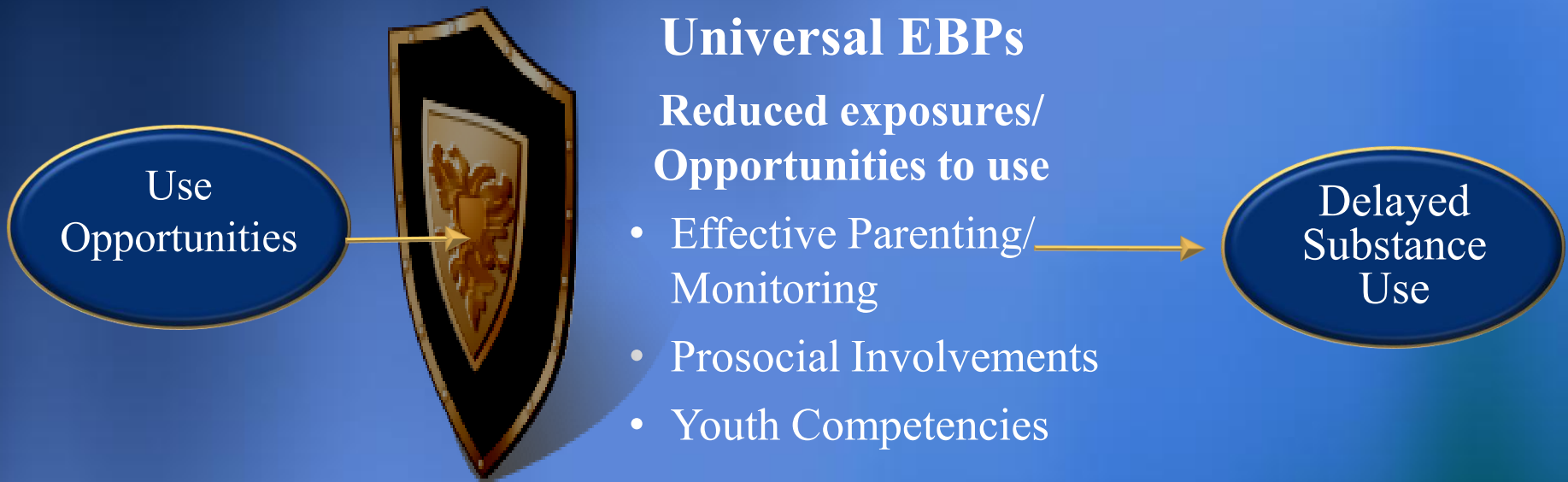
Sources: Biglan et al., 1997; D’Onofrio, 1997; Robertson, 1997 (*NIDA Research Monograph*); Office of Rural Mental Health, 2000; Spoth, 1997, *American Journal of Community Psychology*, Parsons et al., 2003.

# Two Windows of Opportunity for Impact



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.

# First Opportunity — Create Protective Shields, as Empirically Demonstrated



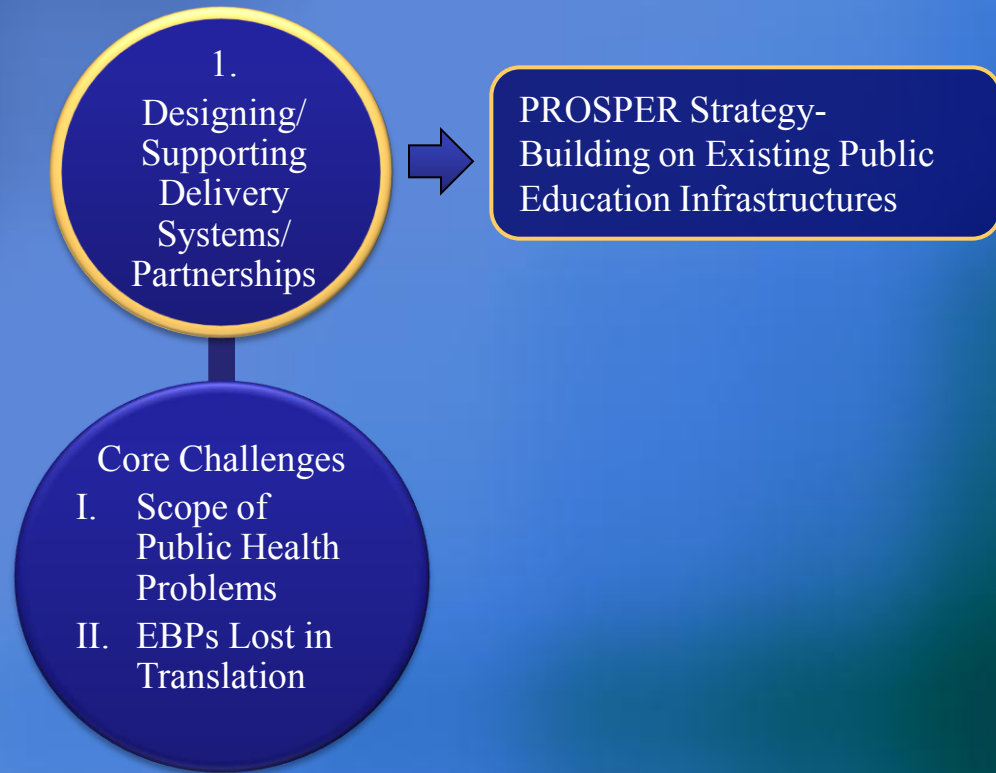
Course of Youth Development



Source: Spoth, R., Gyll, M., & Shin, C. (2009). Universal intervention as a protective shield against exposure to substance use: Long-term outcomes and public health significance. *American Journal of Public Health, 99* (11), 2026-2033.

# Part 2. How PROSPER Addresses Core Challenges

## Instrumental Goal #1—Effective Delivery Systems



# The Critical Importance of Effective Delivery Systems and Partnerships \*



Meta analyses and reviews suggest most factors influencing implementation are delivery or support system-related; systems factors “lie at the center” (Durlak & DuPre, 2008).

\*Adapted from Wandersman et al. (2008), *American Journal of Community Psychology*, 41, 171-181; Durlak & DuPre (2008), *American Journal of Community Psychology*, 41, 327-350.

# Making Use of Existing Infrastructures—Extension Linked with the Public School Delivery Systems

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

# Partnership Model Evolution Across Three Prevention Trials

Project Family

School/Community Implementers  
assisted by Extension



State University  
Prevention Research Team and Extension Specialists

# Partnership Model Evolution Across Three Prevention Trials

Capable Families and Youth

School/Community Implementers  
assisted by Extension

Regional Extension Coordinators

State University  
Prevention Research Team and Extension Specialists



# Partnership Model Evolution Across Three Prevention Trials

## PROSPER

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



# Instrumental Goal #2— Engaging Targeted Populations



# PROSPER Sustainability Trial Overview \*

- Collaboration with PSU/PA
- Design: RCT of 28 school districts (14 IA, 14 PA)
  - Full partnership with community teams
  - Delayed intervention
- Participants: Two cohorts of 6th grade children ( $\approx 6,000$  students per cohort); 2<sup>nd</sup> cohort has  $\approx 1,000$  intensive assessment families
- Multimethod, multi-informant measurement (now at 7<sup>th</sup> wave of data collection—11<sup>th</sup> grade)

# PROSPER Illustrative Findings— Success in Family EBP Recruitment

- 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.

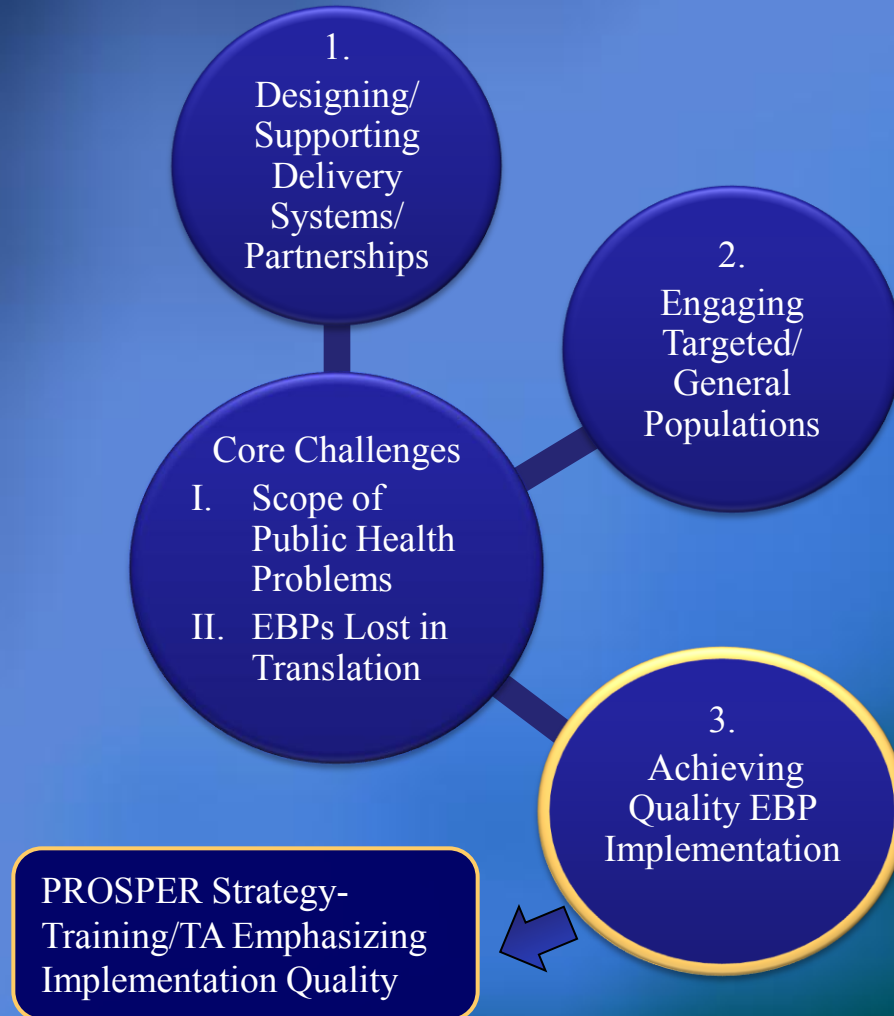
# Empirical Validation — Key Factors indicated by PROSPER Recruitment Study



- Effective TA collaboration
- Number of TA requests
- Quality of recruitment
  - Promotional/information materials
  - Efforts to contact families

Source: Spoth, R., Clair, S., Greenberg, M., Redmond, C., & Shin, C. (2007). Toward dissemination of evidence-based family interventions: Maintenance of community-based partnership recruitment results and associated factors. *Journal of Family Psychology*, 21(2), 137-146.

# Instrumental Goal #3 — EBP Implementation Quality



# Ongoing EBP Monitoring for Quality Implementation

Educate/train PROSPER partnership members about the importance of quality monitoring at:

- Statewide meetings
- Learning communities
- During facilitator and observer trainings
- “Feedback sessions” after program  
(e.g. SFP 10-14) session is completed
- Facilitator supervision

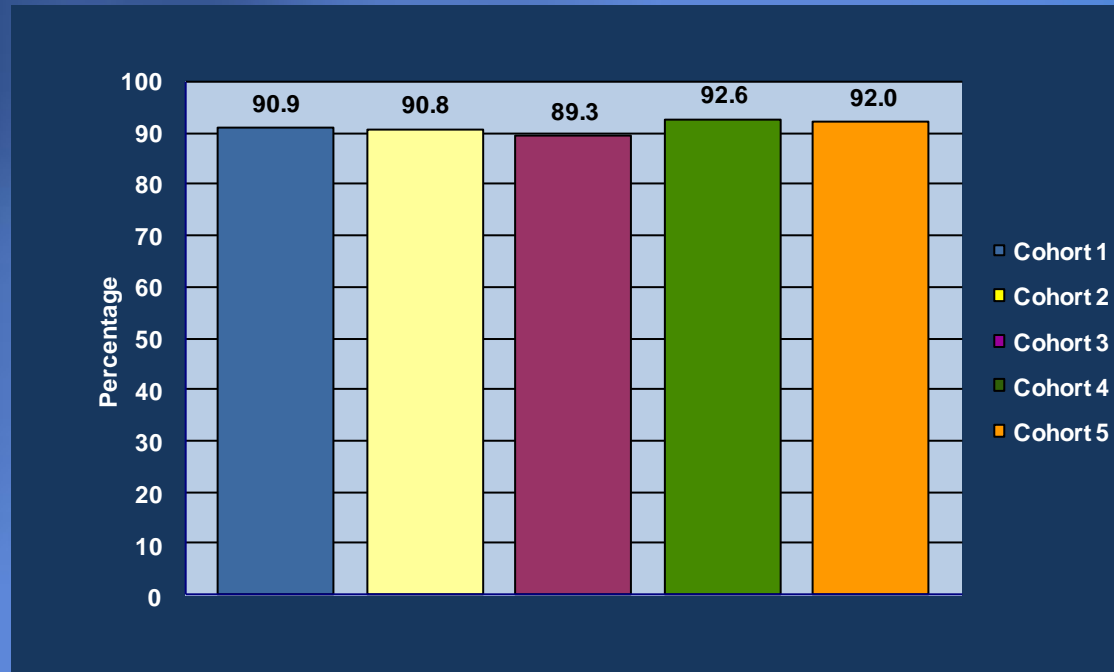
# Illustrative Findings — PROSPER Implementation Study Findings

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

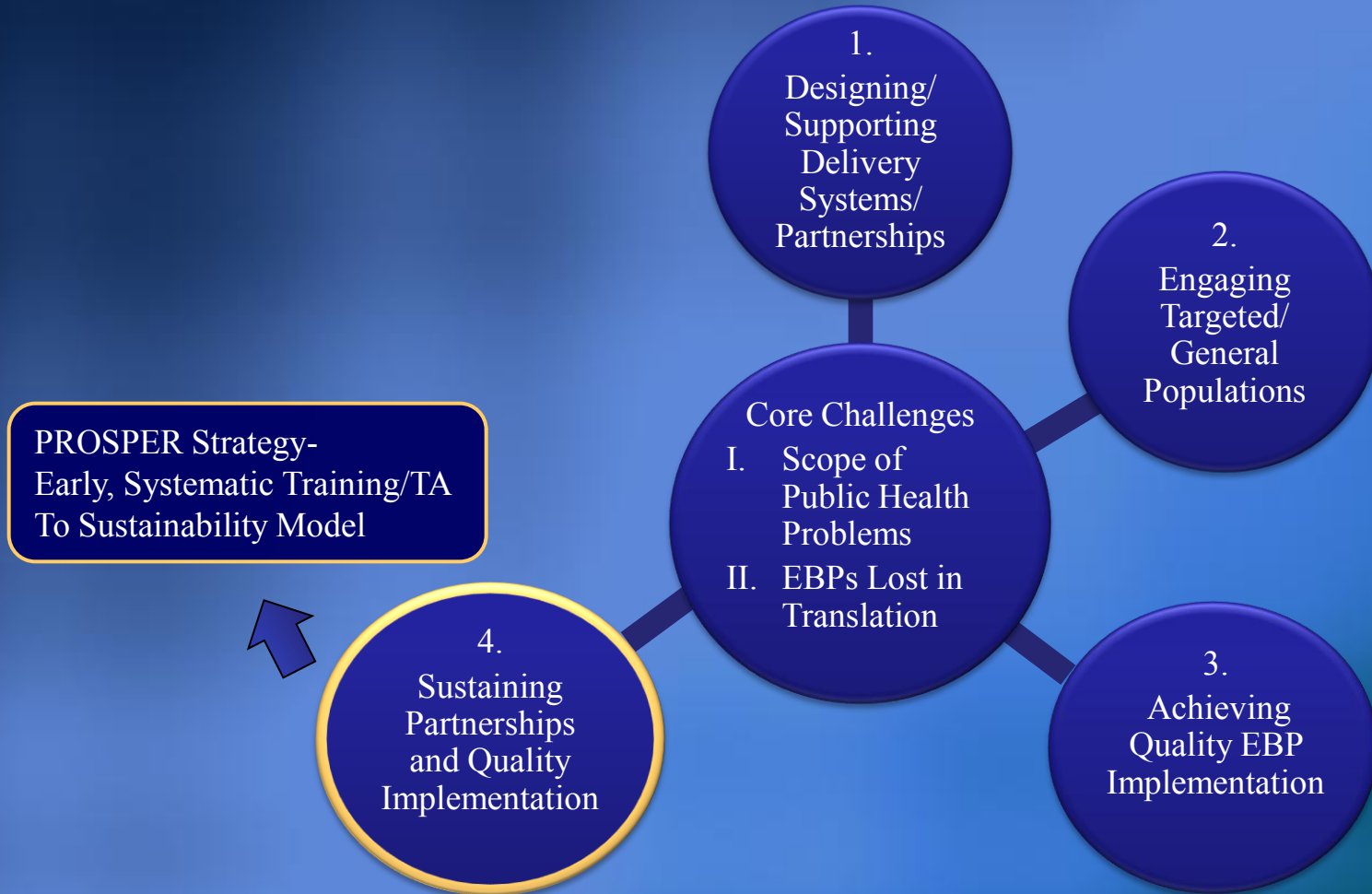


Source: Spoth, Guyll, Lillehoj, Redmond, Greenberg (2007). PROSPER study of evidence-based intervention implementation quality by community-university partnerships. *Journal of Community Psychology*, 35, 981-999.

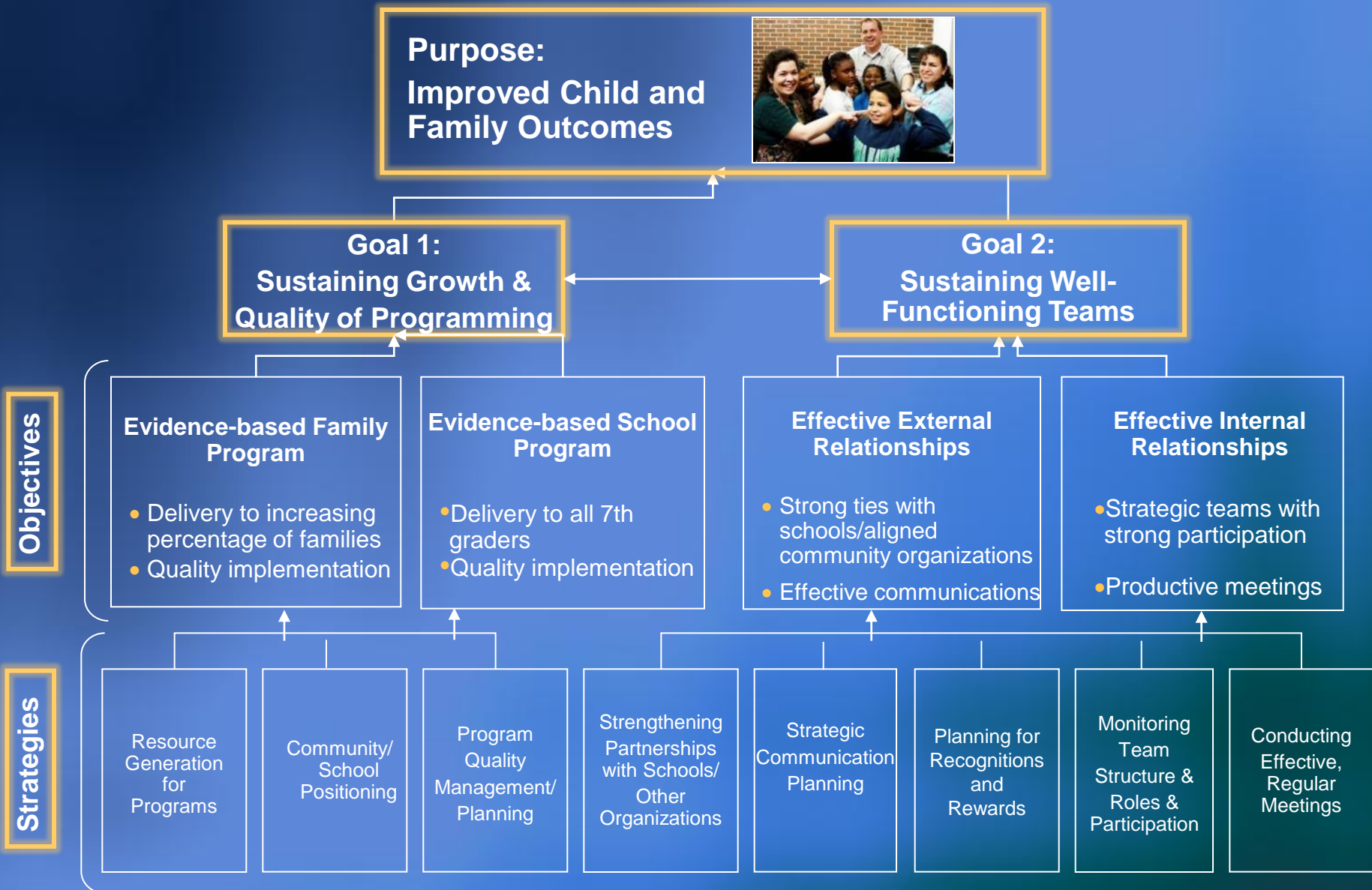
# PROSPER SFP 10-14— Long-Term Mean Adherence Ratings



# Instrumental Goal #4 — Sustainability of Team/EBPs

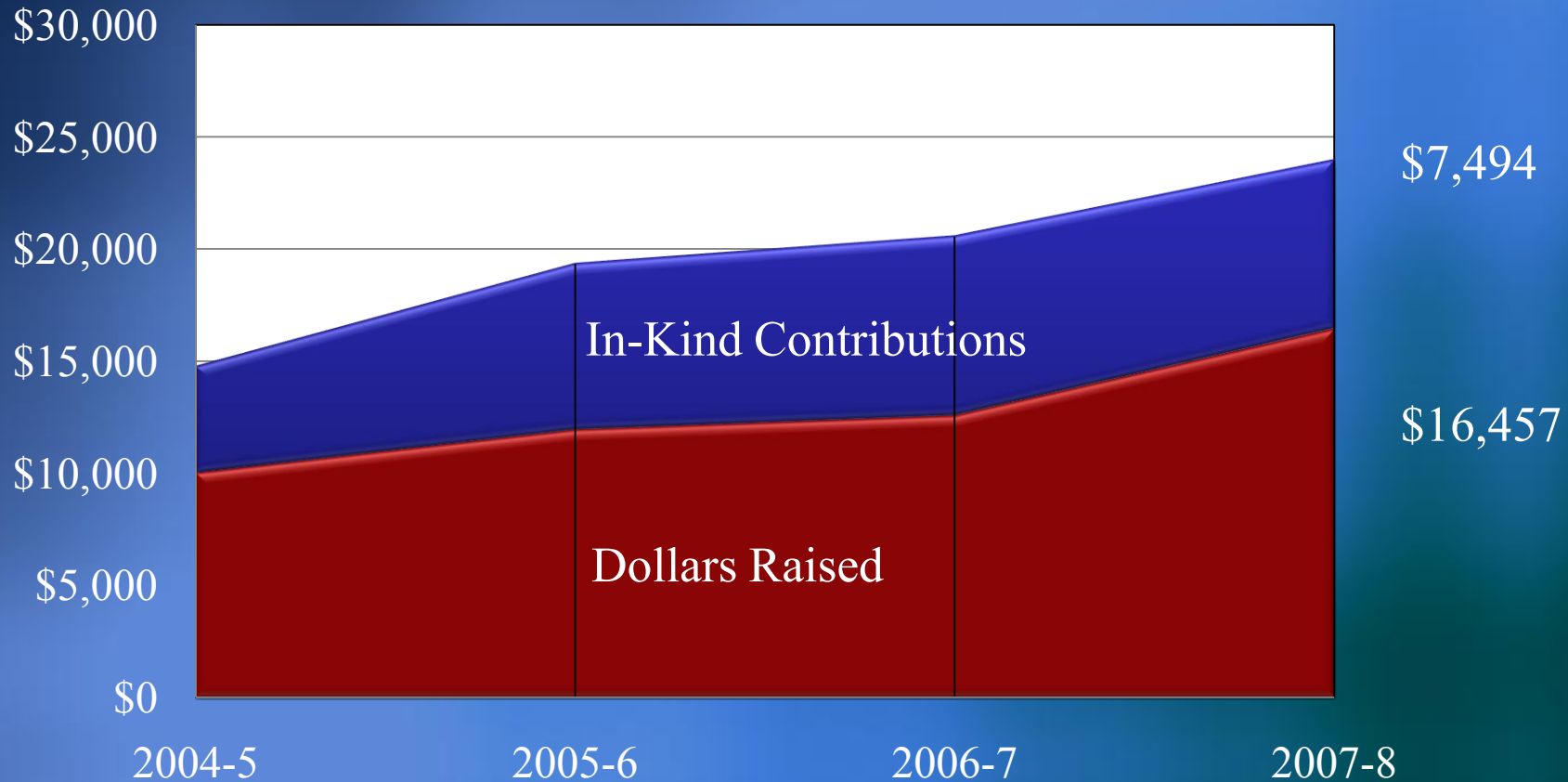


# PROSPER Sustainability Model



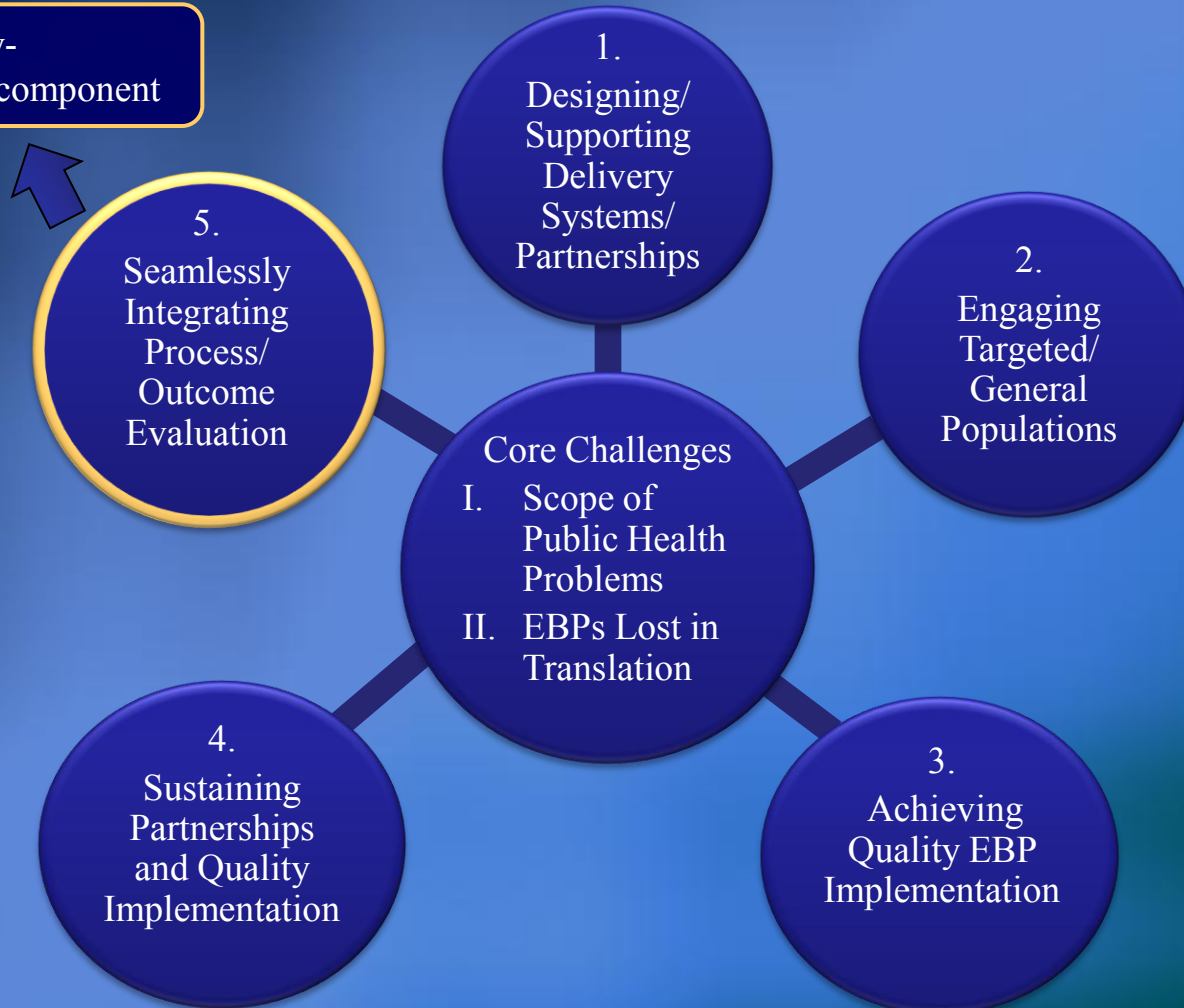
# Illustrative Findings — Annual Sustainability Funding

Average per Community = \$23,951

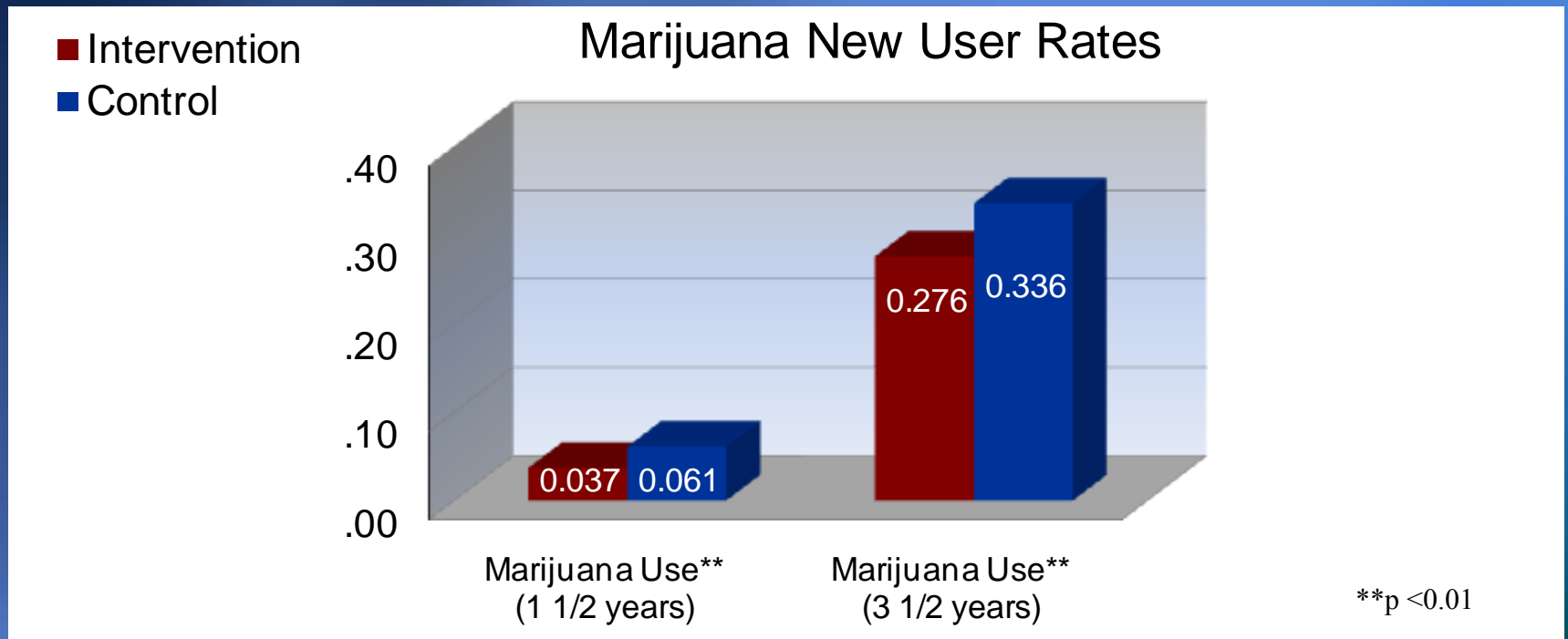


# Instrumental Goal #5— Integrated Process and Outcome Evaluation

PROSPER Strategy-  
Evaluation as core component



# Illustrative Findings — Substance Initiation Outcomes at 1½ and 3½ Years Past Baseline



\*\* Relative Reduction Rate - At 1½ years, for every 100 non-intervention initiates, there would be only 60 intervention initiates, for same period.

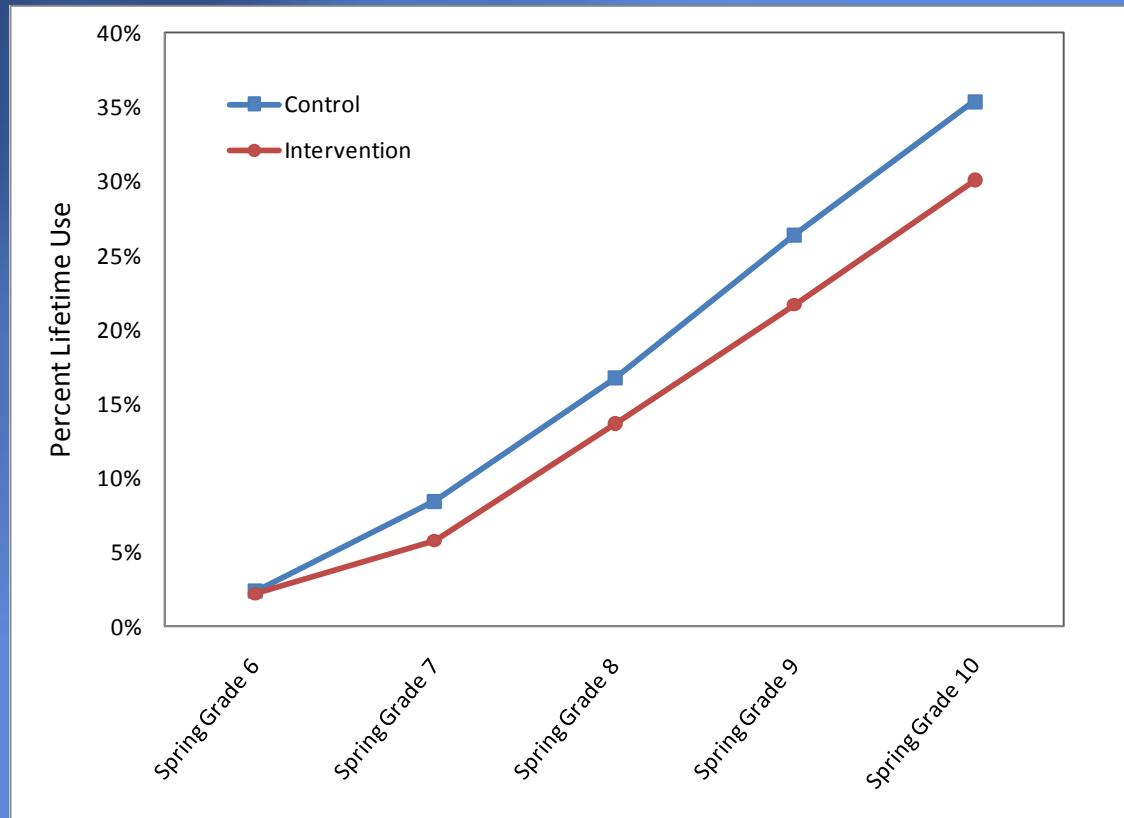
Source: Spoth, Redmond, Shin, Greenberg, Clair, & Feinberg (2007). Substance use outcomes at 1½ years past baseline from the PROSPER community-university partnership trial. *American Journal of Preventive Medicine*, 32(5), 395-402.

# Illustrative Findings — Range of Significant Substance Use Outcomes

Significant Intervention-Control Differences  
at 4½ Years Past Baseline

- Lifetime/New User Rates
  - Alcohol
  - Drunkenness
  - Cigarettes
  - Marijuana
  - Inhalants
  - Meth
  - Ecstasy
- Initiation Indices
  - Gateway
  - Illicit
- Past Year Rates
  - Drunkenness
  - Marijuana
  - Inhalants
  - Meth

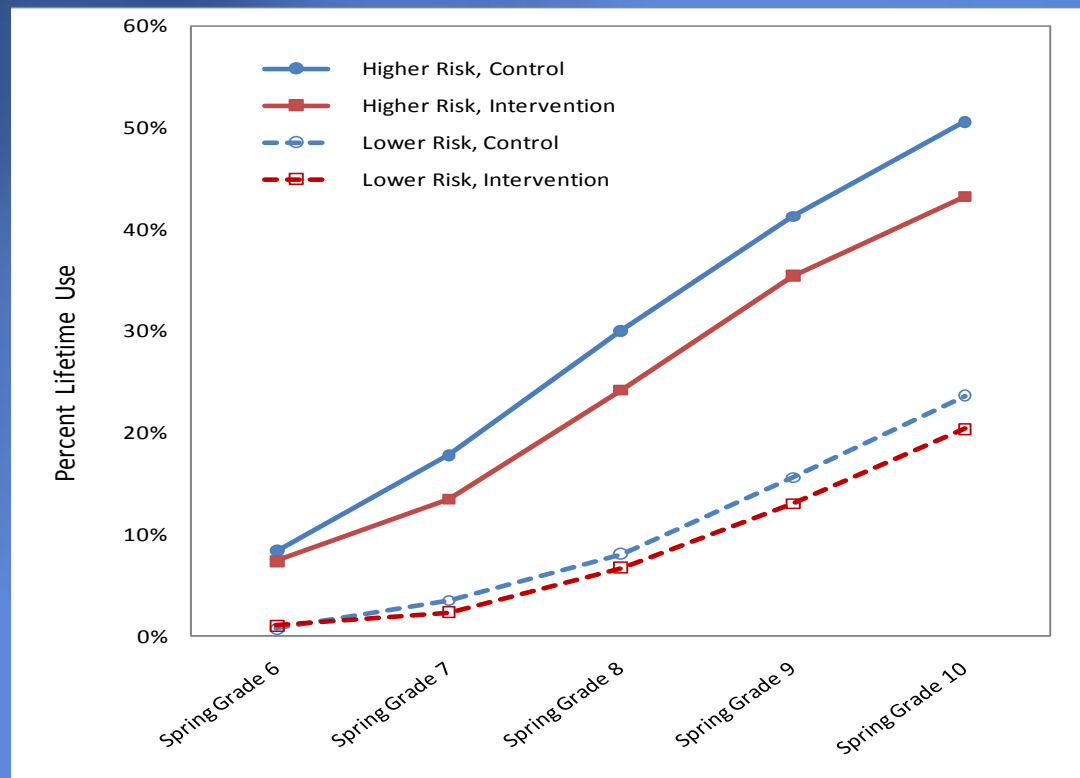
# PROSPER Substance Initiation Results — Diverging Trajectories of Marijuana Use Through 4½ Years Past Baseline



Source: Spoth, Redmond, Greenberg, Shin, et al. (2009). Addressing addiction with community health partnerships and evidence-based intervention: Substance use outcomes 4½ years past baseline. Manuscript in preparation.

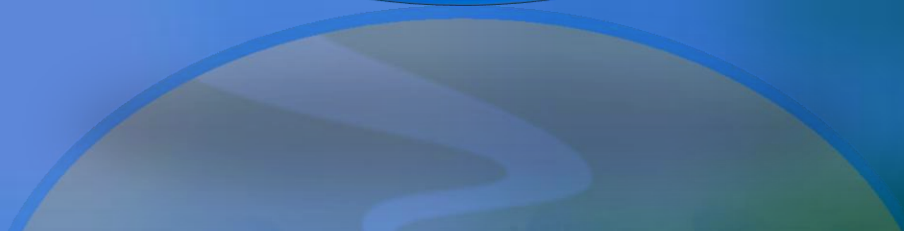
# PROSPER Substance Initiation Results — Impact on Marijuana Use Among Higher-Risk Students

Trajectories through 4 ½ Years Past Baseline



Source: Spoth, Redmond, Greenberg, Shin, et al. (2009). Addressing addiction with community health partnerships and evidence-based intervention: Substance use outcomes 4½ years past baseline. Manuscript in preparation.

# Part 3. Future Directions



# Future Promise— Long-term Effects of EBPs on PROSPER's Menu

## Outcomes at 10 Years Past Baseline



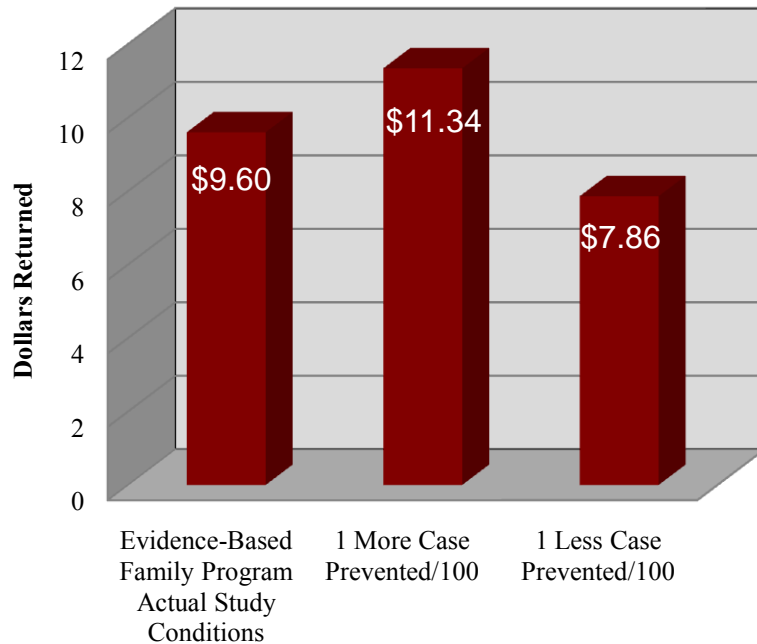
- Significant effects on young adult drunkenness, cigarette use, illicit drug use, offending behavior, health-risking sexual behavior
- Examples of practical significance—differences in behavior for young adults

	<u>Illicit Use</u>	<u>Offending</u>
Evidence-Based Family Program	14.8%	7.1%
Control Condition	18.2%	14.3%
Yields relative reduction rate	19.0%	50.0%

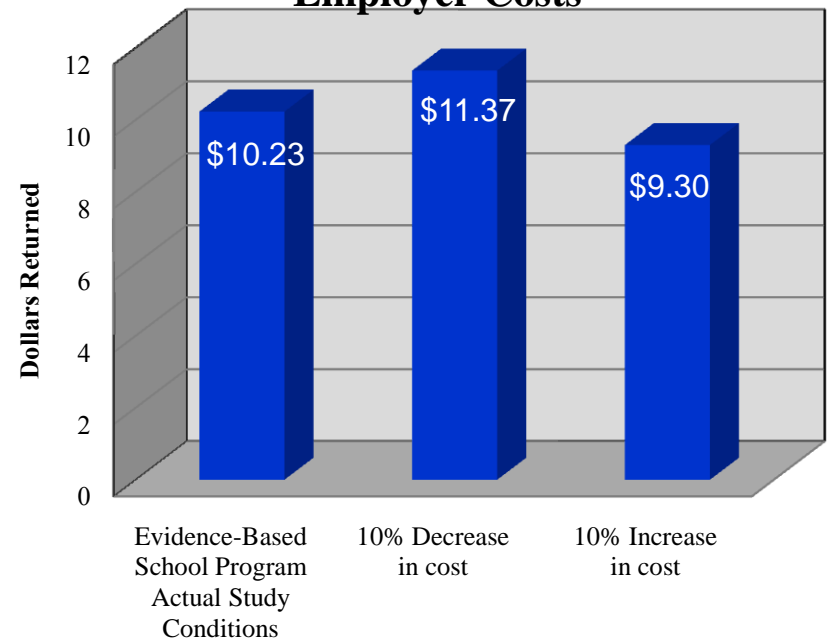
Sources: Spoth, R., Trudeau, L., Gyll, M., Shin, C., & Redmond, C. (2009). Universal intervention effects on substance use among young adults mediated by delayed adolescent substance initiation. *Journal of Consulting & Clinical Psychology*, 77(4), 620-632. Spoth, R., Trudeau, L., Shin, C., & Redmond, C. (August, 2008) Universal intervention effects on offending behaviors among young adults via reduction in growth of adolescent problem behaviors. Invited presentation at the annual conference of the American Psychological Association, Boston, MA.

# Future Promise — Economic Benefits of EBPs on PROSPER's Menu

**Partnership-Based EBPs:  
Benefit-Cost Ratios - Alcohol Disorder**



**Partnership-Based EBPs:  
Benefit-Cost Ratios - Meth Use  
Employer Costs**



Sources: Spoth, Guyll, & 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; Guyll, M., Spoth, R., et al. (2009). An economic analysis of methamphetamine prevention effects. (Manuscript in preparation.)

# Realizing Promise through a Partnership Network

## PROSPER Network Team for Scientific and EBP Technical Assistance

Prevention Scientists, PROSPER TA Providers, IT and Research Data Managers/Analysts  
(Overall project management, Scientific and EBP 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

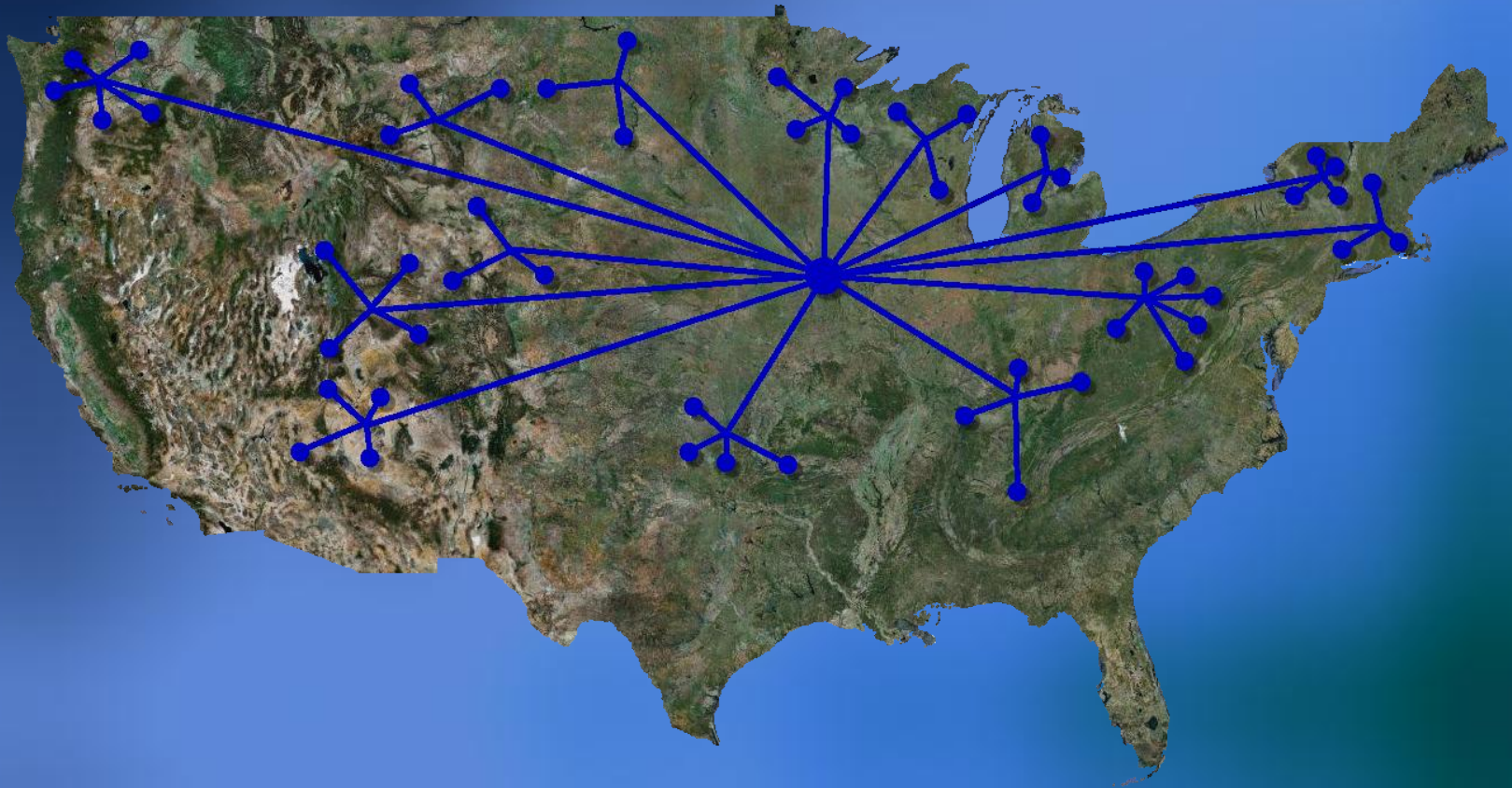
Extension-Based Data Coordinator/Evaluators, Project Director, Extension Administrator/Liaison,  
Advisory Team of State Department Representatives

# Realizing Promise through a Partnership Network

- NIDA “Grand Opportunity” grant infrastructure development with capacity building, state liaison training and web-based evaluations
- CDC funding to study readiness and adoption in additional states
  - National surveys of extension, public education, public health systems/network analysis
  - Adoption decision coaching
  - Replication study



# PROSPER Partnership Network...



## Acknowledgement of Our Partners in Research

### Investigators/Collaborators

R. Spoth (Director), C. Redmond & C. Shin (Associate Directors),  
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### Associated Faculty/Scientists

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### Prevention Coordinators

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K. James, J. Meek, A. Santiago, C. Tomaschik



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