Northwest (HHS Region 10)

PTTC Prevention Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

Why use evidence and where to find it:

Blueprints for Healthy Youth Development

Karl G. Hill, PhD, Principal Investigator,
Blueprints For Healthy Youth Development

May 27, 2020

Disclaimer

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SDRG

SCHOOL OF SOCIAL WORK
UNIVERSITY of WASHINGTON

Prevention Science Graduate Program
WASHINGTON STATE UNIVERSITY

CASAT
Center for the Application of Substance Abuse Technologies
University of Nevada, Reno

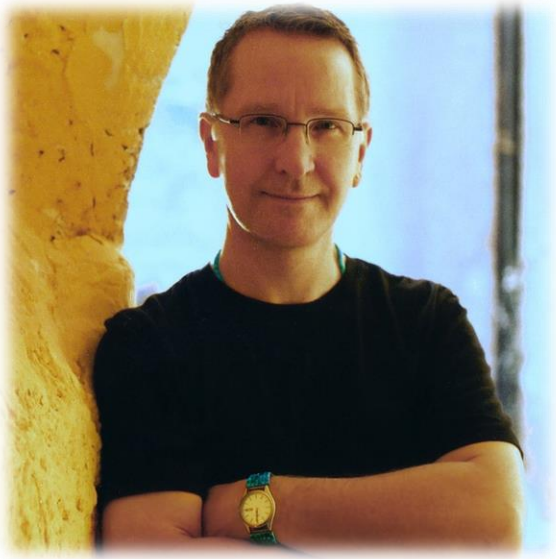
Upcoming Webinar – Save the Date!

Northwest Mental Health Technology Transfer Center and Prevention Technology Transfer Center Present:

Child Trends: Research to Improve Children's Lives During COVID-19

June 11, 2020; 11:00 AM – 12:30 PM Pacific

Presenter



Karl G. Hill, PhD, is the Principal Investigator of the *Blueprints for Healthy Youth Development* prevention registry, and directs the Program on Problem Behavior and Positive Youth Development at the University of Colorado Boulder. Over the last thirty years he has focused on two key questions: *What are optimal family, peer, school and community environments that encourage healthy youth and adult development?* And *How do we work with communities to make this happen?* In addition, he has focused on developing and testing interventions to shape these outcomes, and on working with communities to improve youth development and to break intergenerational cycles of problem behavior

Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

27 May 2020
Boulder, Colorado / Zoom
Northwest Prevention Technology Transfer Center
Webinar

Why Use Evidence and Where to Find It Blueprints for Healthy Youth Development

Karl G. Hill, PhD
Director, Prevention Science Program
Principal Investigator, ***Blueprints for Healthy Youth Development***
Professor Psychology and Neuroscience
Institute of Behavioral Science
University of Colorado Boulder

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Thank you (!!!) Kevin Haggerty, Janet Porter, Blair Brooke-Weiss, John Briney & our colleagues at the NW-PTTC!

Please respond on Chat to the group:

What is your role in prevention?

?

Overview

- Background
- Root Causes of Youth & Adult Problem Behavior

  → What have we learned as a field in the last 30 years, and why does it matter?
- Community Based Prevention
- Blueprints for Healthy Youth Development
- What do we still not know?

My story: from treatment to prevention

Youth Development &
Problem Prevention

1983!

Addiction
Violence
Depression

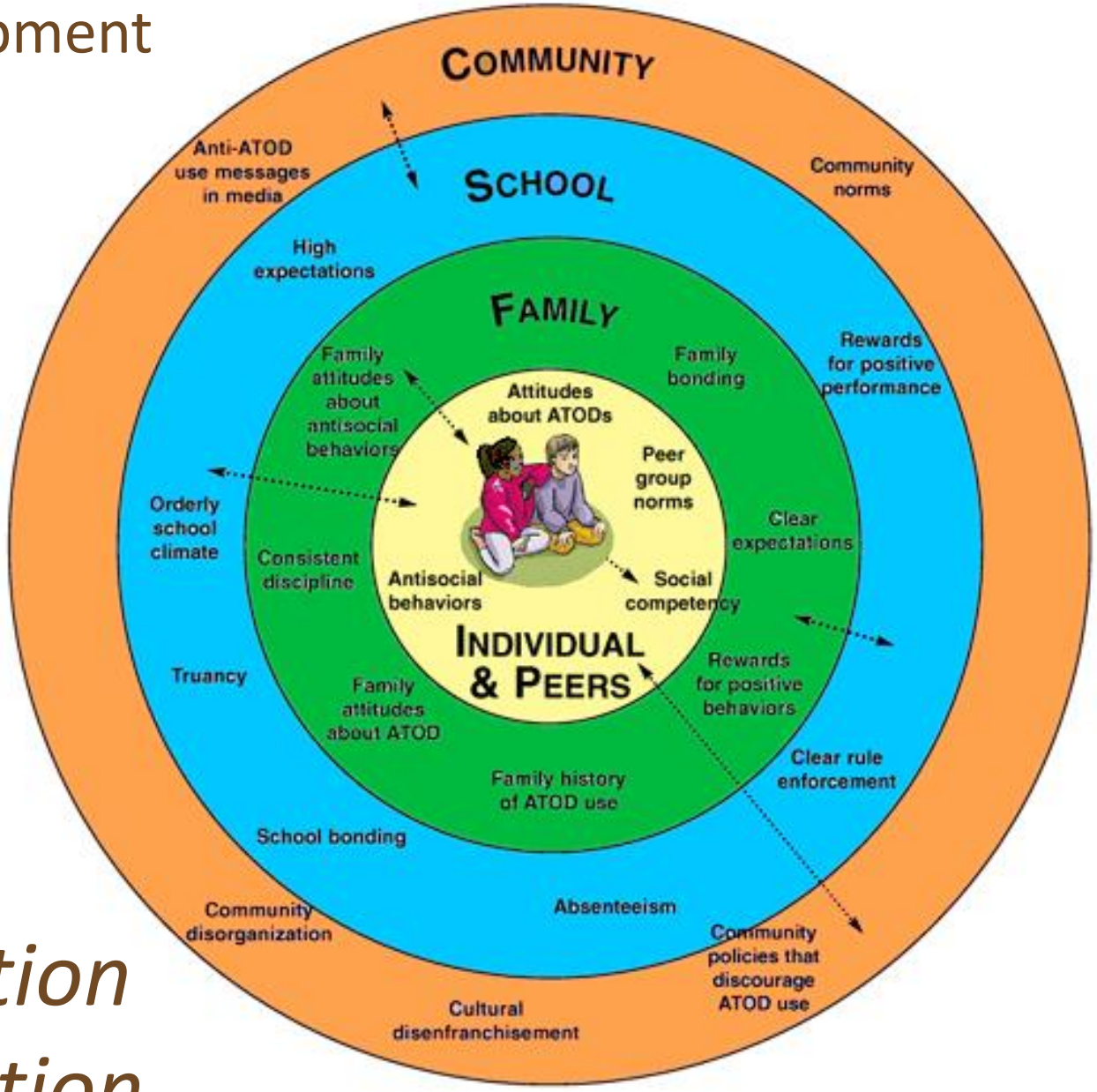
Treatment

The University of New Mexico
Department of Psychology

Doctorate in Boston (1991)
Life-Course Social Development

Social Development Research Group 1994-2017 Seattle, WA

J. David Hawkins
Richard F. Catalano
Kevin Haggerty



Problem Prevention & Health Promotion

Prevention Science

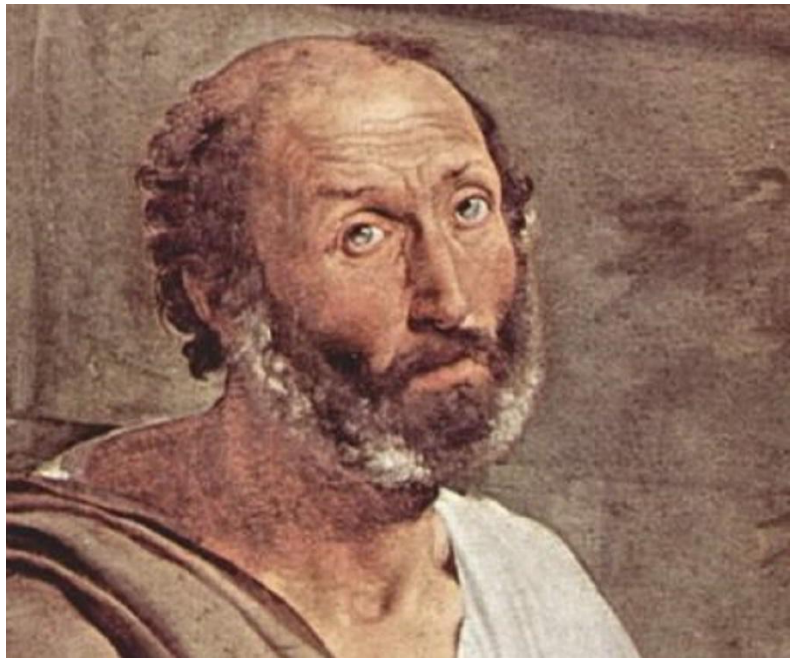
Karl G. Hill, PhD
Director, Prevention Science Program
Principal Investigator, ***Blueprints for Healthy Youth Development***
Professor Psychology and Neuroscience
Institute of Behavioral Science
University of Colorado Boulder

400-350 BCE

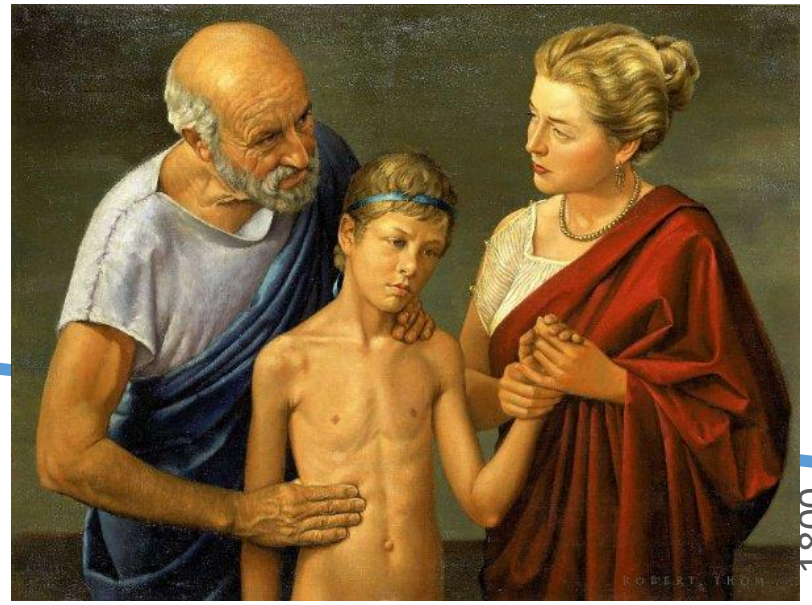
Aristotle

Biology, Physics, Astronomy, Geology

Hippocrates - Medicine



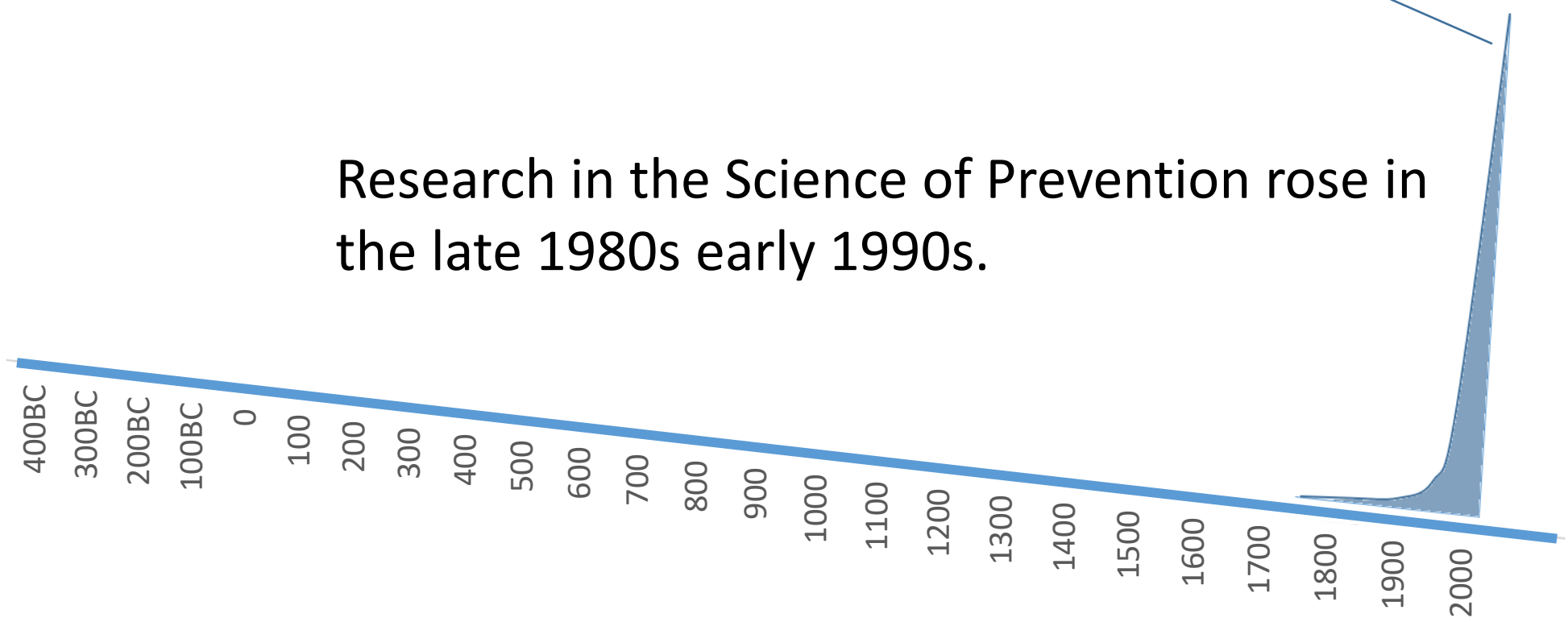
Many sciences have a long history. Biology, physics, astronomy, geology, medicine have been developing as sciences for 2400 years.



Prevention Science is a new field,
and there is still much to learn.

1991
Society for Prevention Science

Research in the Science of Prevention rose in the late 1980s early 1990s.



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  → What have we learned as a field in the last 30 years, and why does it matter?
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Basic Prevention Principles: What have we learned as a field in the last 30 years?

1. Causes
2. Outcomes
3. Individual Risks vs. Cumulative Risk Impact
4. Selective vs. Universal Intervention
5. Theory / Intervention Development
6. Community-Based Prevention

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Implications for action!

Basic Prevention Principles: What have we learned as a field in the last 30 years?

1. Causes

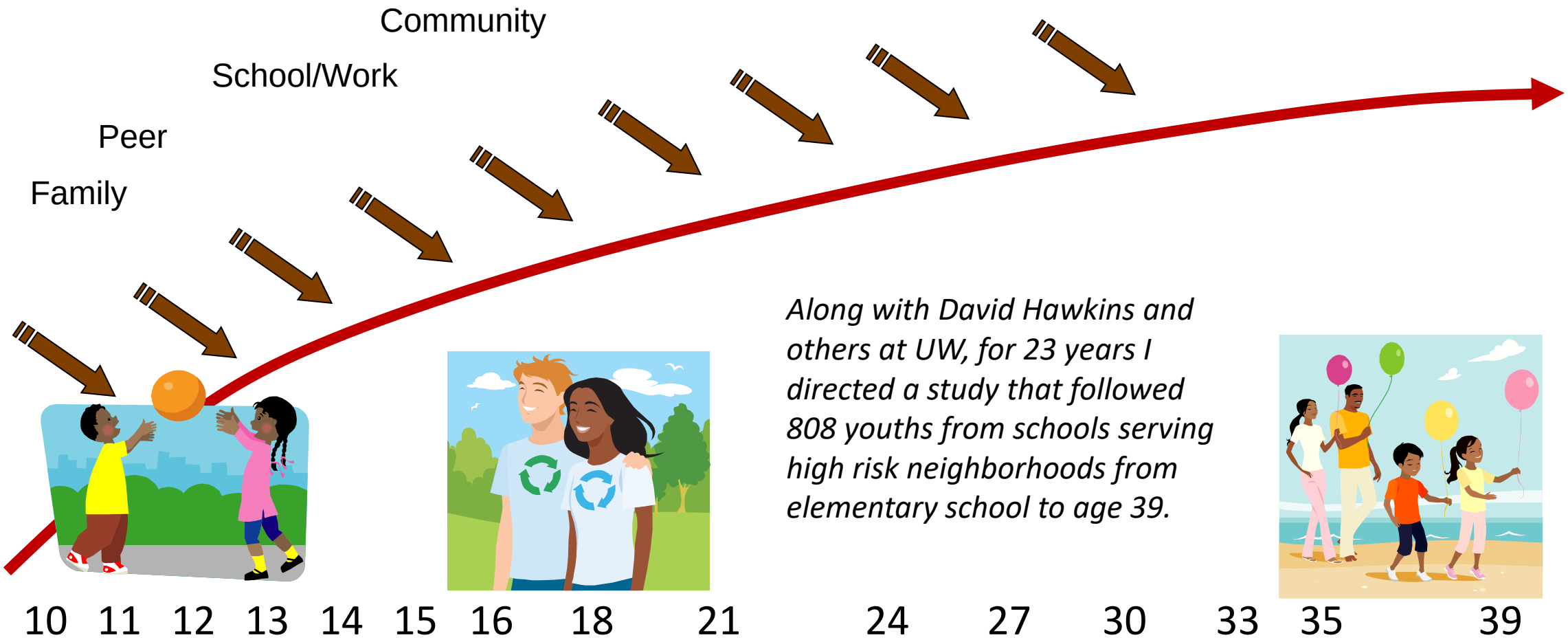
   To adequately address a problem,
   you have to know its causes.

What are the child and adolescent causes of addiction and related outcomes?

At some point we all start out pretty much the same.

What happens along the way to push kids off track?

Seattle Social Development Project followed 808 kids from elementary school until age 39



Along with David Hawkins and others at UW, for 23 years I directed a study that followed 808 youths from schools serving high risk neighborhoods from elementary school to age 39.

808 5th graders

Initially we asked: what are the one or two big causes that we can focus on to reduce addiction?

Family

School

Individual
Peer

Community

It turned out that the root causes of prosocial and problematic development reach across all domains. It's not just one or two big things.

Risk Factors

Those factors that increase risk for poor outcomes

Family

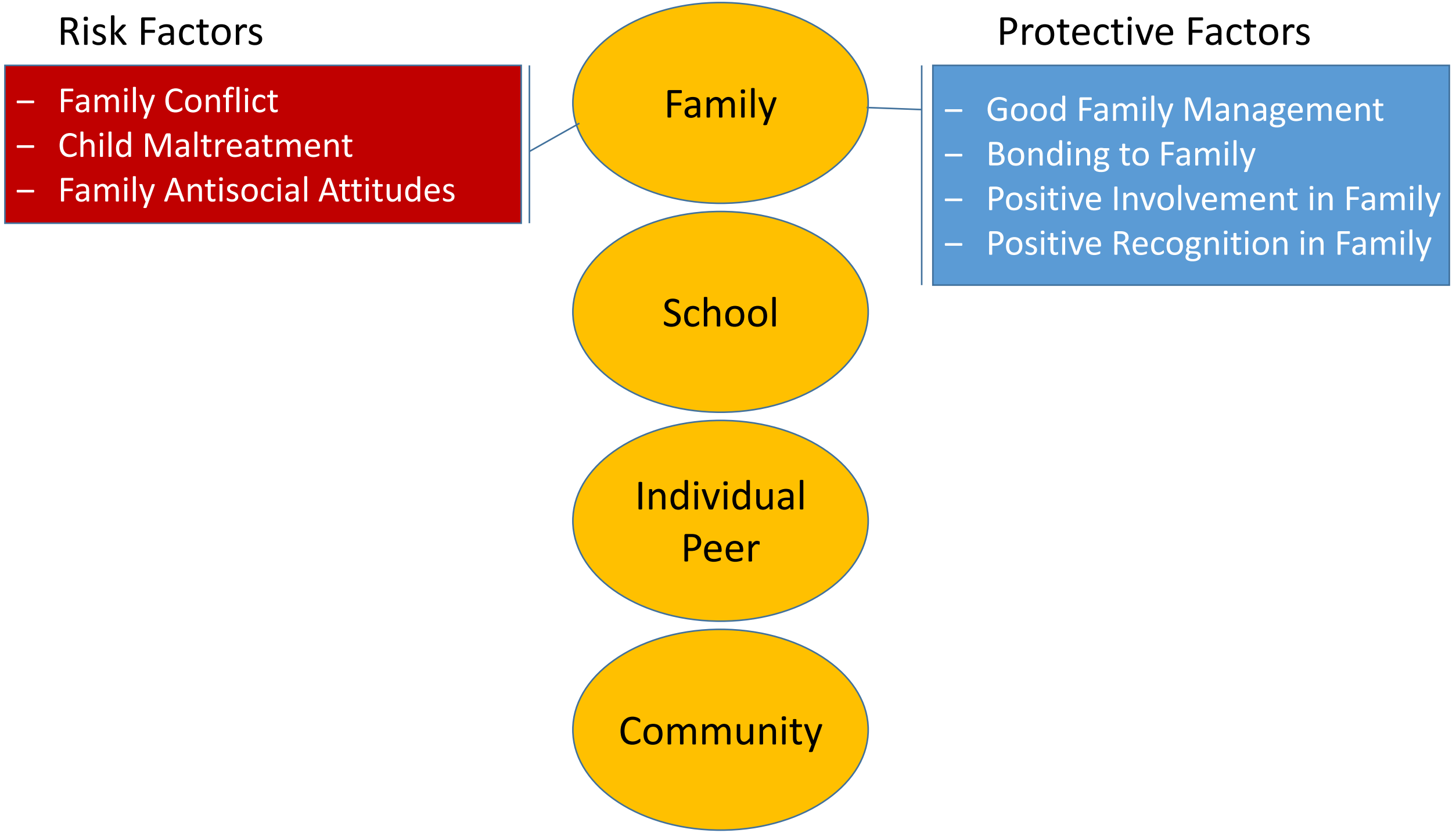
School

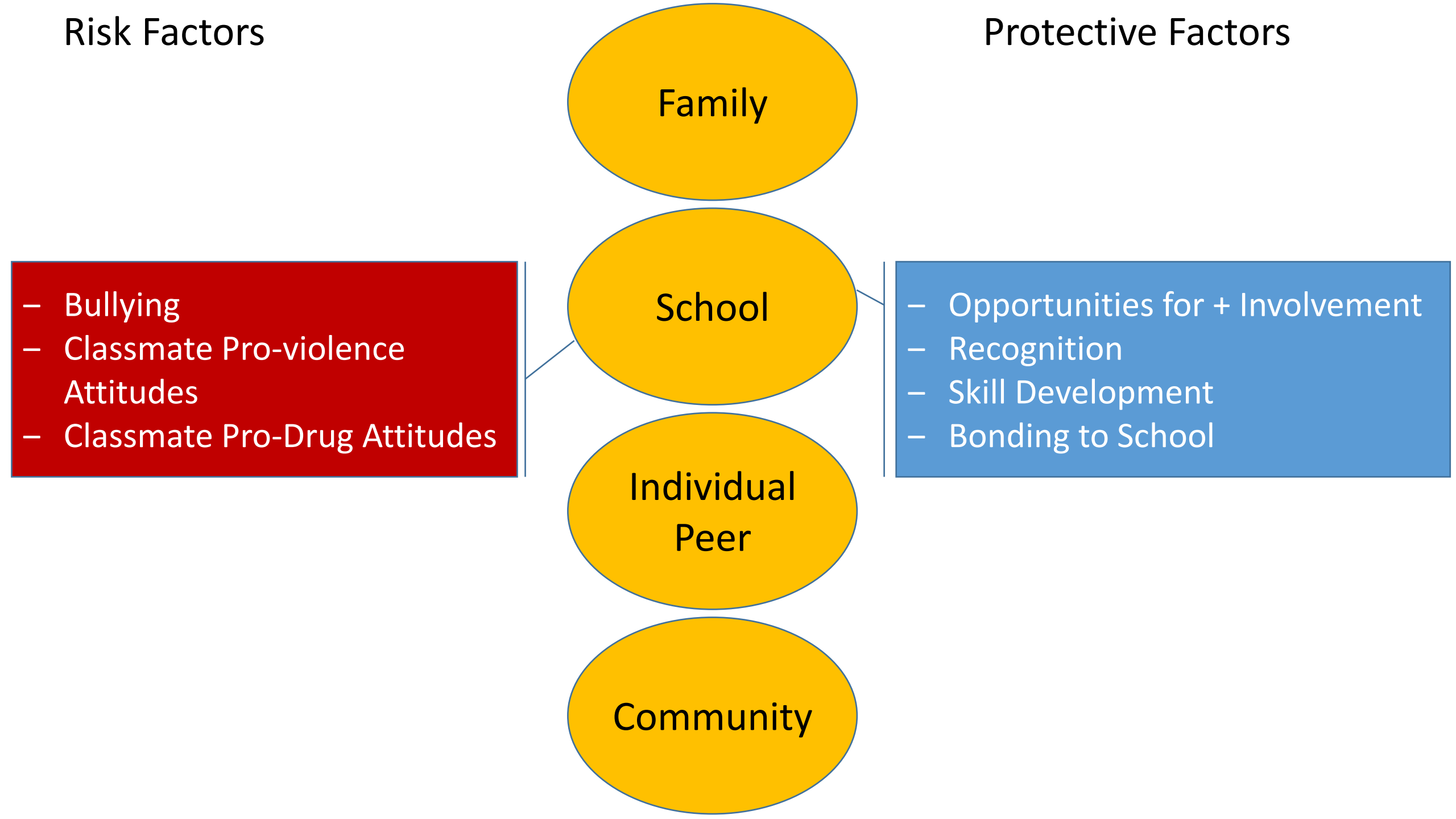
Individual
Peer

Community

Protective Factors

Those factors that protect against risk and promote positive outcomes.


Risk Factors
– Family Conflict
– Child Maltreatment
– Family Antisocial Attitudes
Family
School
Individual
Peer
Community
Protective Factors
– Good Family Management
– Bonding to Family
– Positive Involvement in Family
– Positive Recognition in Family


Risk Factors
Protective Factors
Family
School
Individual
Peer
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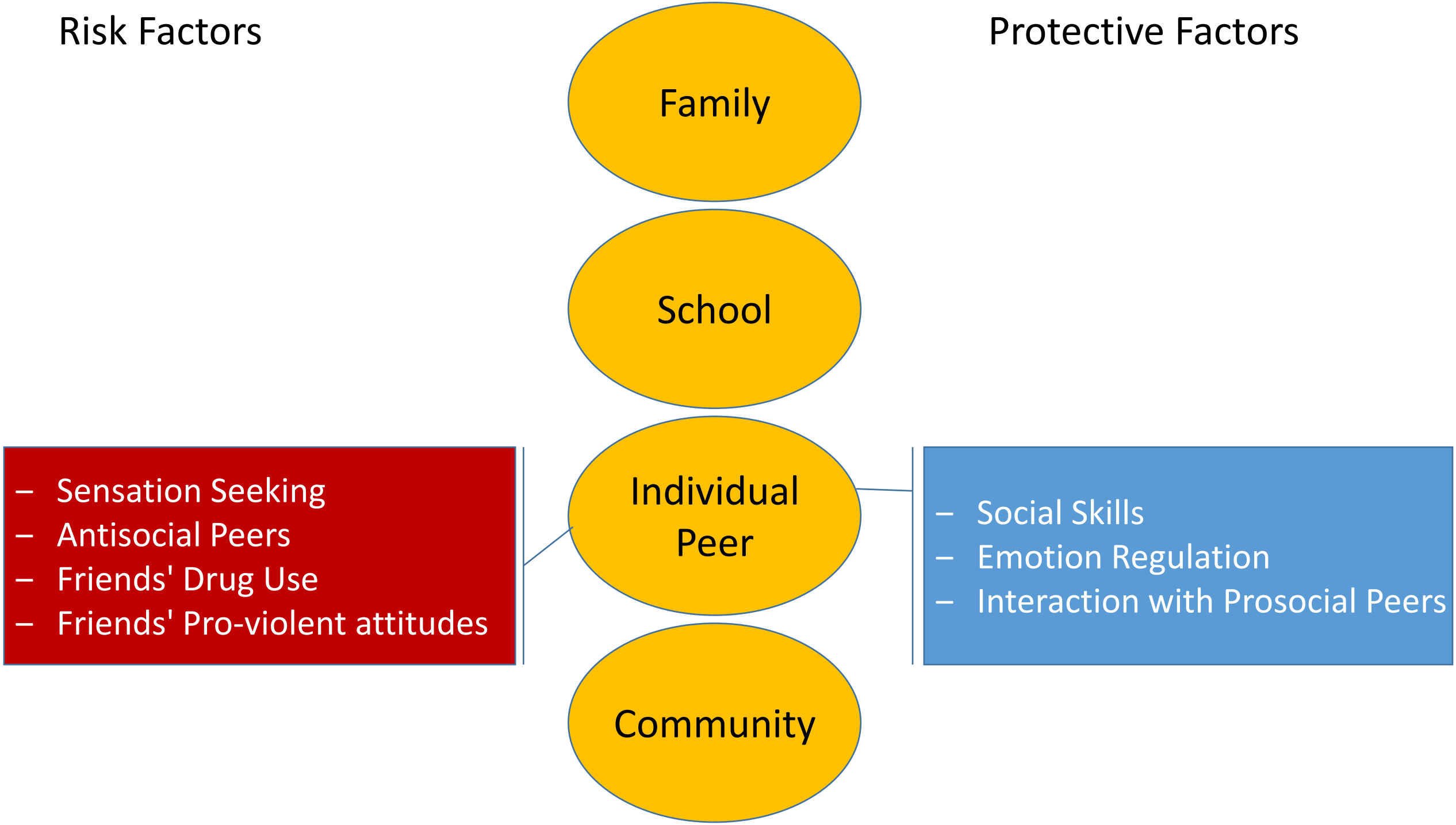
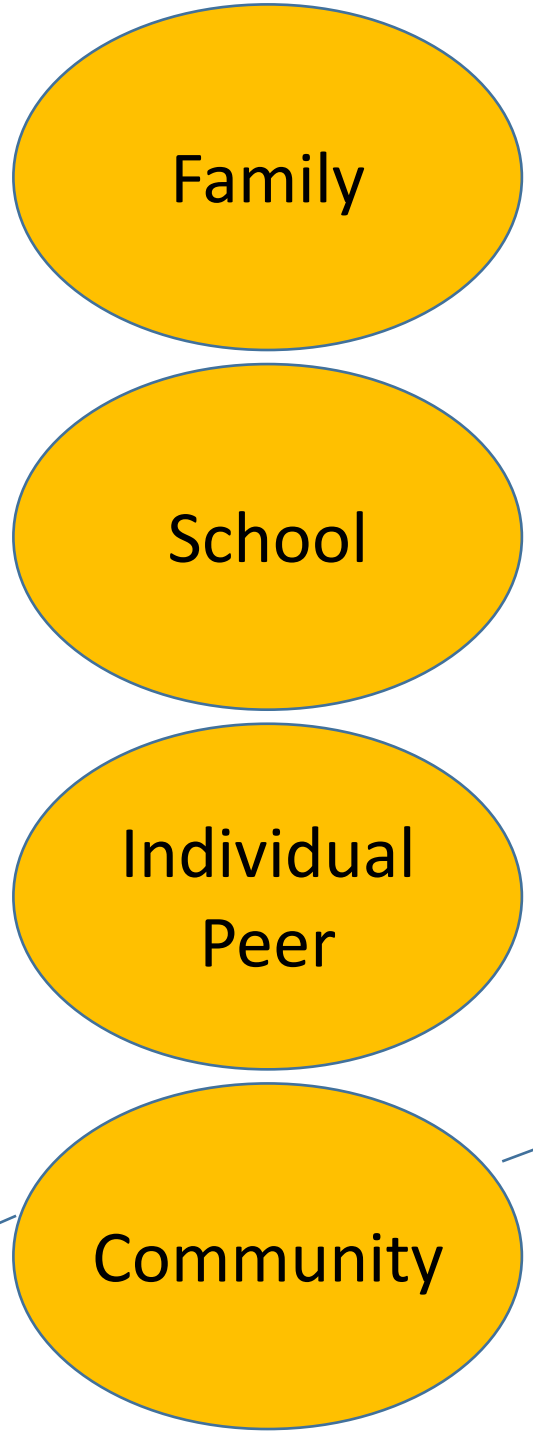
– Bullying
– Classmate Pro-violence Attitudes
– Classmate Pro-Drug Attitudes
– Opportunities for + Involvement
– Recognition
– Skill Development
– Bonding to School


Risk Factors
Protective Factors
Family
School
Individual
Peer
Community
– Sensation Seeking
– Antisocial Peers
– Friends' Drug Use
– Friends' Pro-violent attitudes
– Social Skills
– Emotion Regulation
– Interaction with Prosocial Peers

Risk Factors

Protective Factors



- Community Disorganization
- Pro-Drug & violence norms
- Drug Availability
- Gangs

- Prosocial Opportunities
- Prosocial Involvement
- Recognition & Rewards

Risk Factors

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School

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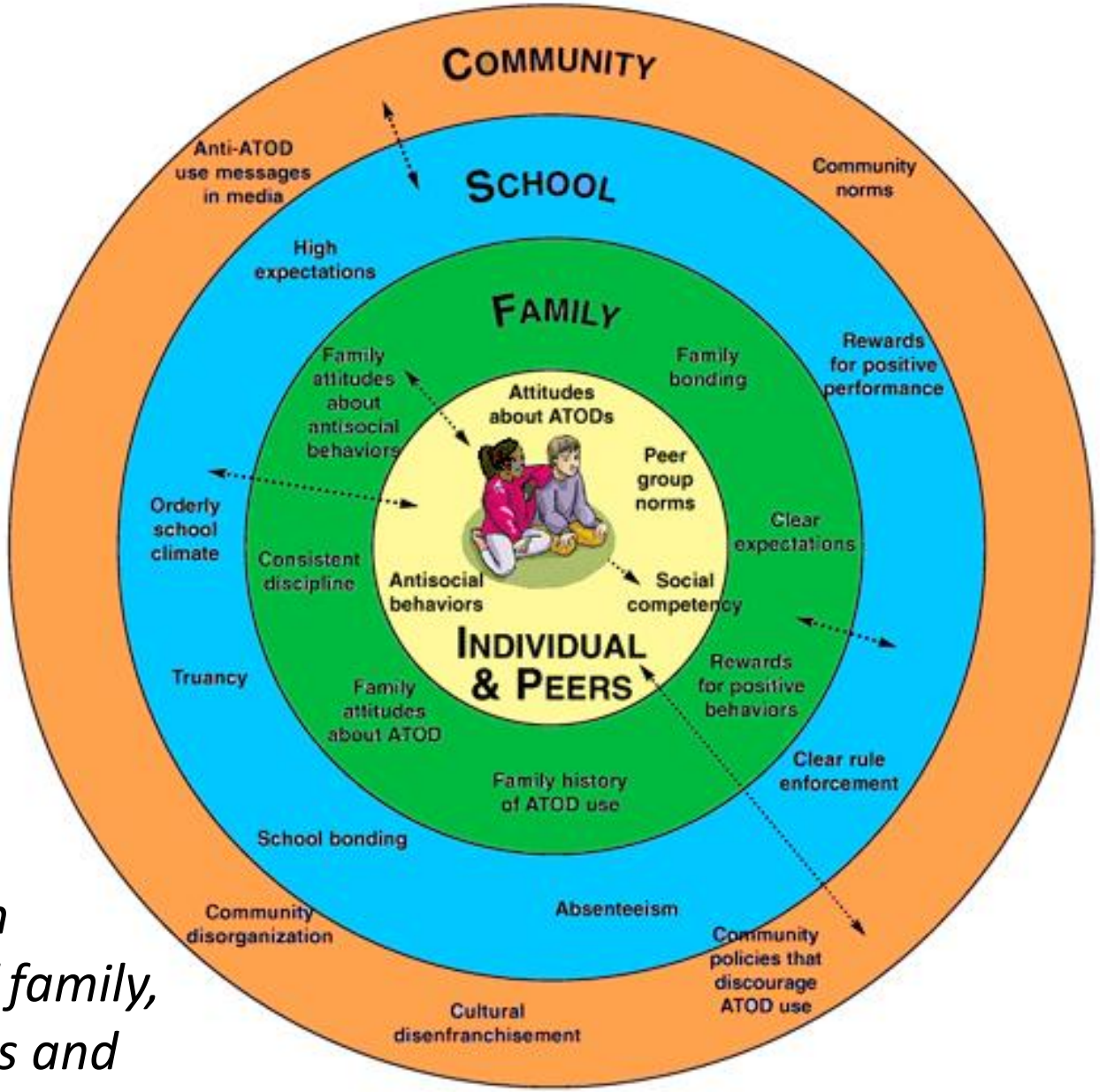
Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

The root causes of prosocial and problematic development, including violence, reach across all domains.



Kids live in an ecosystem of family, peers, schools and communities.

Risk Factors

Reduce those factors that put children at risk for poor outcomes

Family

School

Individual Peer

Community

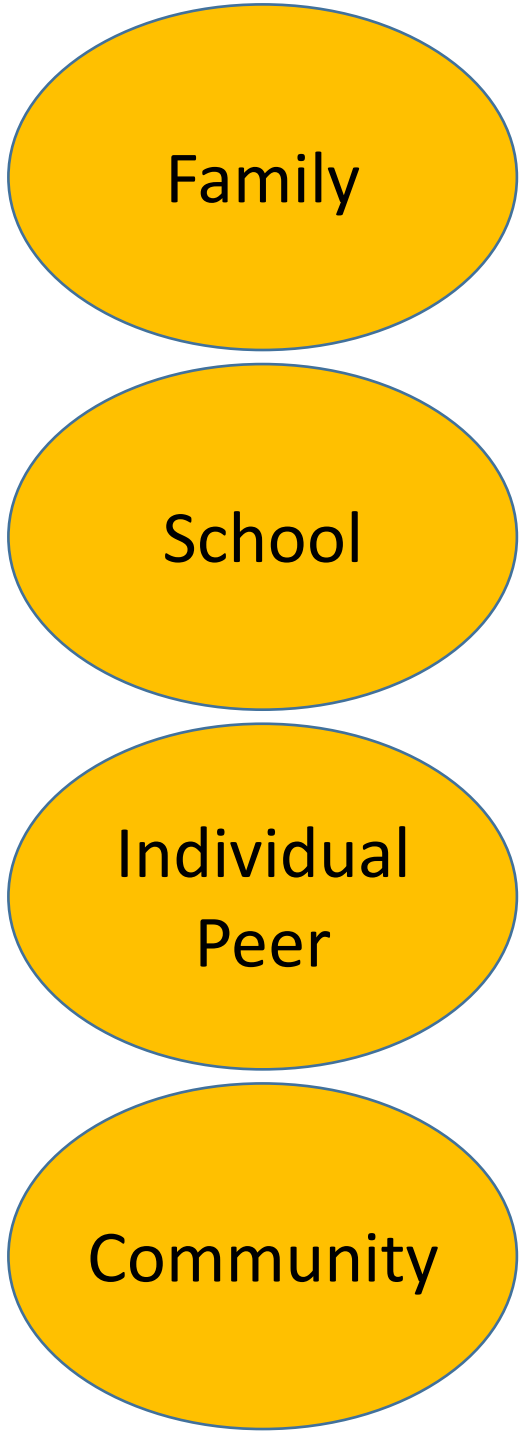
Protective Factors

Build protective/ nurturing environments and individual strengths

The logic of prevention science

Implication

If the root causes of prosocial and problematic development reach across all domains…



Then prevention strategies should address multiple domains of risk and protection.

Basic Prevention Principles: What have we learned as a field in the last 30 years?

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	Substance Abuse	Violence	Suicide	Educational Attainment
Family	✓	✓	✓	✓
School	✓	✓	✓	✓
Individual Peer	✓	✓	✓	✓
Community	✓	✓	✓	✓

The same set of root causes affect a wide range of outcomes, not just addiction.

Substance Abuse

Violence

Suicide

Educational Attainment

Family

School

Individual Peer

Community

Implication:

We do not need different prevention programs (or agencies) for different outcomes.

Which risks are strongest?

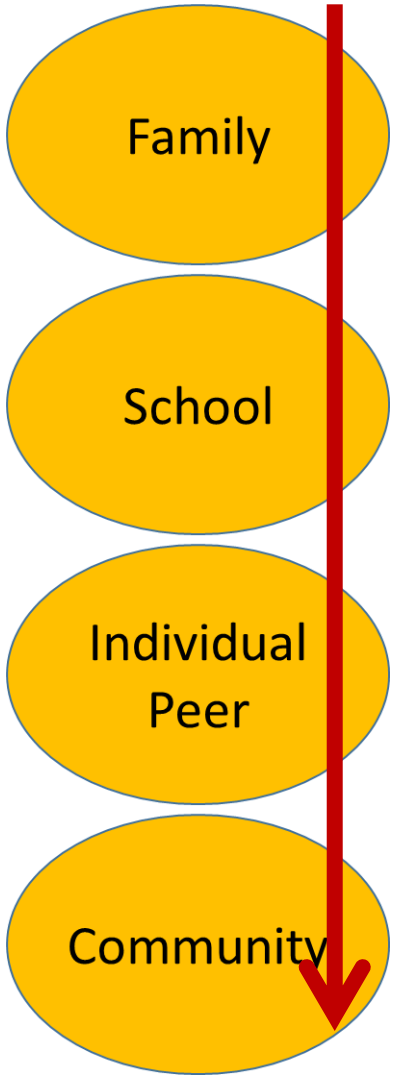
- Family
- School
- Individual Peer
- Community

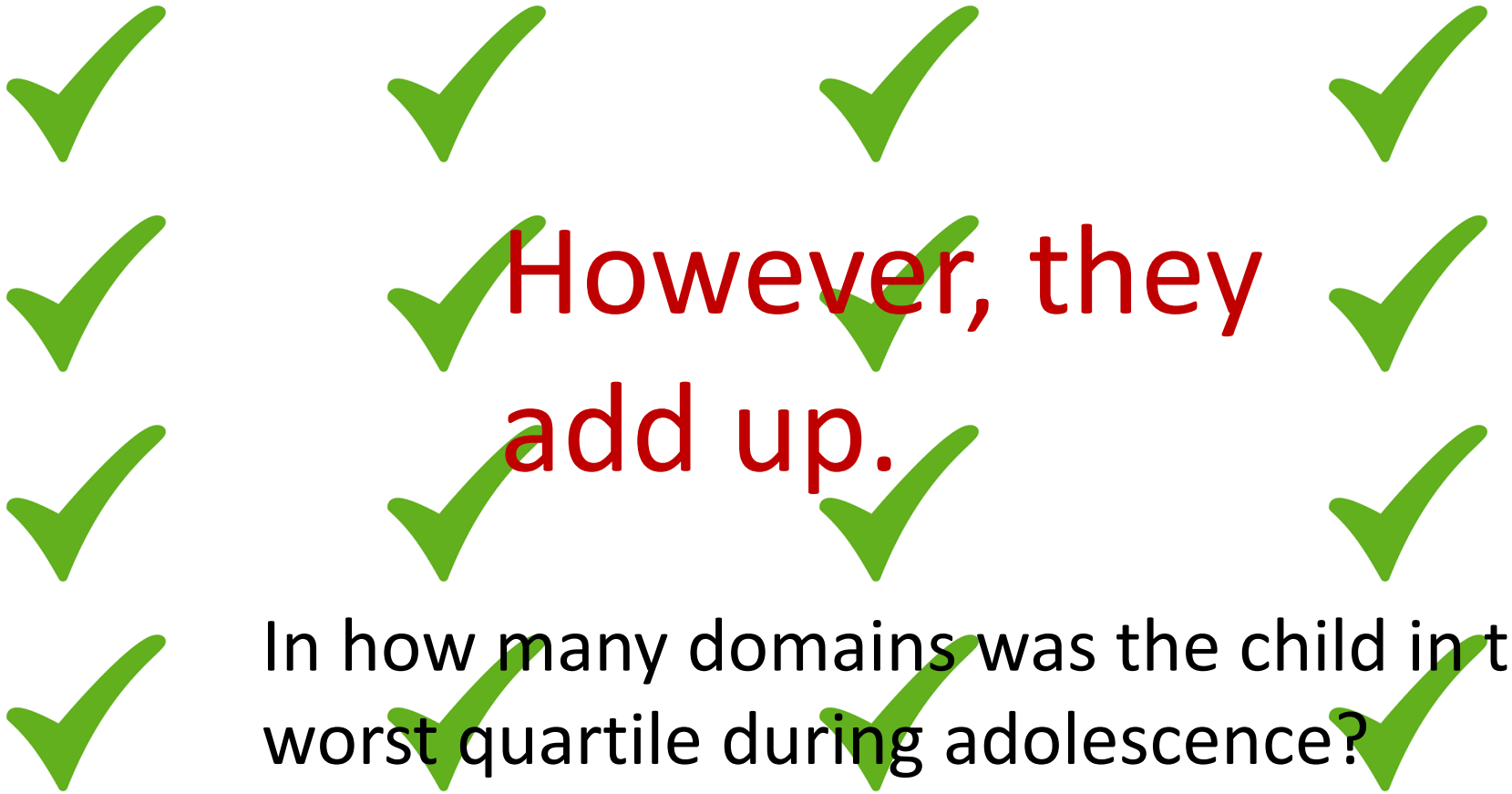
Each of these causes has about the same impact by itself.

Substance Abuse	Delinquency	Suicide	Educational Attainment
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓

No one factor rises above the rest as most important.

Substance Abuse | Delinquency | Suicide | Educational Attainment





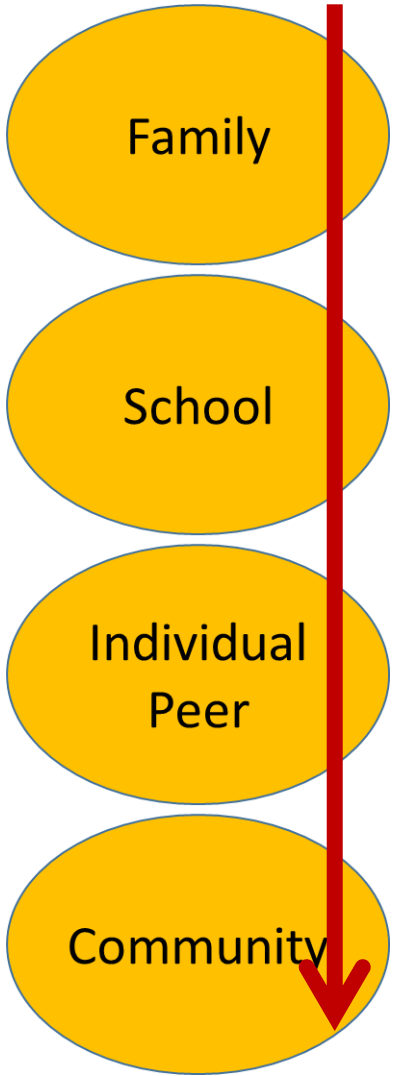
However, they add up.

In how many domains was the child in the worst quartile during adolescence?

0 to 4

Cumulative Risk

Substance Abuse



0 to 4

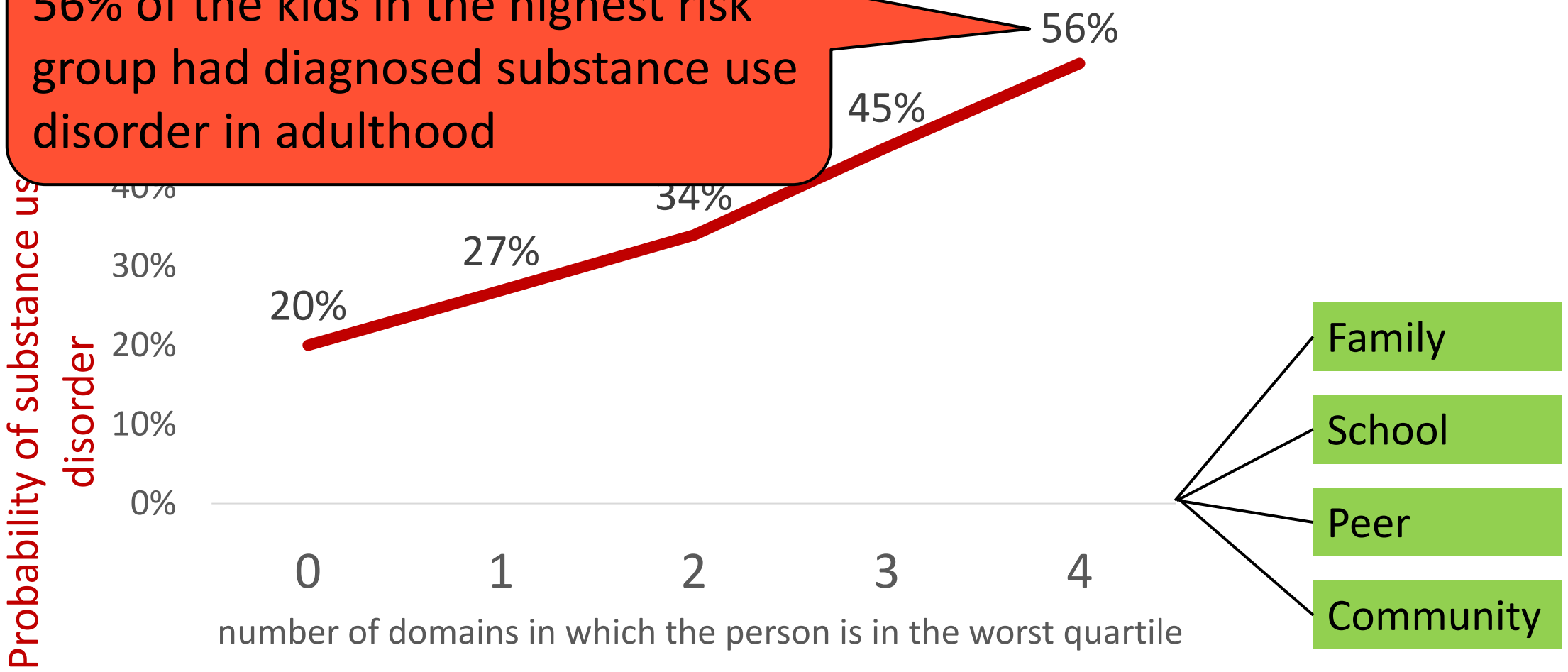
However, they add up.

In how many domains was the child in the worst 25% during adolescence?

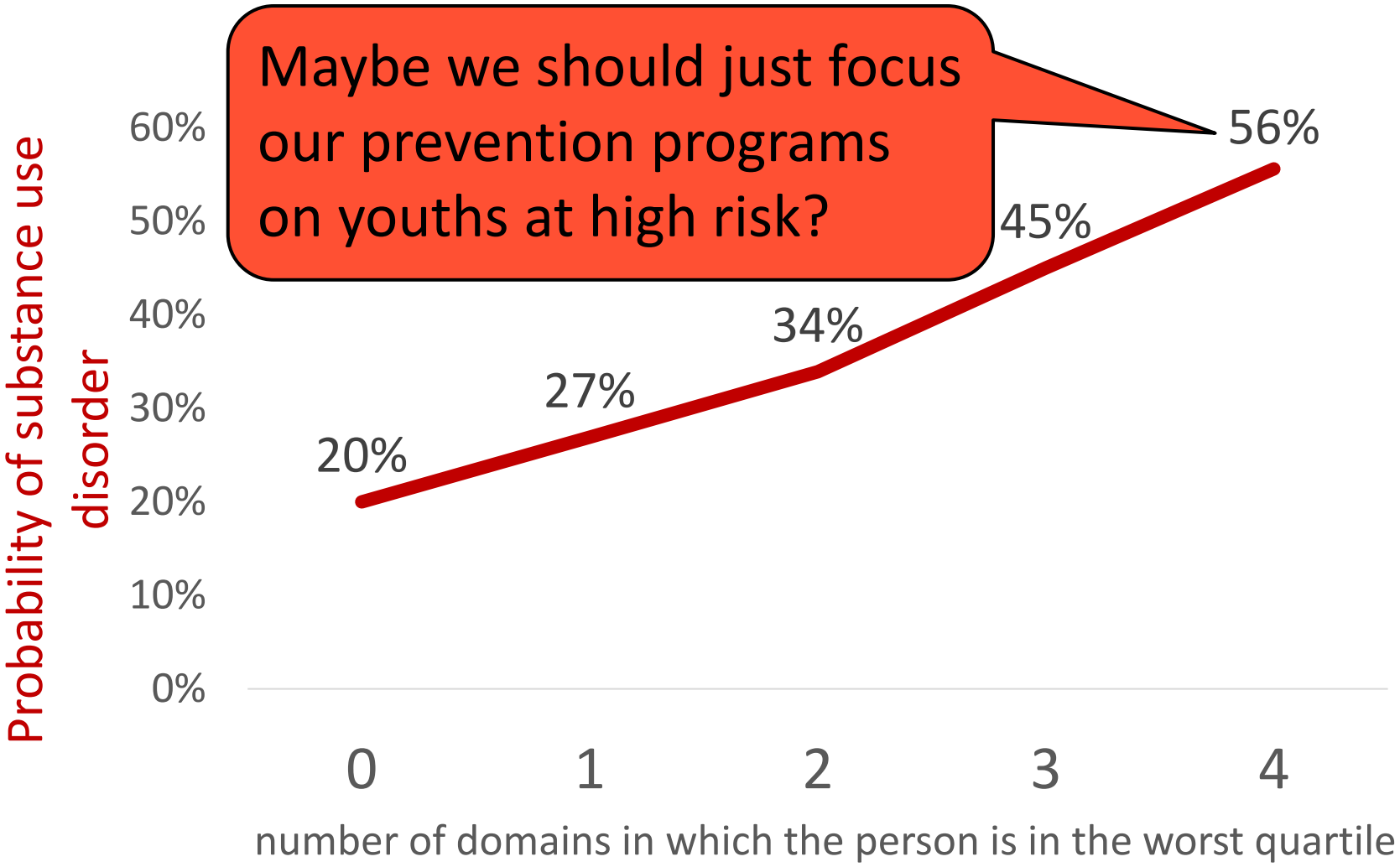
Cumulative Risk

Predicting Substance Use Disorder in Adulthood from Adolescent Risk

56% of the kids in the highest risk group had diagnosed substance use disorder in adulthood



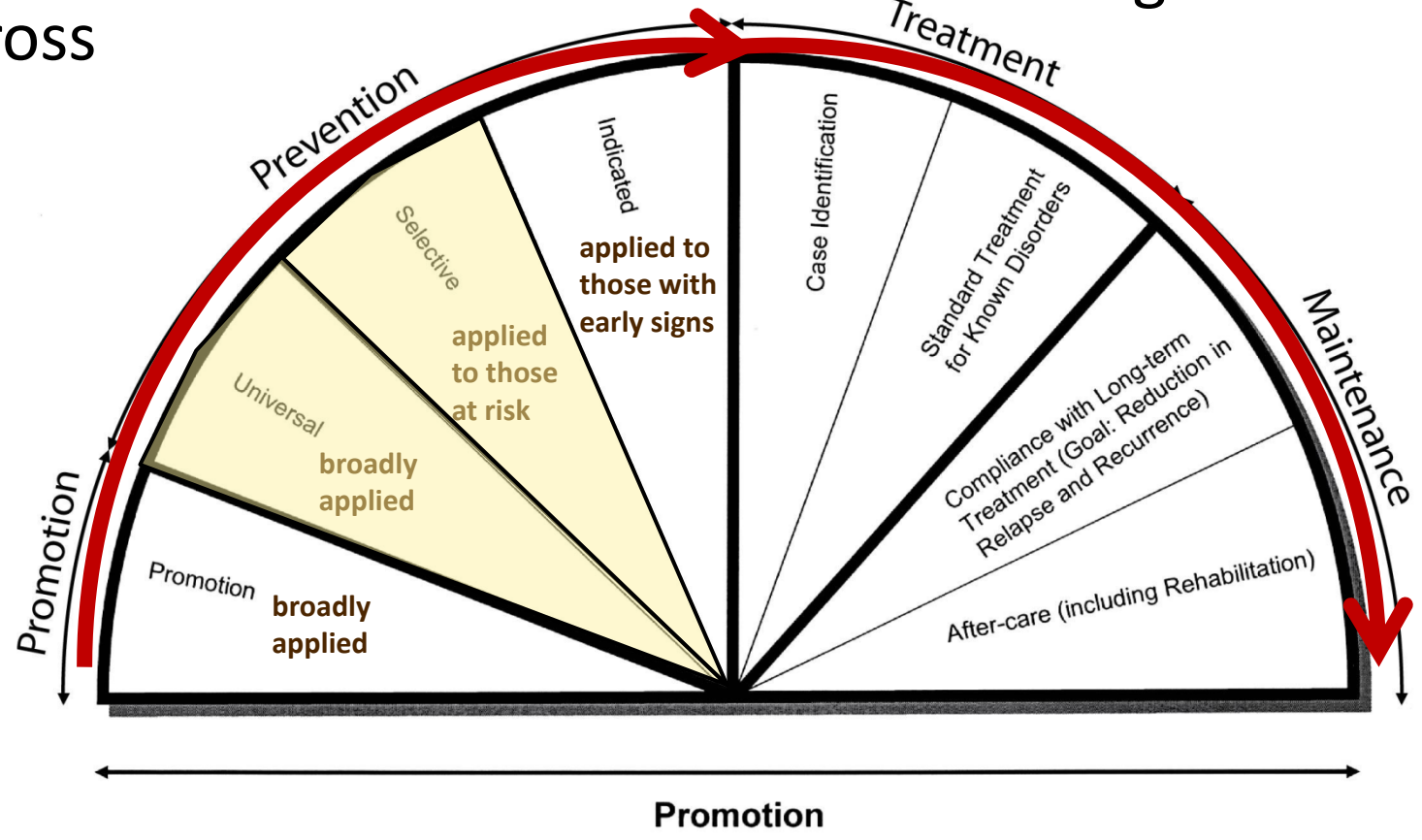
Predicting Substance Use Disorder in Adulthood from Adolescent Risk



A prevention strategy the focuses only on high-risk youth will fail to “move the needle” on community substance use disorder.

Universal interventions apply the prevention program broadly across the population.

Selective interventions only apply the prevention program to those at highest risk.



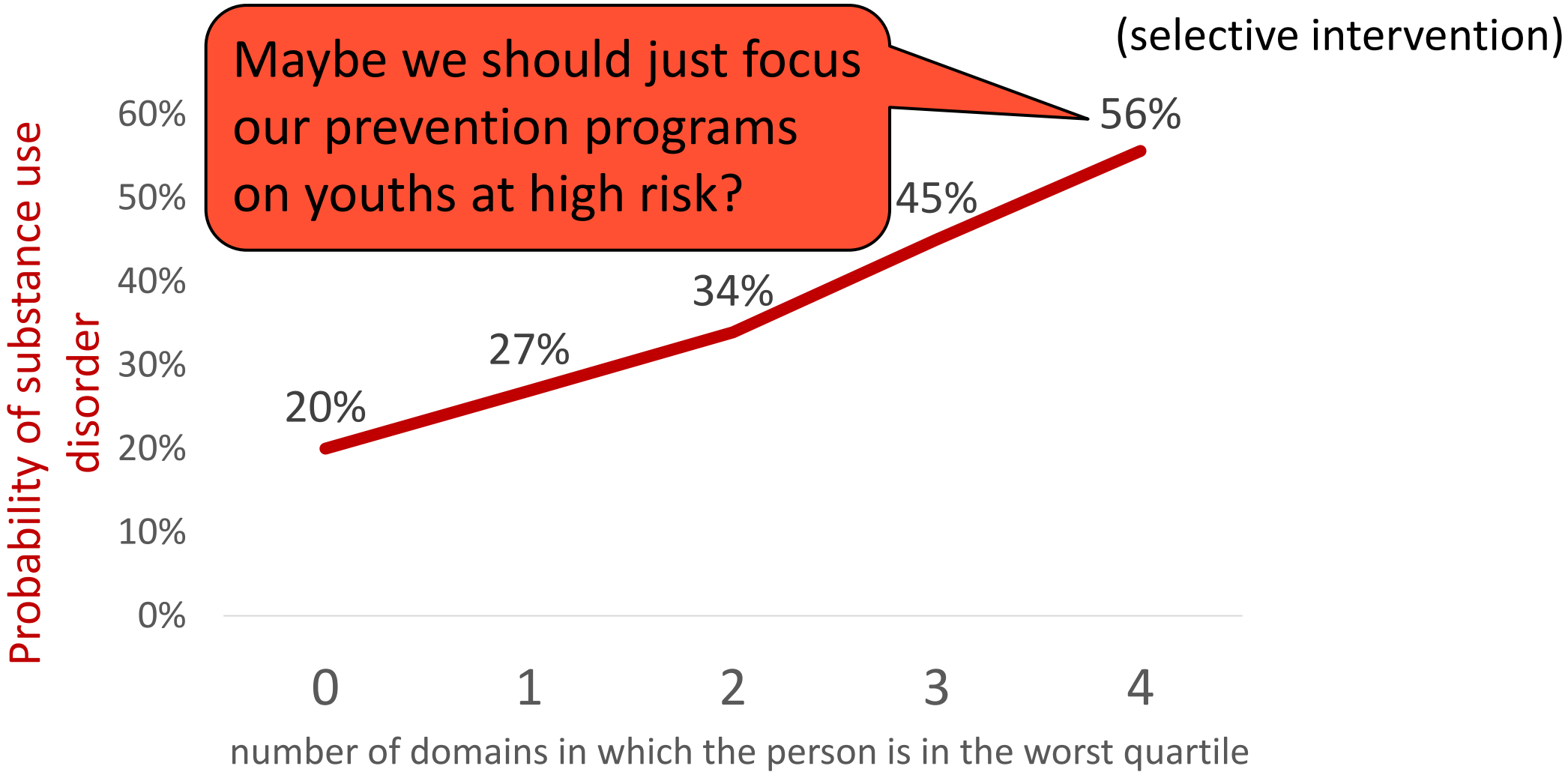
Source: Institute of Medicine (2009). Preventing Mental, Emotional and Behavioral Disorders Among Young People. O'Connell, Boat & Warner (eds.) Washington DC: National Academy Press

Identify and intervene with those individuals who are at greatest risk of addiction: Selective Intervention

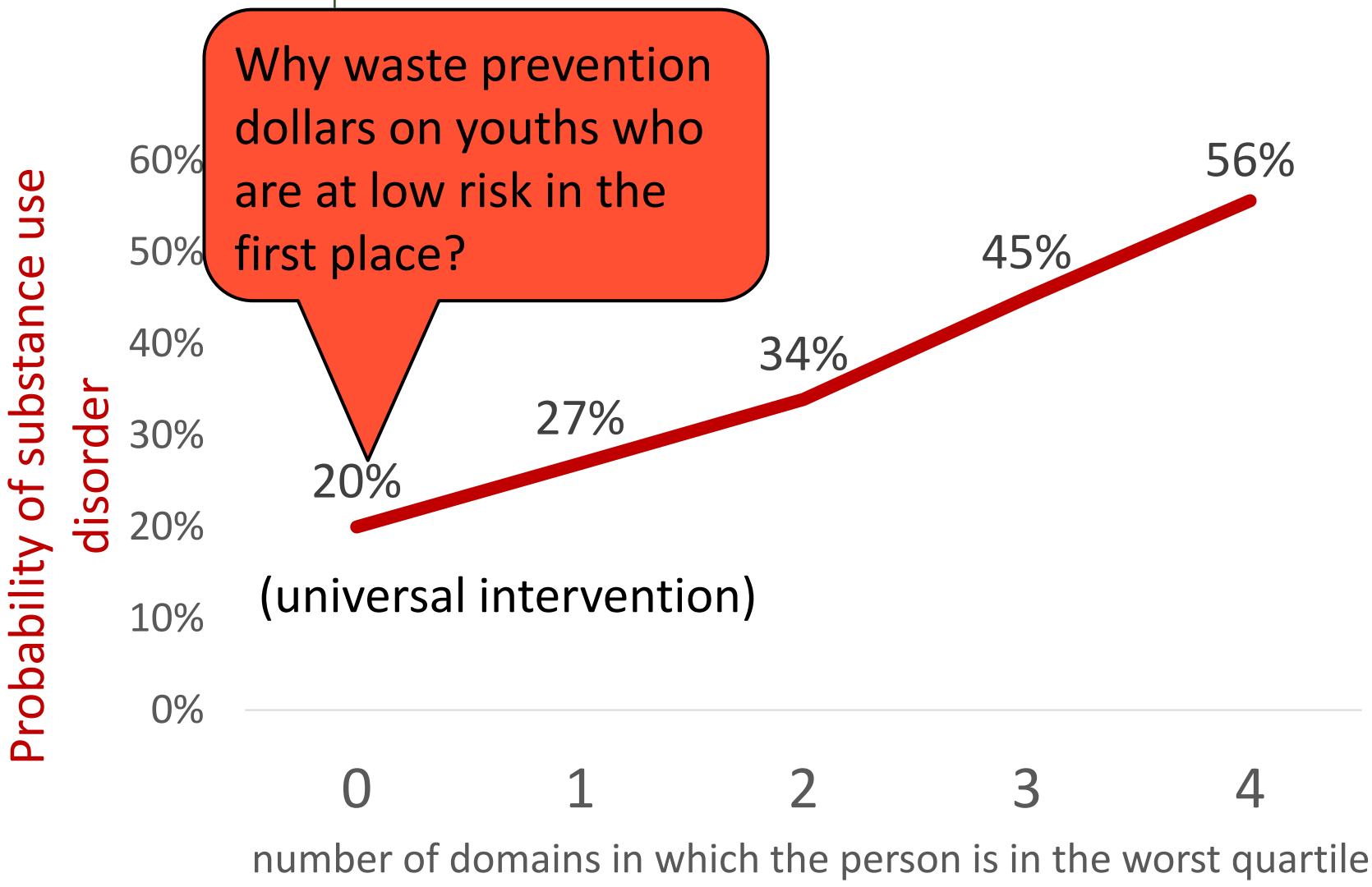
Two strategies

Turn down the heat: Universal Prevention

Predicting Substance Use Disorder in Adulthood from Adolescent Risk

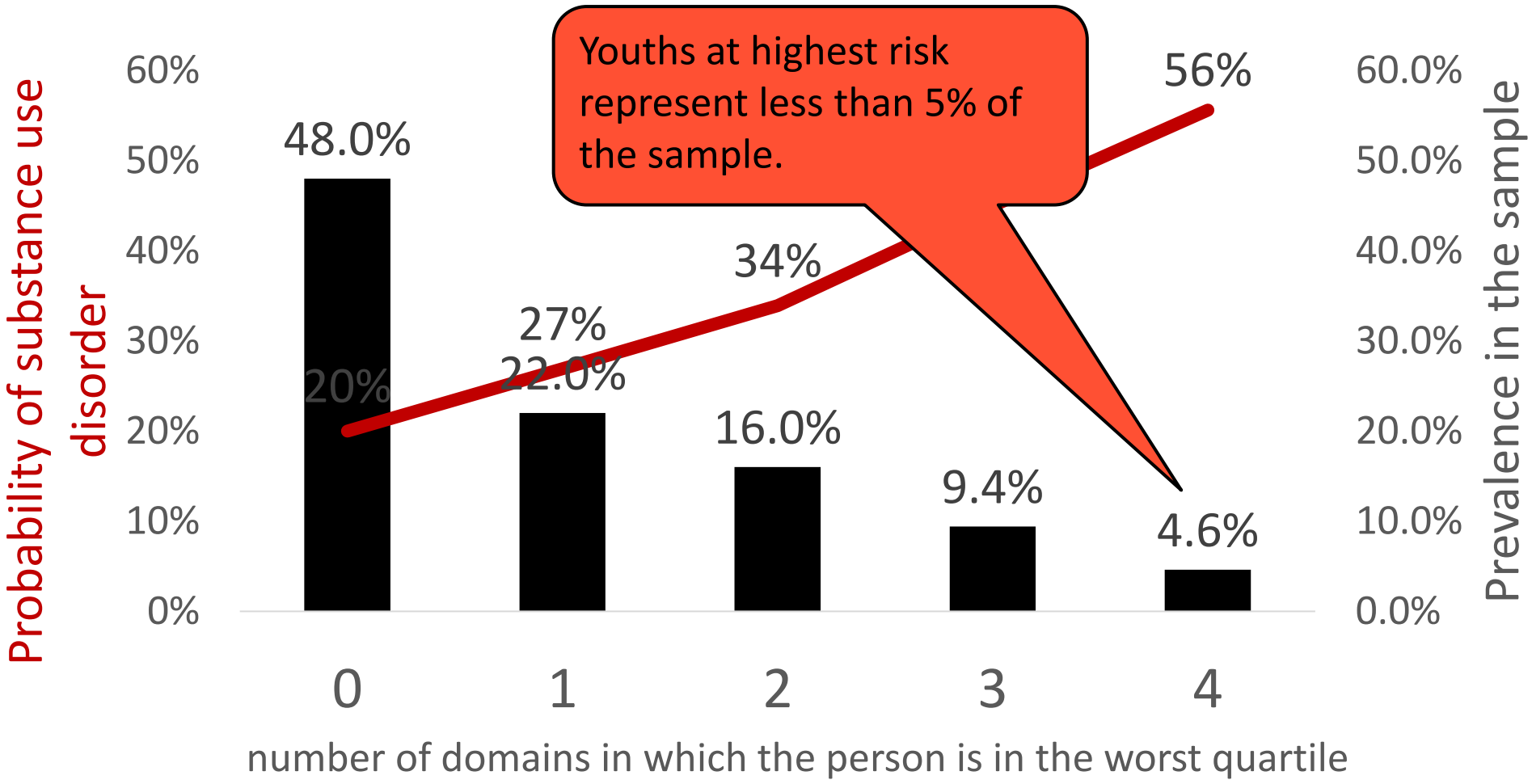


Predicting Substance Use Disorder in Adulthood from Adolescent Risk



Because…

Predicting Substance Use Disorder in Adulthood from Adolescent Risk



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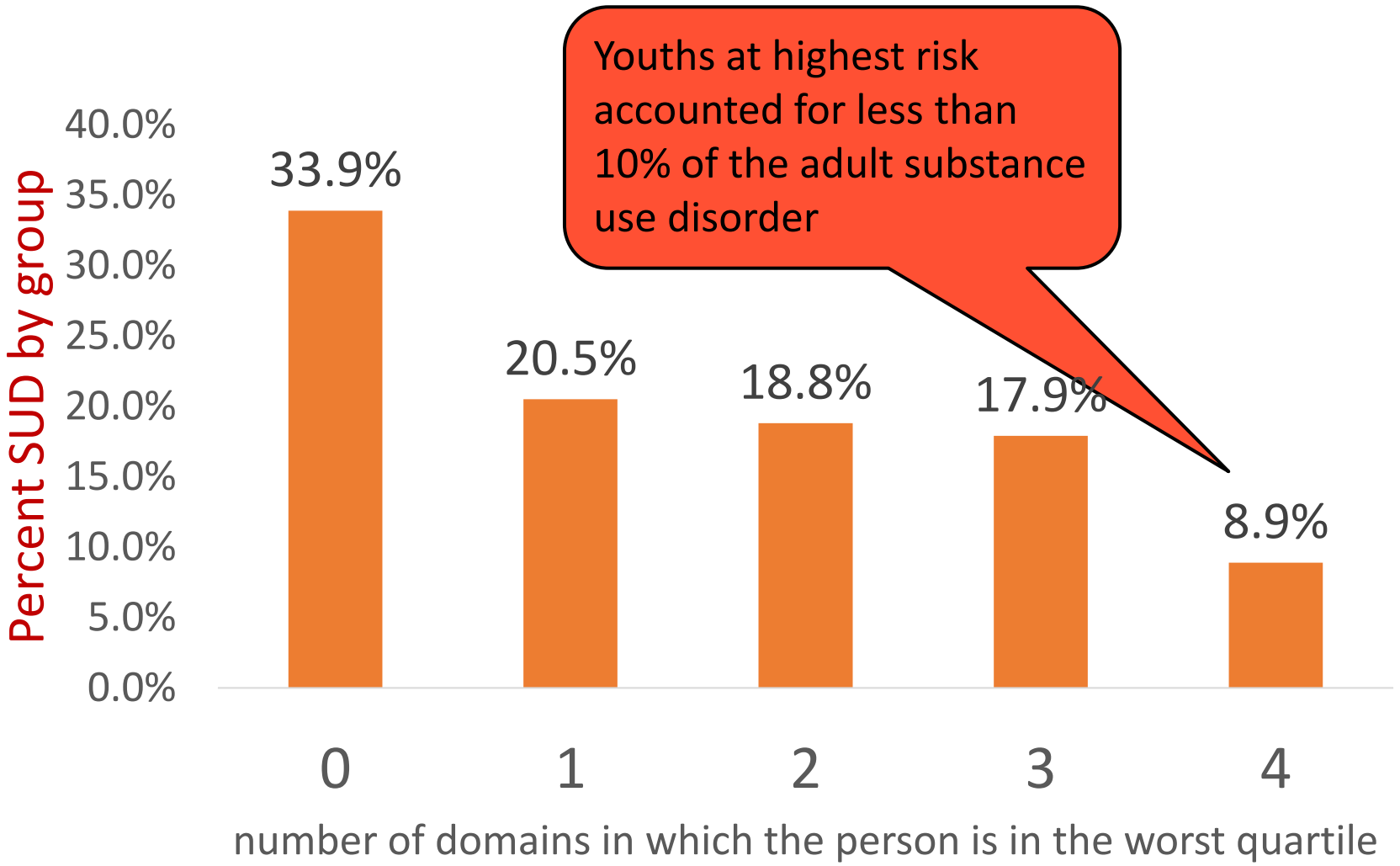
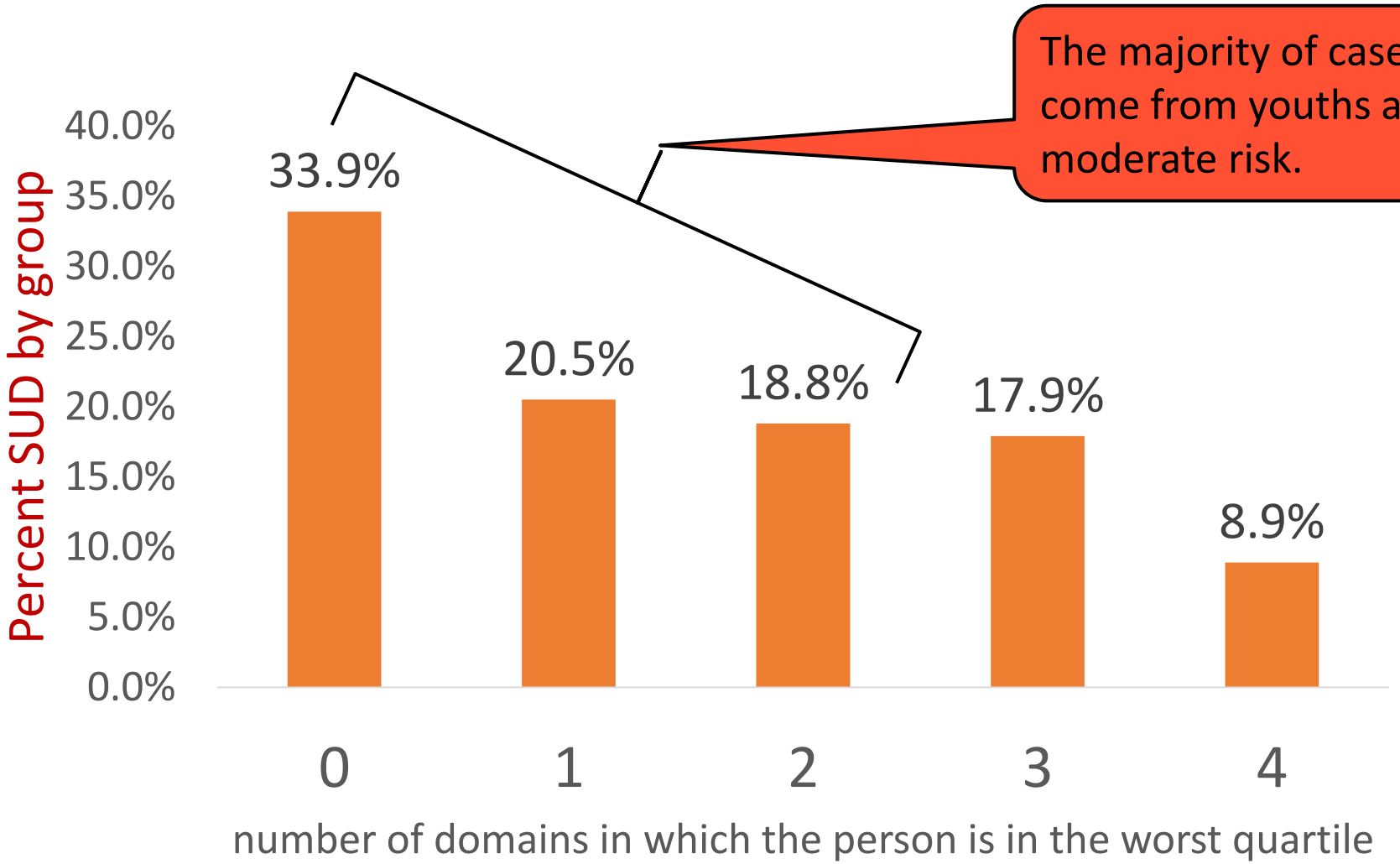


Predicting Substance Use Disorder in Adulthood from Adolescent Risk



If we had focused only on the high risk kids we would have missed over 70% of the adult cases of substance use disorder.

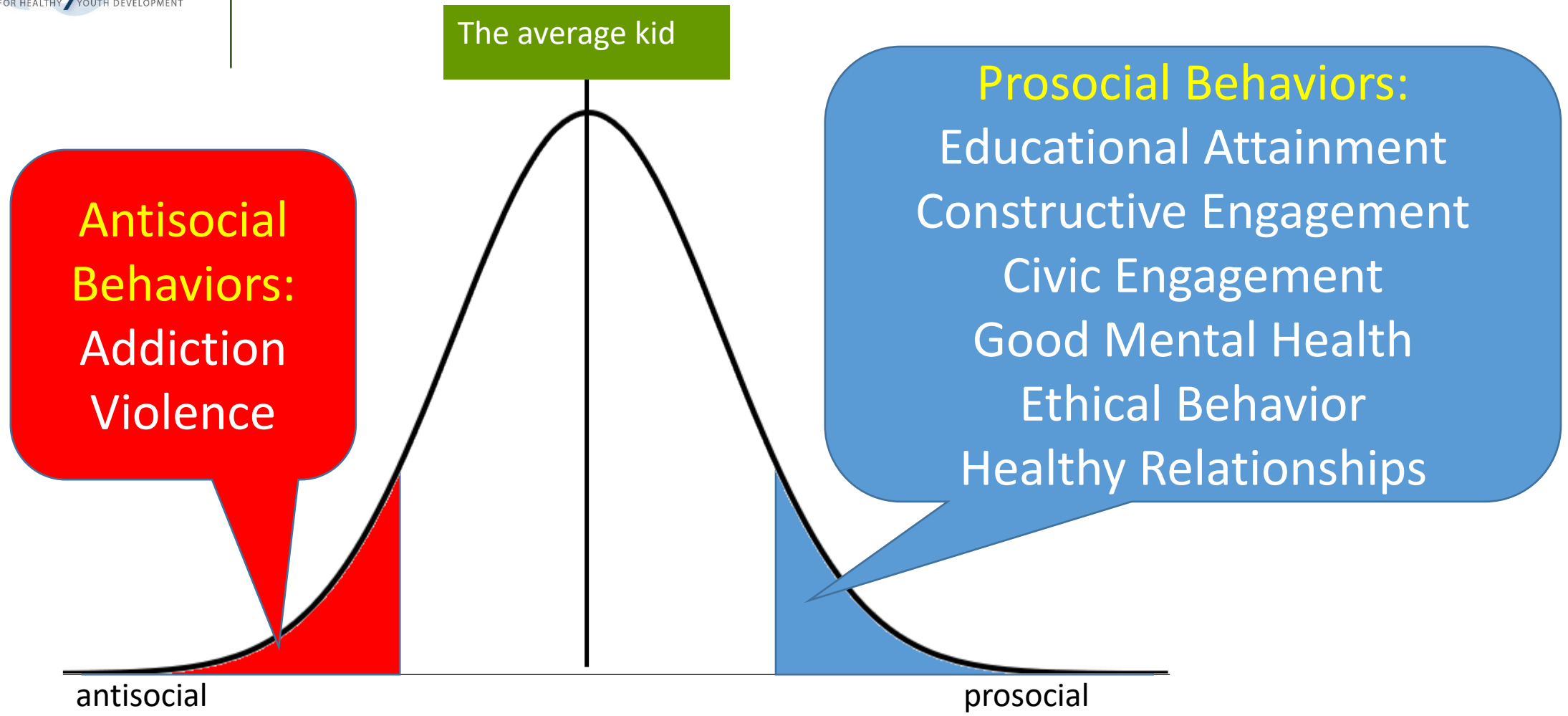
This is called the “prevention paradox”

Rose’s Theorem:

A large number of people exposed to a small risk may generate many more cases than a small number exposed to a high risk.

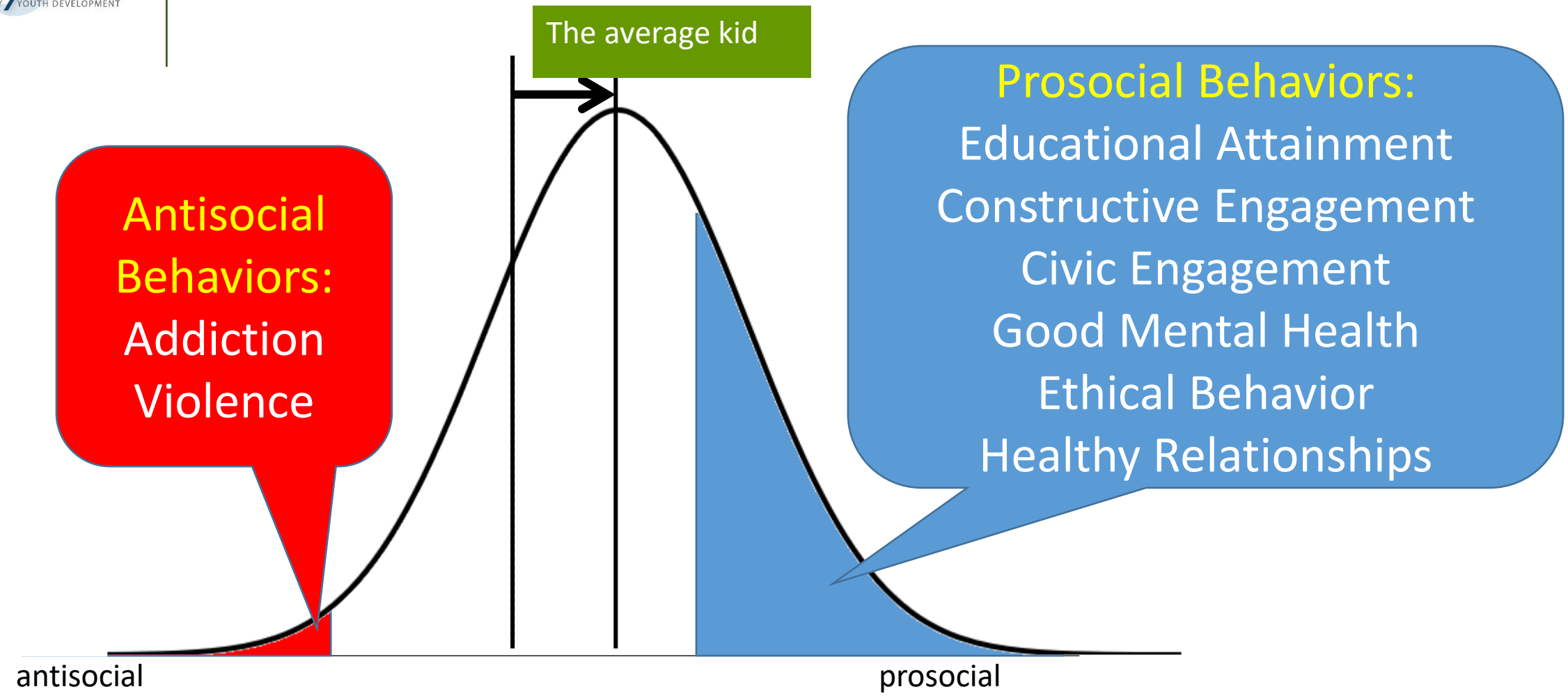
(Geoffrey Rose, 1992:24).

Another consideration: Shifting the Curve



Distribution of behavior in a population of youths.

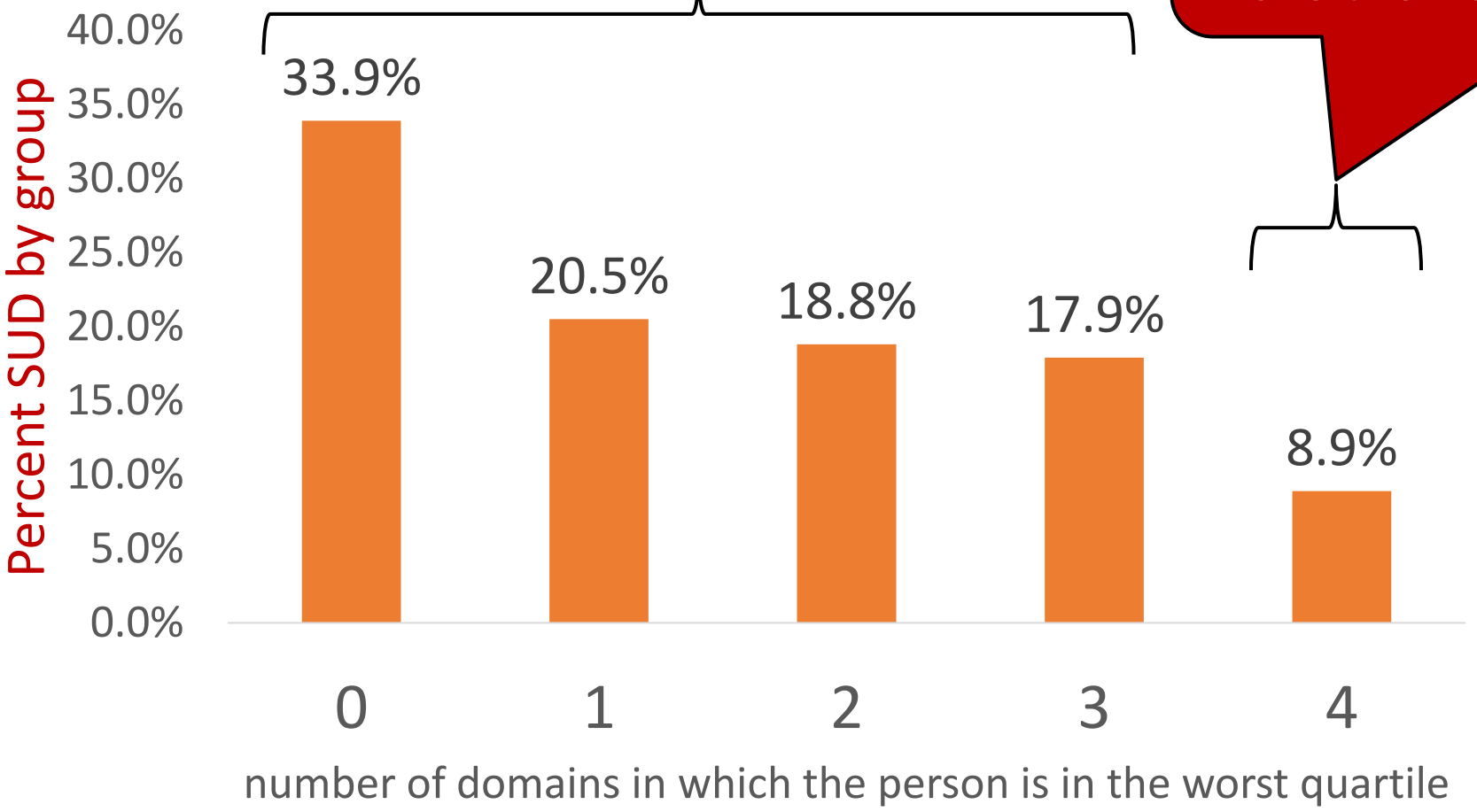
Shifting the Curve



Small shifts in the population result in large changes in the “tails”.

They should be embedded within universal prevention to move the population needle

Selective Intervention for youths at high risk are important but won't move the needle



What have we learned in the last 30 years?

1. The causes of disordered and of positive development reach across all areas of influence: family, school, peer, community, individual.
2. These factors affect a wide range of outcomes.
3. Each of these causes has +/- the same impact, however together they have a large cumulative impact.
4. A strong prevention strategy embeds a selective intervention within a universal strategy. If funds are limited, do not neglect Universal.

Risk and Protective Factors Can be Organized into a Theory

Risk Factors

- Family Conflict
- Child Maltreatment
- Family Antisocial Attitudes
- Bullying in School
- Classmate Pro-violence Attitudes
- Classmate Pro-Drug Attitudes
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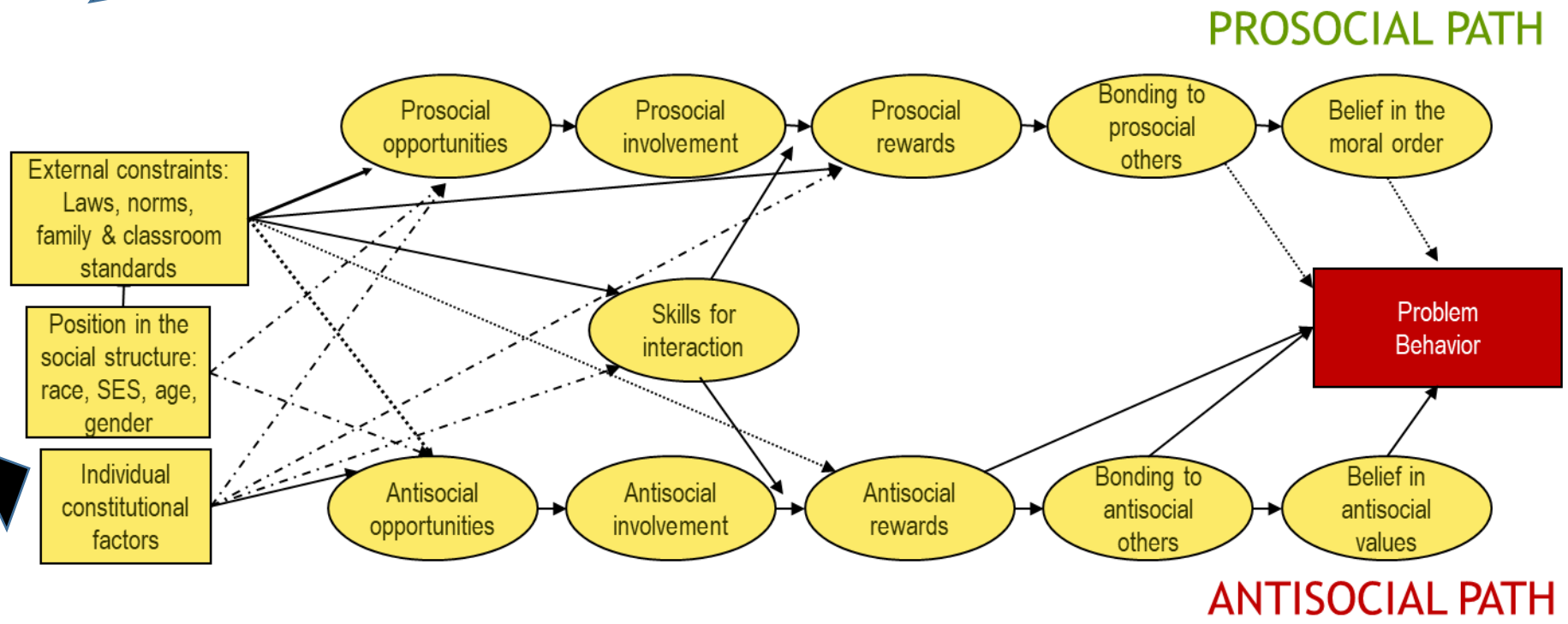
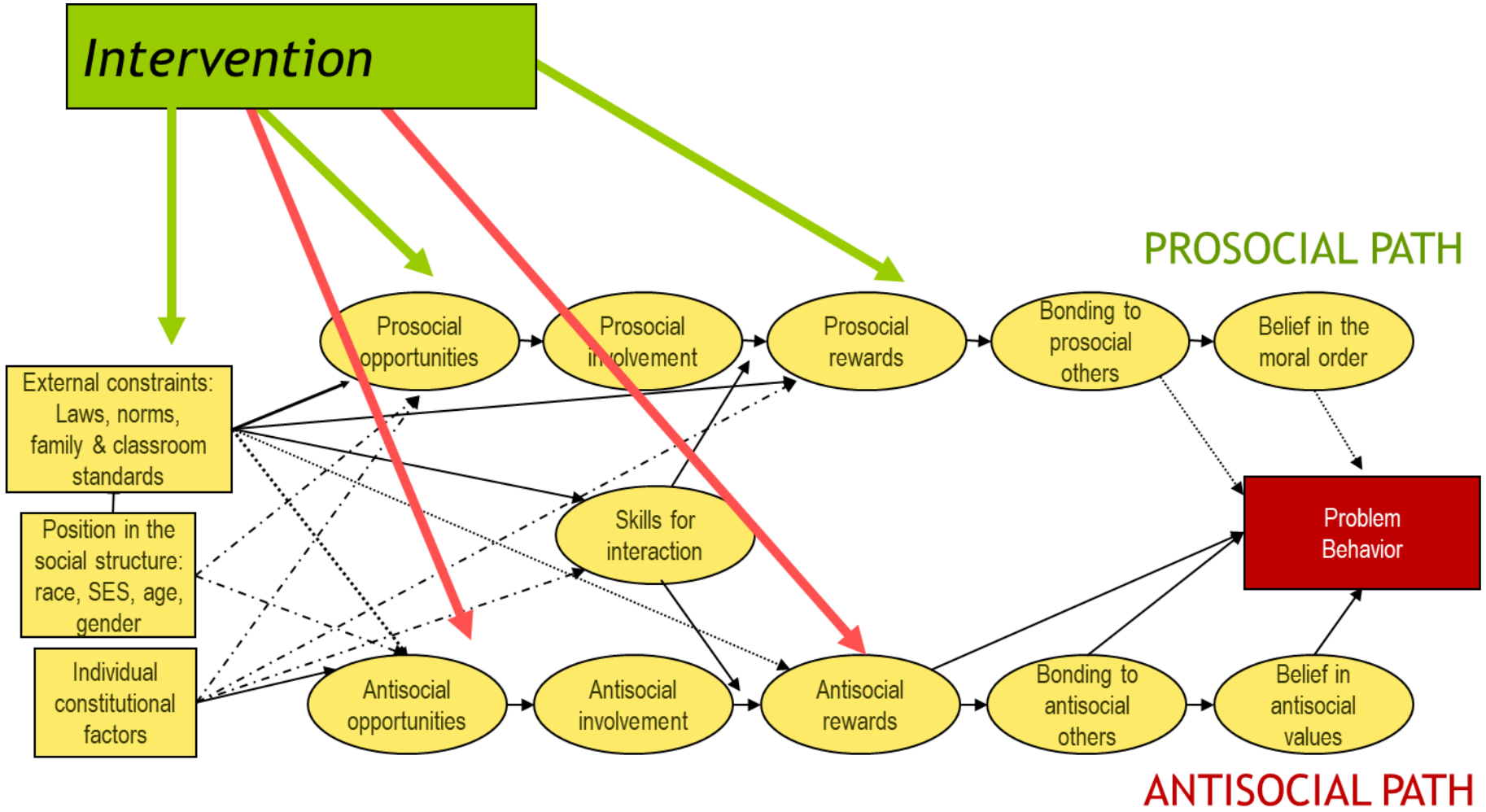


Social Development Model, Catalano & Hawkins, 1996

Risk and Protective Factors Can be Organized into a Theory

And Theory guides the development and adaptation of interventions.



Social Development Model, Catalano & Hawkins, 1996

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5. We can organize risk and protective factors into a theory, and use the theory to guide the development of interventions.

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4. A strong prevention strategy embeds a selective intervention within a universal intervention.
5. We can organize risk and protective factors into a theory, and use the theory to guide the development of interventions.
6. Getting communities to select and implement tested, effective interventions takes planning, but we have many successes.

Overview

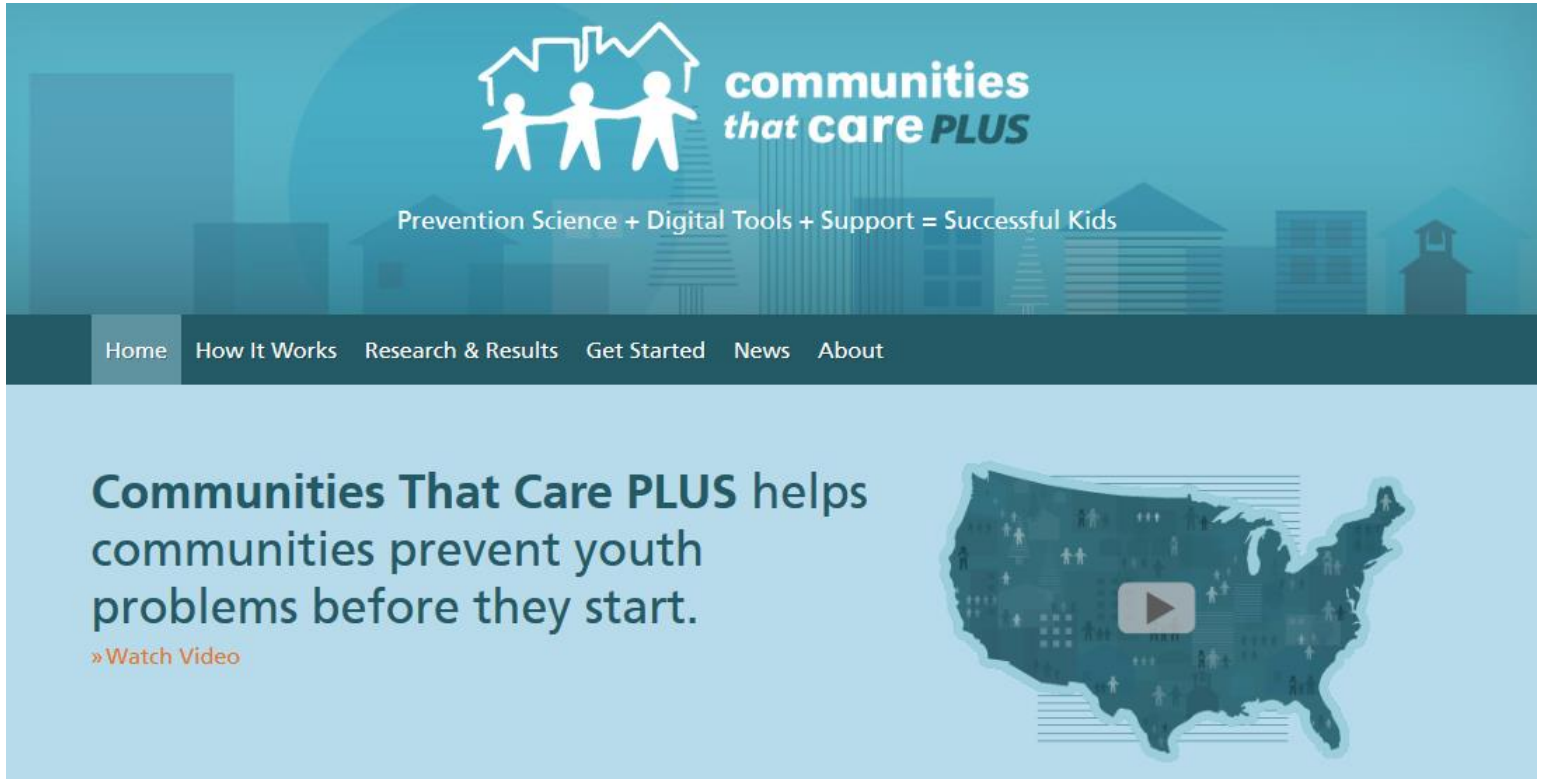
- Background
- Root Causes of Youth & Adult Problem Behavior

  → What have we learned as a field in the last 30 years, and why does it matter?
- Community Based Prevention
- Blueprints for Healthy Youth Development
- What do we still not know?

Blueprints FOR HEALTHY YOUTH DEVELOPMENT

www.CommunitiesThatCare.net

Communities That Care (CTC)



CTC is NOT an intervention.

It is a strategy to guide communities through the steps of science-based prevention.

Community Mobilization: Example Communities that Care (CTC)

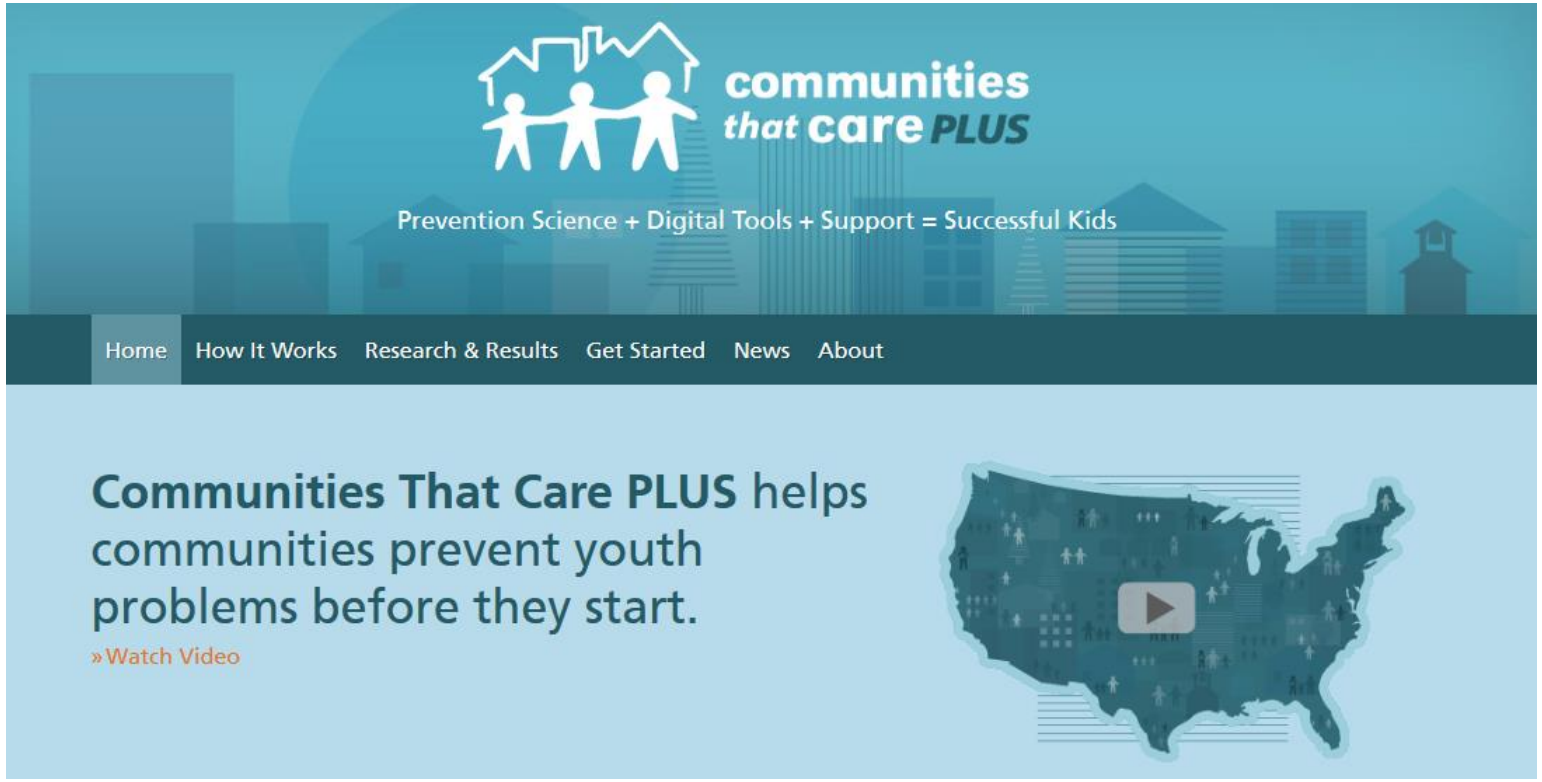
CTC Videos:

https://www.youtube.com/channel/UCSvfu68VZ2WR4IbDwQsPn3Q

Blueprints FOR HEALTHY YOUTH DEVELOPMENT

www.CommunitiesThatCare.net

Communities That Care (CTC)



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Mayor

Champion(s)

County DA

Key Leaders

CTC Community Coordinator

Alex Durham, Voyager Youth Program teen site leader and program assistant, speaks about upcoming plans to the Ouray County Communities That Care (CTC) Board. Durham, right, is also the youth development implementation team leader for

CTC Board

Community Members

Community Youth

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Work Groups

Community Members

Community Youth

Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

communities that care
Strong Communities, Successful Kids

VISION FOR HEALTHY COMMUNITY
Process

- Activate catalysts
- Community ready?
- Identify key community leaders
- Invite diverse stakeholders

Phases

1 Get Started

2 Get Organized

3 Develop Community Profile

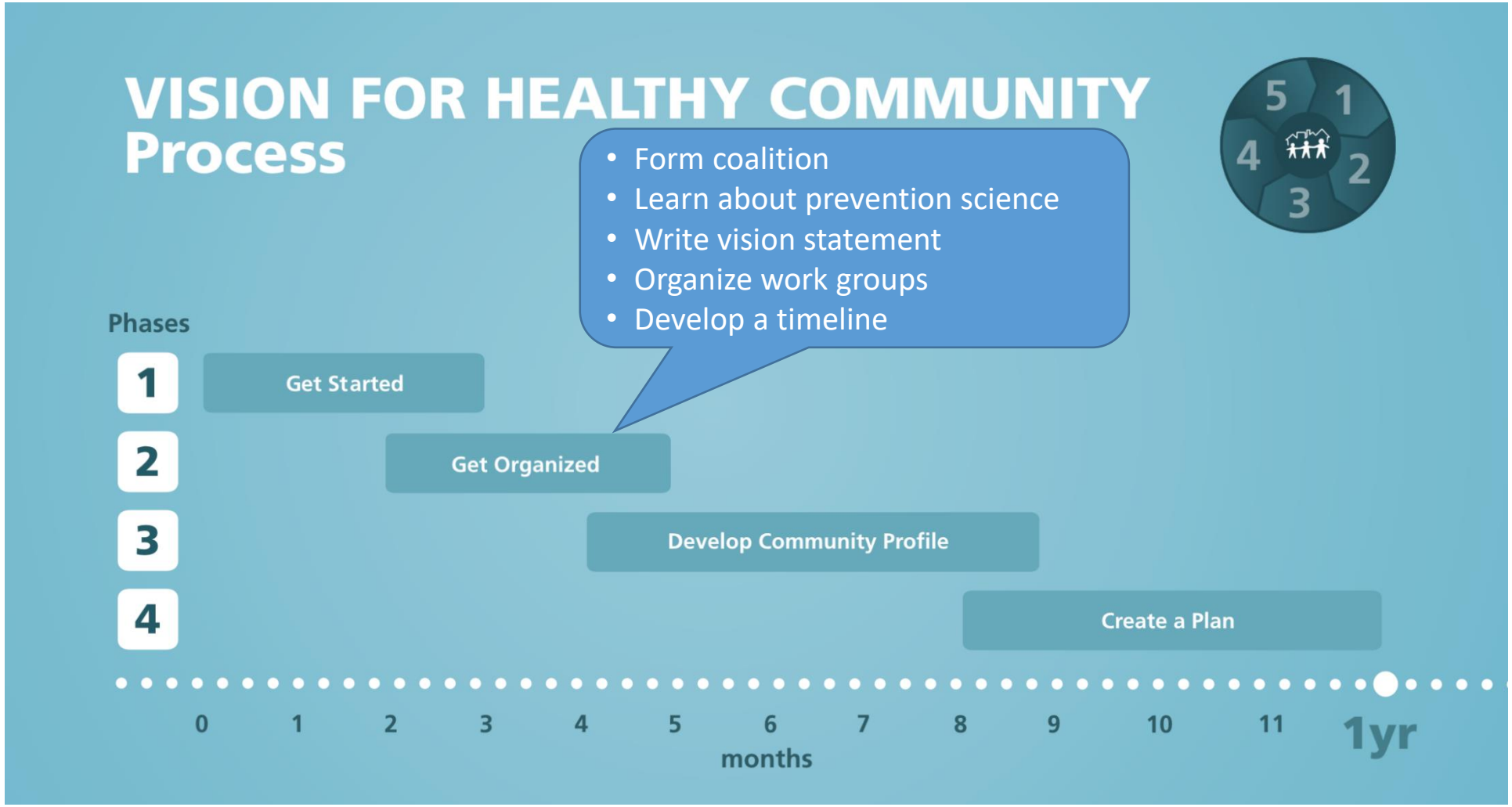
4 Create a Plan

0 1 2 3 4 5 6 7 8 9 10 11 1yr

months

Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

communities that care
Strong Communities, Successful Kids



Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

communities that care
Strong Communities, Successful Kids

VISION FOR HEALTHY COMMUNITY
Process

Phases

1 Get Started

2 Get Organized

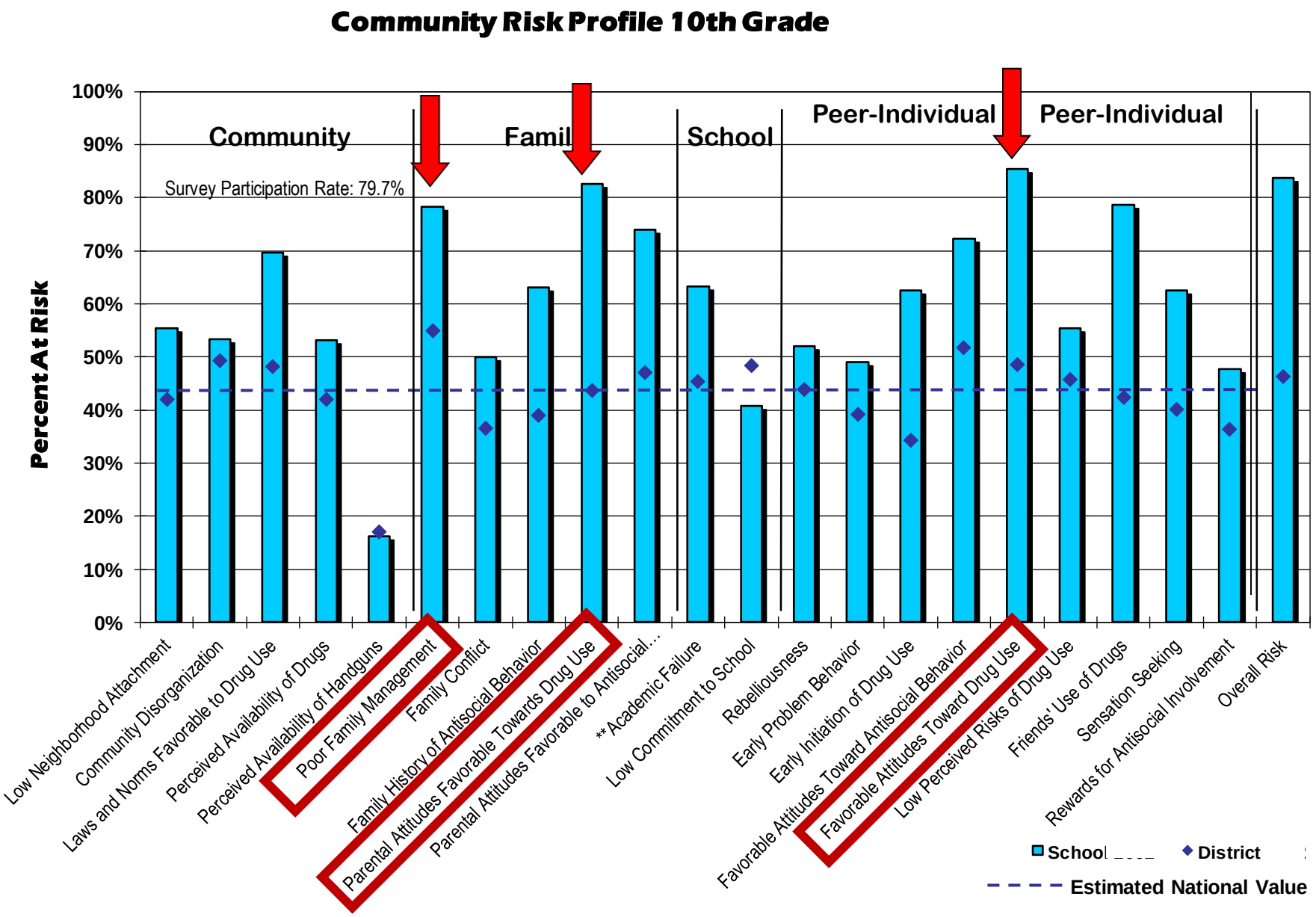
3 Develop Community Profile

4 Crea

- Conduct community youth survey
- Prioritize risk and protective factors
- Identify existing resources and gaps

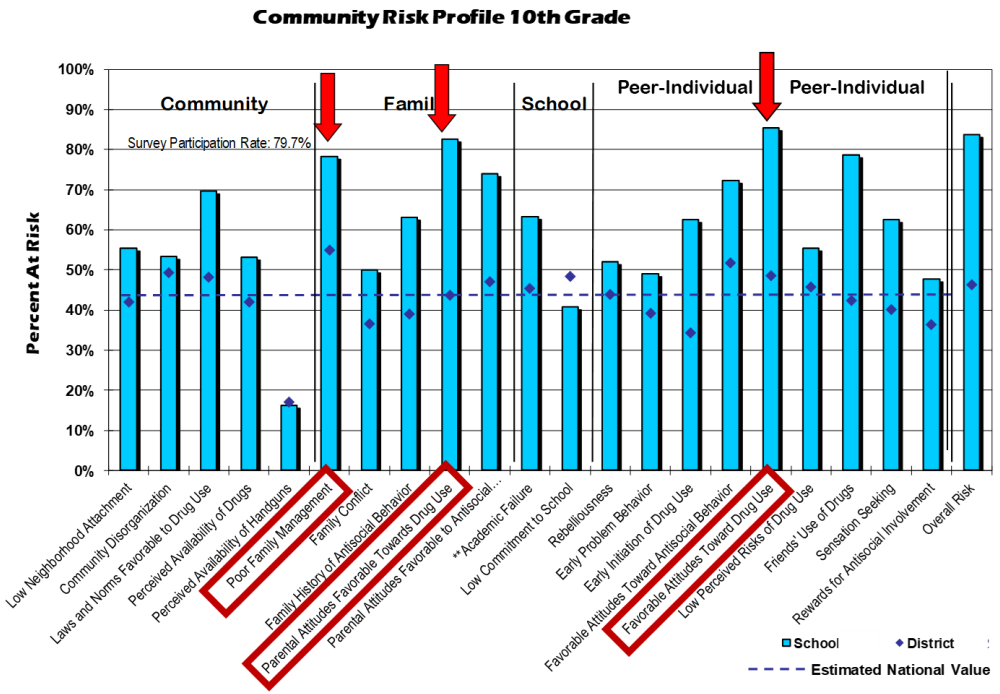
0 1 2 3 4 5 6 7 8 9
months

Survey Used



www.communitiesthatcare.net/userfiles/files/2014CTCYS.pdf

Please respond to the poll:



To what extent is your community collecting local risk and protective factor data and using it to drive your selection of prevention programs?

Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

communities that care
Strong Communities, Successful Kids

Please respond on Chat to the group:

<u>How</u> is the selection of interventions that are implemented in your community currently being done?

- Define clear, measurable outcomes
- Select tested, effective policies and programs

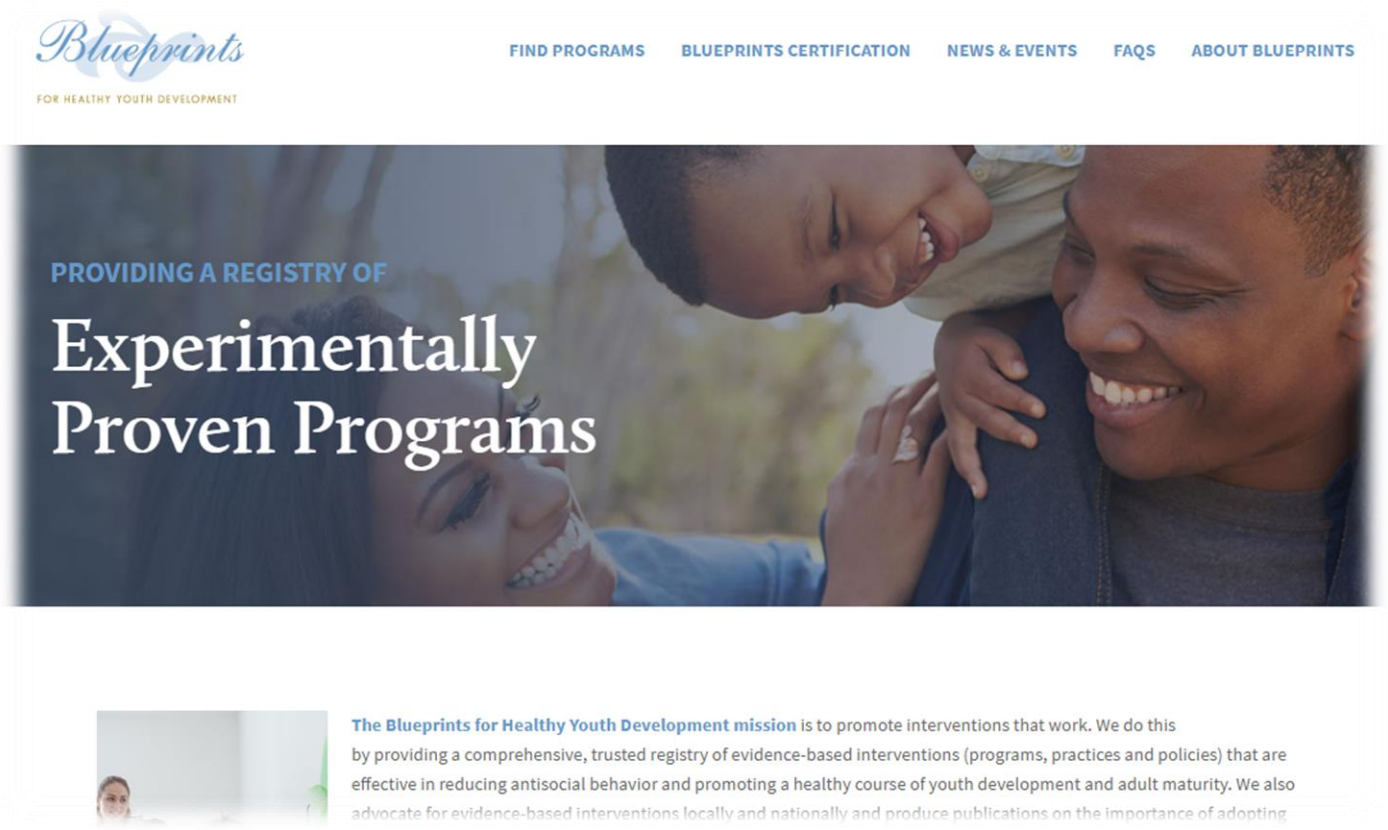
Blueprints FOR HEALTHY YOUTH DEVELOPMENT

communities that care — Strong Communities, Successful Kids

How do community members know what works?

- Define clear, measurable outcomes
- Select tested, effective policies and programs

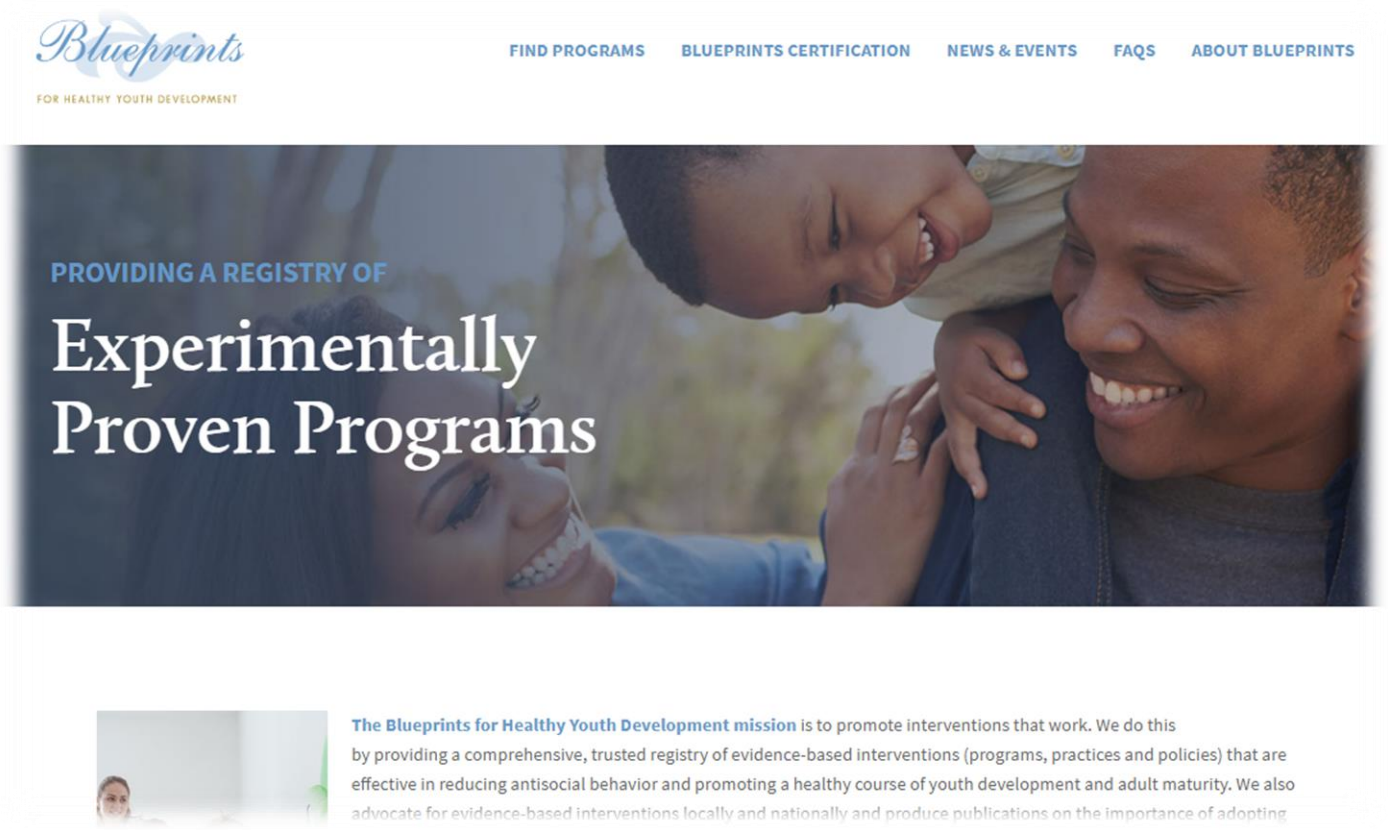
Blueprints!



A web-based registry of *experimentally proven programs* (EPPs) promoting the most rigorous scientific standard and review process for certification.

www.blueprintsprograms.org

What is Blueprints for Healthy Youth Development?



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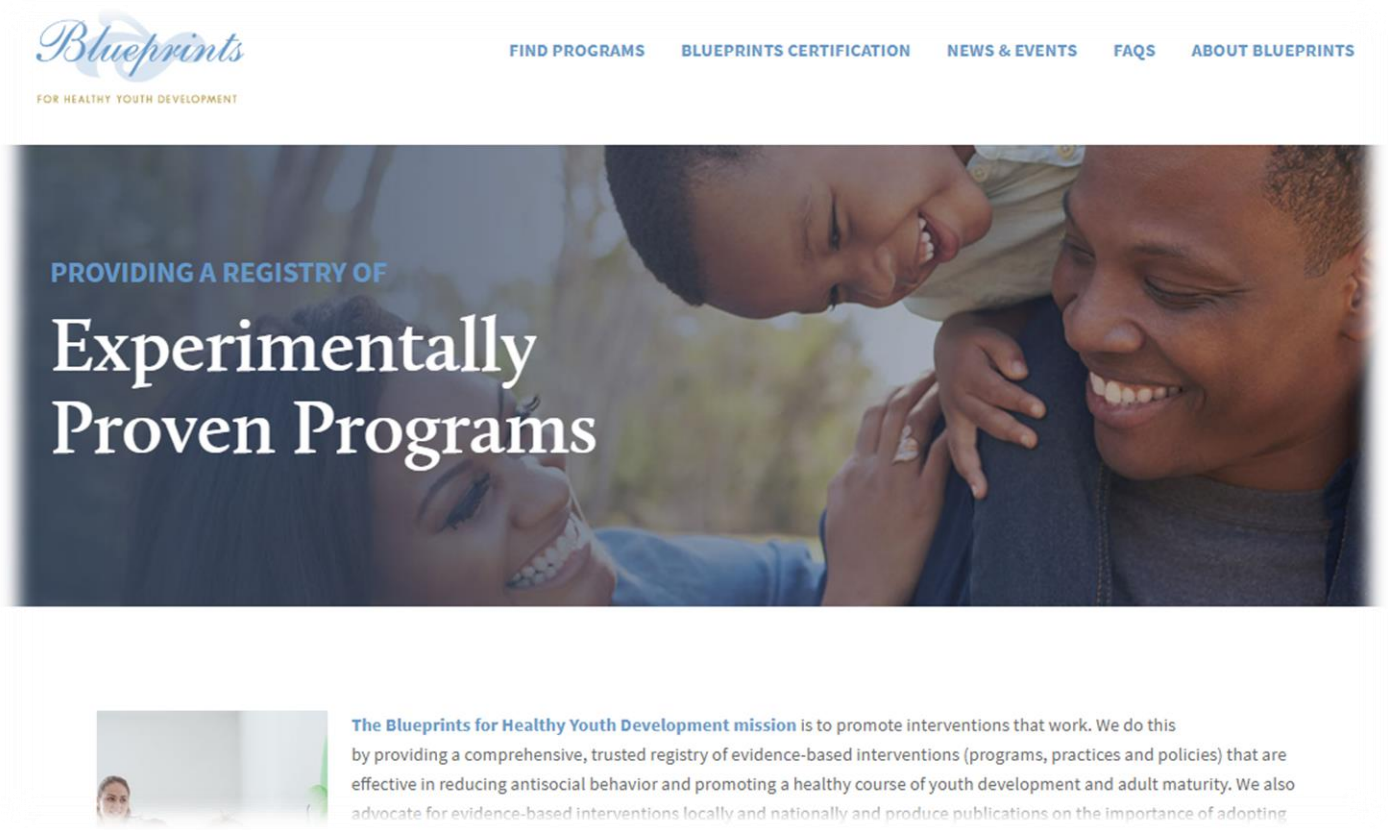


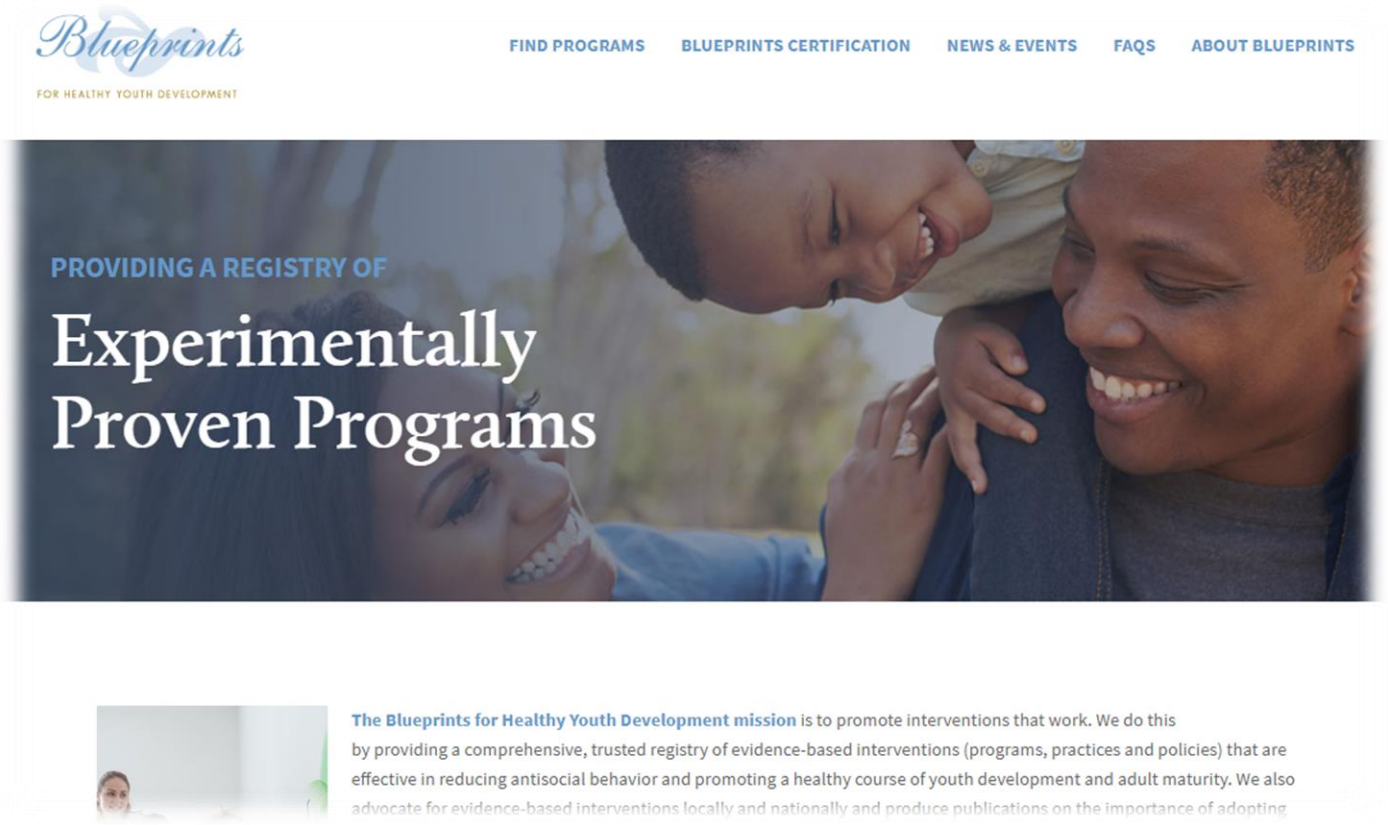
Goal:

To provide communities with a trusted guide to interventions that work.

(Like a “Consumer Reports” for prevention)

www.BlueprintsPrograms.org

What is Blueprints for Healthy Youth Development?



Please respond to the poll:

Have you used Blueprints in your work?

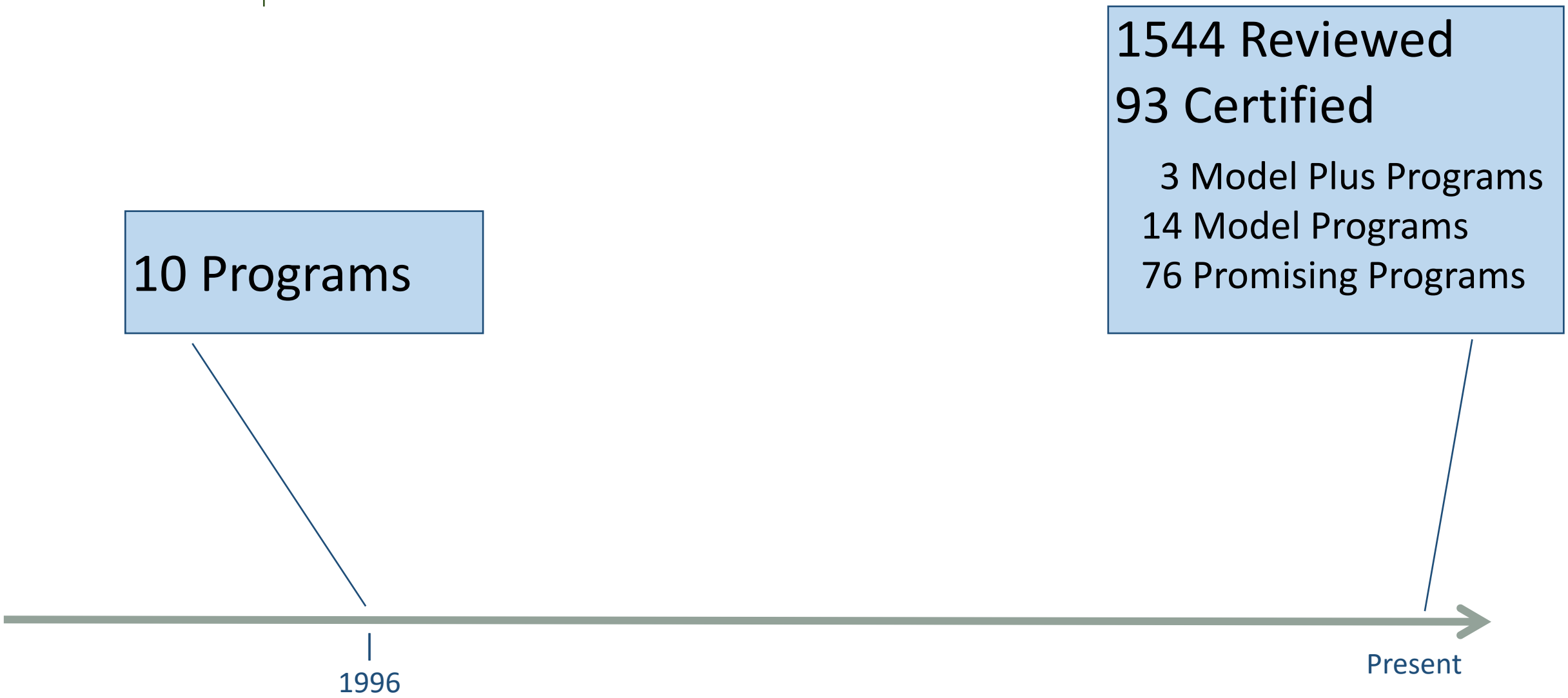
Explore the site: especially “find programs”

www.blueprintsprograms.org

Each Certified Intervention has a Fact Sheet including

- Program Name and Description
- Developmental/Behavioral Outcomes
- Risk/Protective Factors Targeted
- Risk/Protective Factors Impacted
- Contact Information/Program Support
- Target Population
- Program Rating and Effect Size
- Operating Domain: Individual, Family, School, Community
- Logic/Theory Model
- Program Costs: Unit Costs, Start-Up, Implementation, Fidelity Monitoring, Budget Tool
- Cost Benefit/Return On Investment (When Available): Net Unit Cost-Benefit, Benefits
- Funding Overview, Financing Strategies
- Program Materials
- References

Role of Blueprints in this process



Role of Blueprints in this process

Recommended to communities to go to scale

Very Strong Research Evidence
Sustained effect
Ready to go to scale

Strong Research Evidence
Sustained effect
Ready to go to scale

Moderate Research Evidence
Suggested for further testing

1544 Reviewed
93 Certified

3 Model Plus Programs
14 Model Programs
76 Promising Programs

Role of Blueprints in this process

- **Is the evidence strong?**
- **Did the intervention have a big impact?**
- **Is the intervention ready for distribution?**

1544 Reviewed
93 Certified
3 Model Plus Programs
14 Model Programs
76 Promising Programs

Blueprints Certification Pro

A report says a program works → Report undergoes internal review by Blueprints experts → Report sent for external review by Blueprints Advisory Board Members

Program Name:

Author(s):

Primary Criteria

Yes ? No

☐ ☐ ☐ *1. High-Quality Design:*

☐ ☐ ☐ *2. Sample Ns Tracked:*

☐ ☐ ☐ *3. Measures Independent:*

☐ ☐ ☐ *4. Measures Valid/Reliable:*

☐ ☐ ☐ *5. Behavioral Outcome Measure:*

☐ ☐ ☐ *6. Intent-to-Treat:*

☐ ☐ ☐ *7. Proper Level:*

☐ ☐ ☐ *8. Baseline Outcome Controls:*

☐ ☐ ☐ *9. Baseline Equivalence:*

☐ ☐ ☐ *10. Differential Attrition Minimal:*

☐ ☐ ☐ *11. Tested Baseline-by-Condition Attrition:*

☐ ☐ ☐ *12. Posttest Effect on Behavioral Outcome:*

☐ ☐ ☐ *13. Iatrogenic Free:*

Model Criteria

☐ ☐ ☐ *14. Long-Term Effect on Behavioral Outcome:*

Secondary Criteria

☐ ☐ ☐ *15. Effects on R&P Factors:*

☐ ☐ ☐ *16. Sample General:*

☐ ☐ ☐ *17. Fidelity of Implementation:*

☐ ☐ ☐ *18. Effect Sizes:*

☐ ☐ ☐ *19. Mediation Analysis:*

Summary

☐ ☐ ☐ *20. Recommended for BP Board:*

☐ ☐ ☐ *21. For Board Review Only, Is There a Trial Registration:*

Blueprints Advisory Board

Distinguished board with expertise in research design and methodology from a variety of disciplines

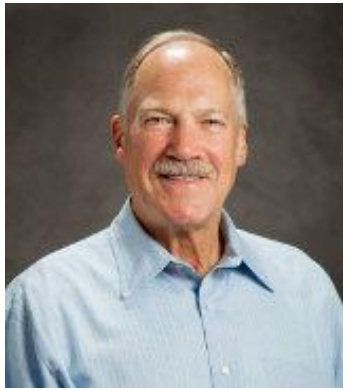
Thomas Cook

Delbert Elliott

Abby Fagan

Frances Gardner

Denise Gottfredson



J. David Hawkins

Larry V. Hedges

Karl G. Hill

Velma Murray

Patrick Tolan

Blueprints Certification Process

A report says a program works

Report undergoes internal review by Blueprints experts

Report sent for external review by Blueprints Advisory Board Members

Program Certified (5.7% of those reviewed)

Program Excluded (non-certified)

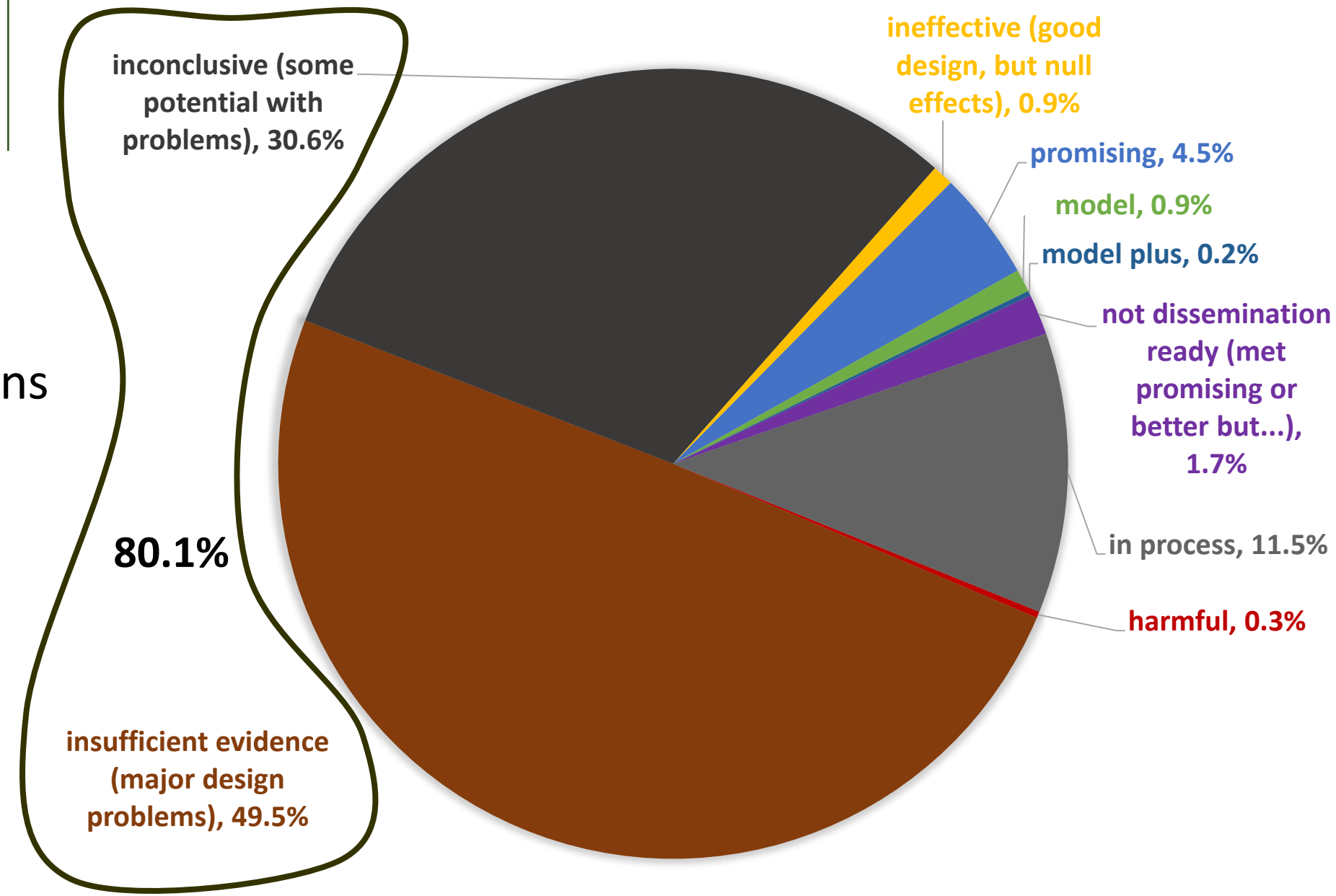
Blueprints Classification Framework Criteria

The chart below shows the minimum criteria for each effectiveness category in the Blueprints classification framework. It reflects the predominant effect of quality evaluations when multiple trials are available. A more detailed explanation of the criteria for the categories follows the chart.

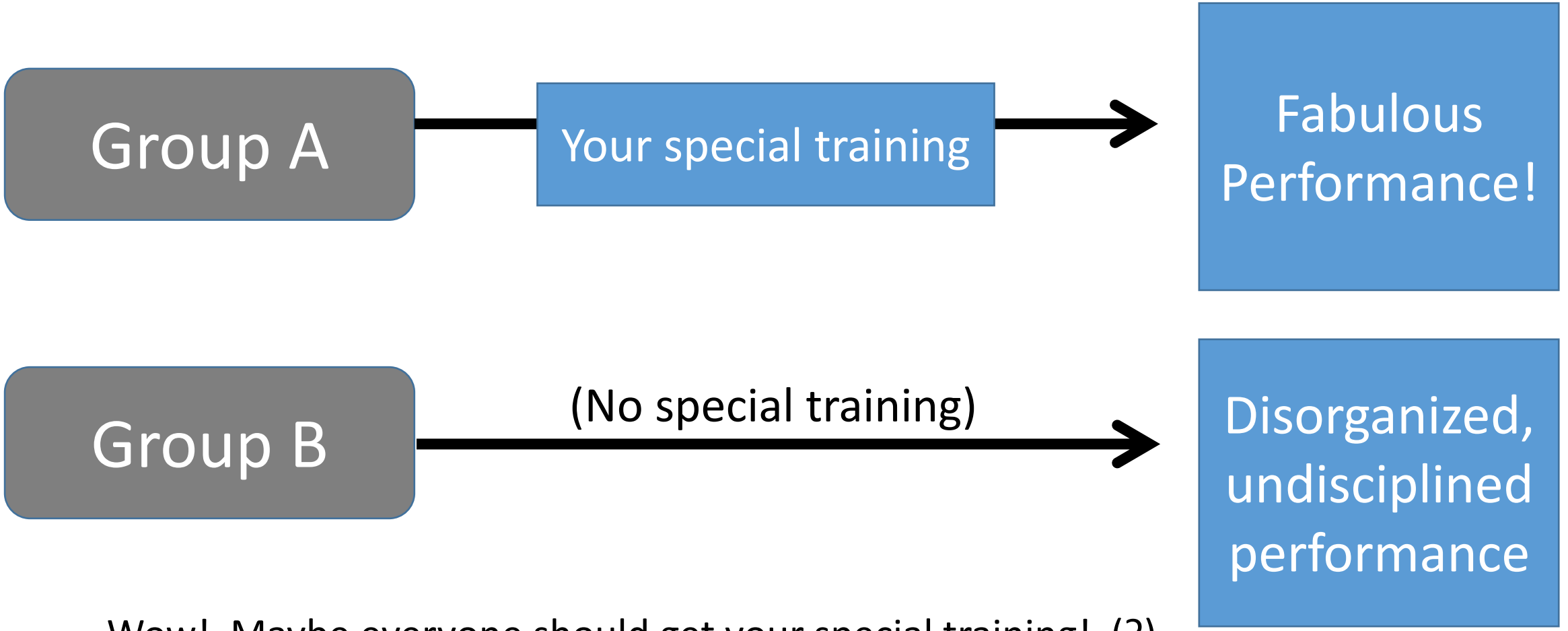
	Evaluation Design	Significant Effect	Sustained Effect	Successful Replication	Research Design Issues
Model Plus	2 Randomized Controlled Trials (RCT), or 1 RCT and 1 Quasi-Experimental Design (QED)	Blueprint behavioral outcome $p < .05$	Yes	Independent replication in 1 study	Satisfies all
Model	1 RCT and 1 Replication (RCT or QED)	Blueprint behavioral outcome $p < .05$	Yes	1 RCT or 1 QED	Satisfies all
Promising	1 RCT, or 2 QEDs	Blueprint behavioral outcome $p < .05$	No	No	Satisfies all
Ineffective	1 RCT or 2 QEDs	Blueprint behavioral outcome with Null effects	No	No	Satisfies most
Harmful	1 RCT or 2 QEDs	Blueprint behavioral outcome with significant harmful effects	No	No	Satisfies most
Inconclusive Evidence	RCTs or QEDs	contradictory or weak findings; evidence can't be fully supported by design; only 1 quality QED	No	No	Some methodological problems
Insufficient Evidence	Major design flaw No control group No Evaluation	Design too weak to support findings; or no evaluation or control group	No	No	Flawed experimental design or non-experimental design

Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

N=1544 Interventions Reviewed to date



Baseline Equivalence



Wow! Maybe everyone should get your special training! (?)

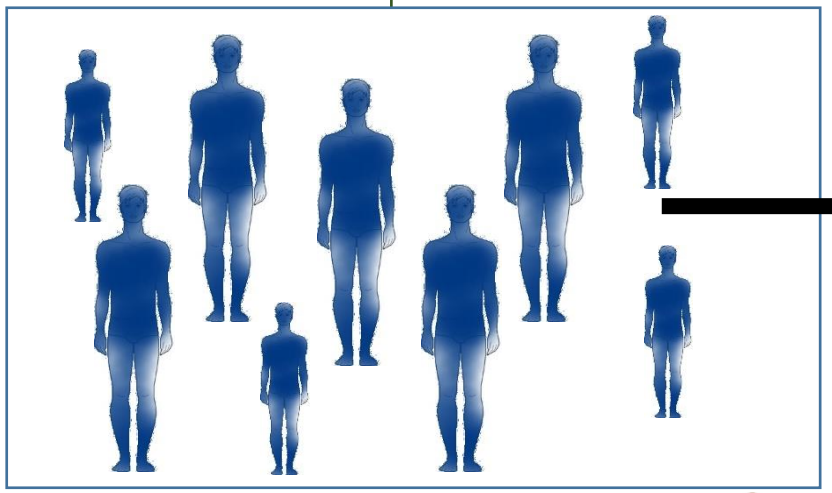
Baseline Equivalence

Your special training → Fabulous Performance!

(No special training) → Disorganized, undisciplined performance

Without baseline equivalence, you can't say that it was your intervention that made the difference.

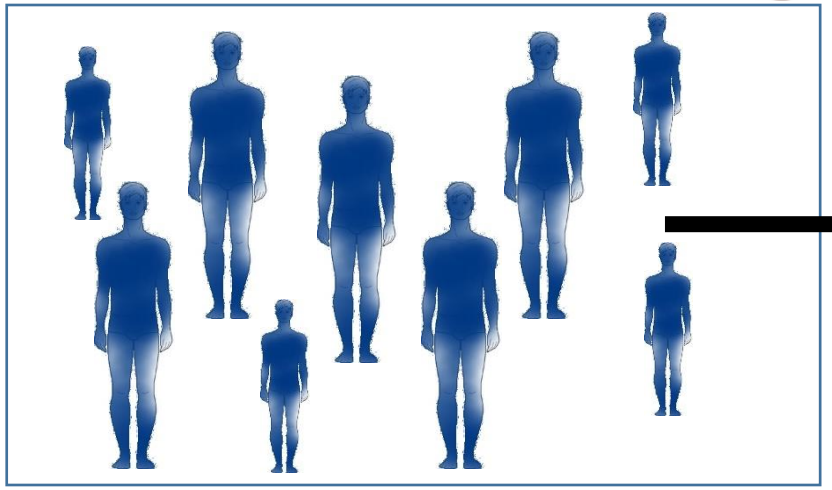
Differential Drop-Out from the Study



Your special training

Test: Basketball Performance

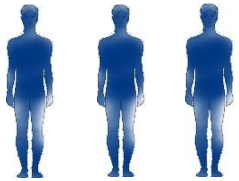
Baseline Equivalence? 👍🏾

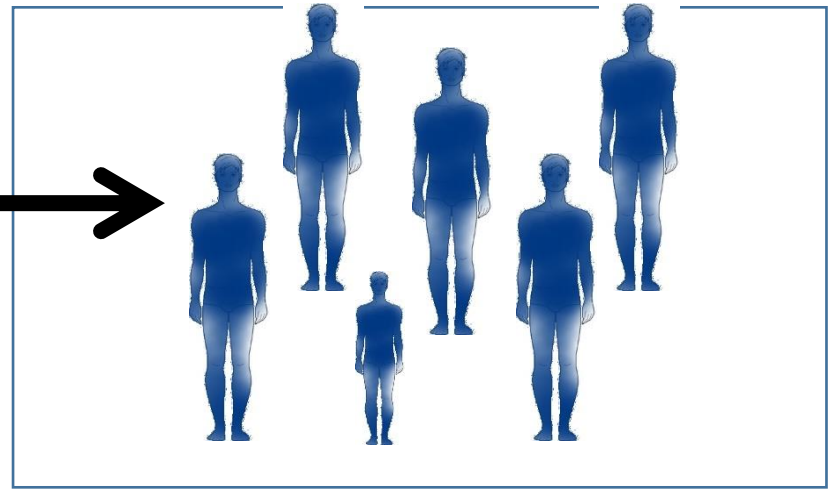


(No special training)

Differential Drop-Out from the Study

Your special training

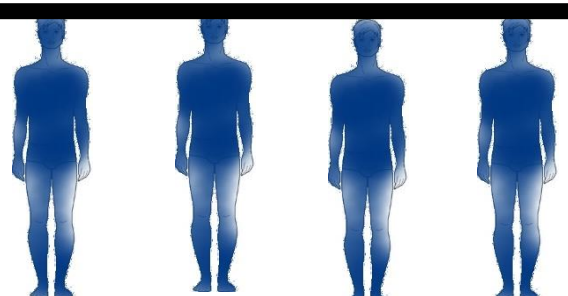


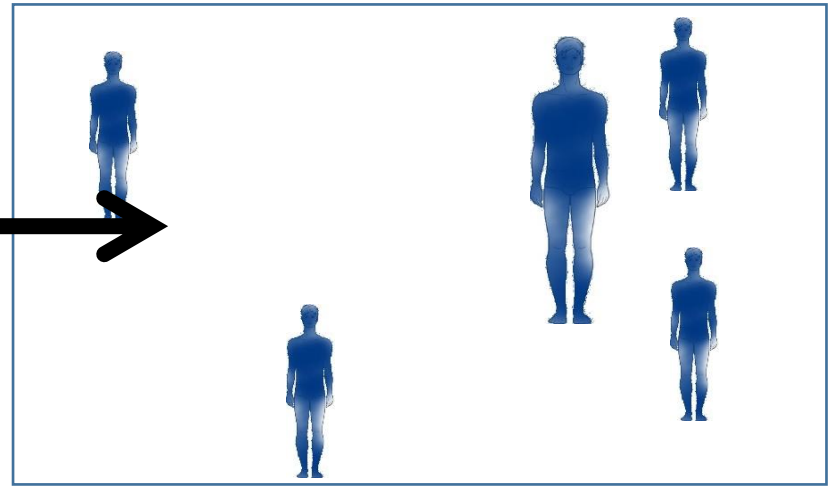


Test: Basketball Performance

Different kinds of people can drop out

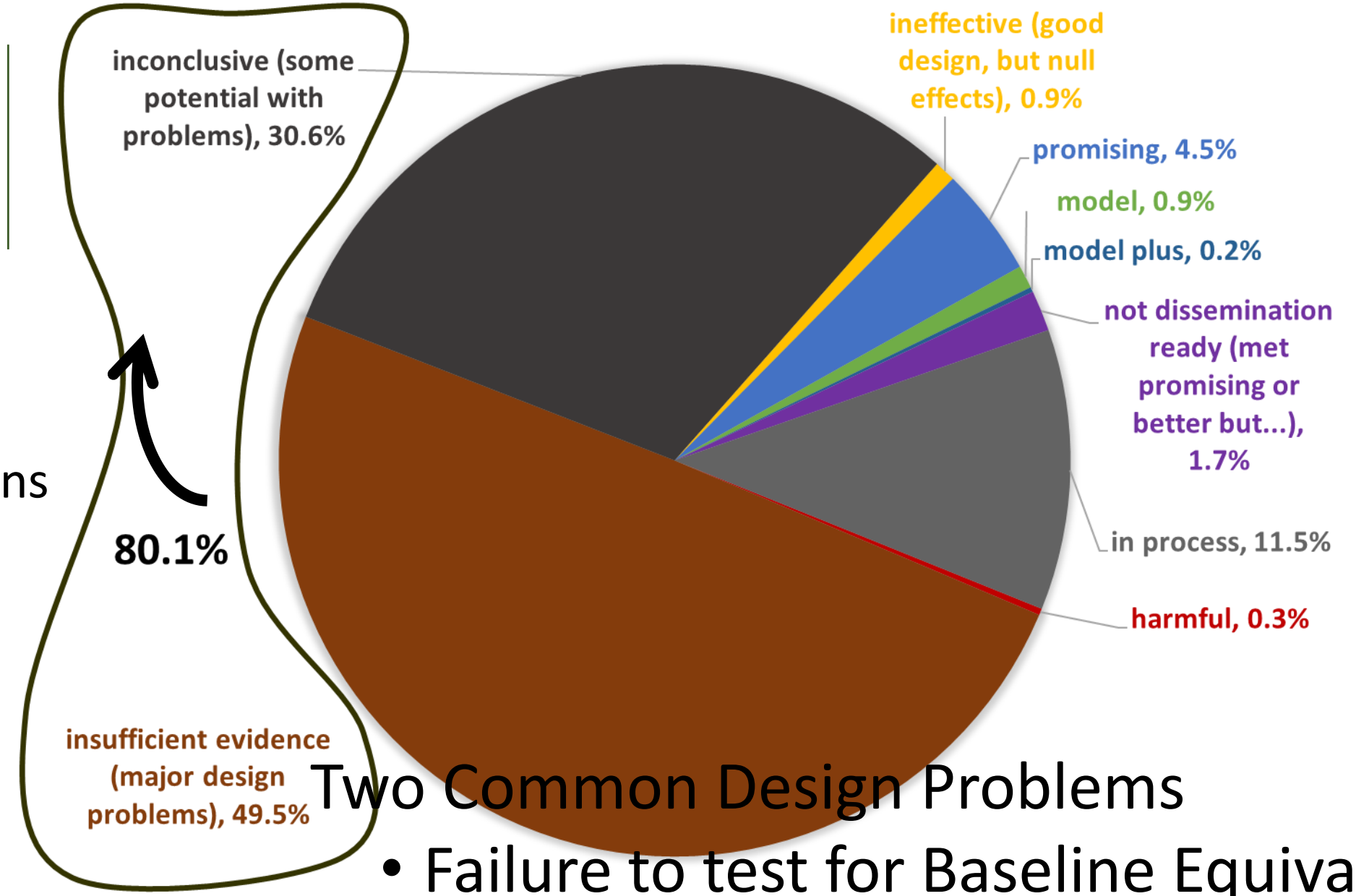
(No special training)





Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

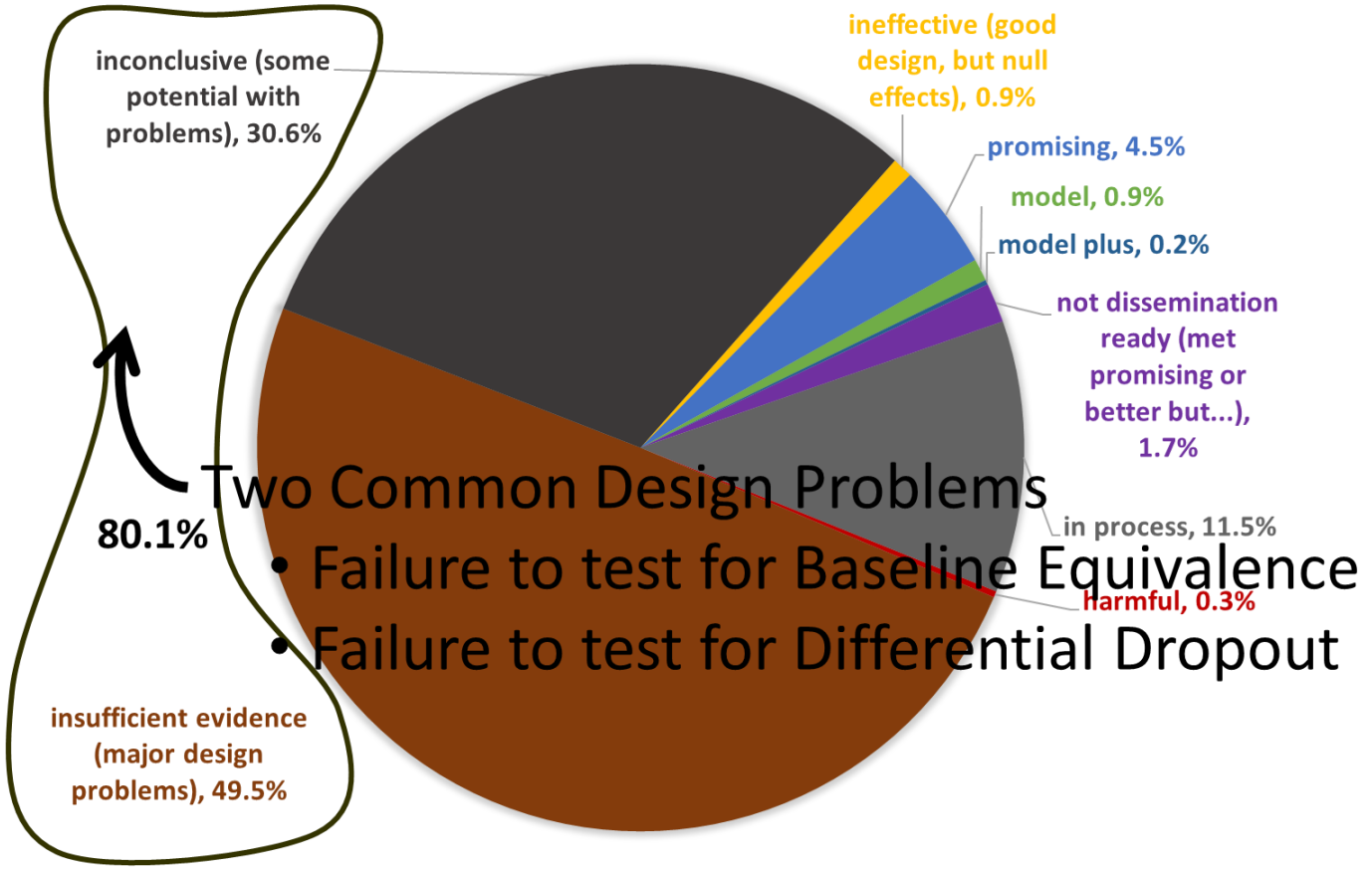
N=1544
Interventions
Reviewed
to date



Two Common Design Problems

- Failure to test for Baseline Equivalence
- Failure to test for Differential Dropout

N=1544
Interventions
Reviewed
to date



As a Result:
We won't certify them on Blueprints

Ineffective programs have been, and still are, very popular.

D.A.R.E.
TO RESIST DRUGS AND VIOLENCE.
DRUG ABUSE RESISTANCE EDUCATION

Ineffective programs have been, and still are, very popular.

- Information Dissemination (telling kids about the dangers of drugs)
- Scare tactics - "Scared Straight" "This is your brain on drugs"
- D.A.R.E.
- After school activities with limited supervision and absence of more potent programming
- Delinquent Group Peer Counseling and Mediation
- Gun Buyback Programs
- Firearm Training
- Boot Camps

Ineffective programs have been, and still are, very popular.

Communities must work together to implement programs that have been proven to work!

Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

communities that care
Strong Communities, Successful Kids

VISION FOR HEALTHY COMMUNITY Process

Phases

1 Get Started

2 Get Organized

3 Develop Community Profile

4 Create a Plan

Select tested, effective policies and programs

5 Implement & Evaluate

0 1 2 3 4 5 6 7 8 9 10 11 1yr

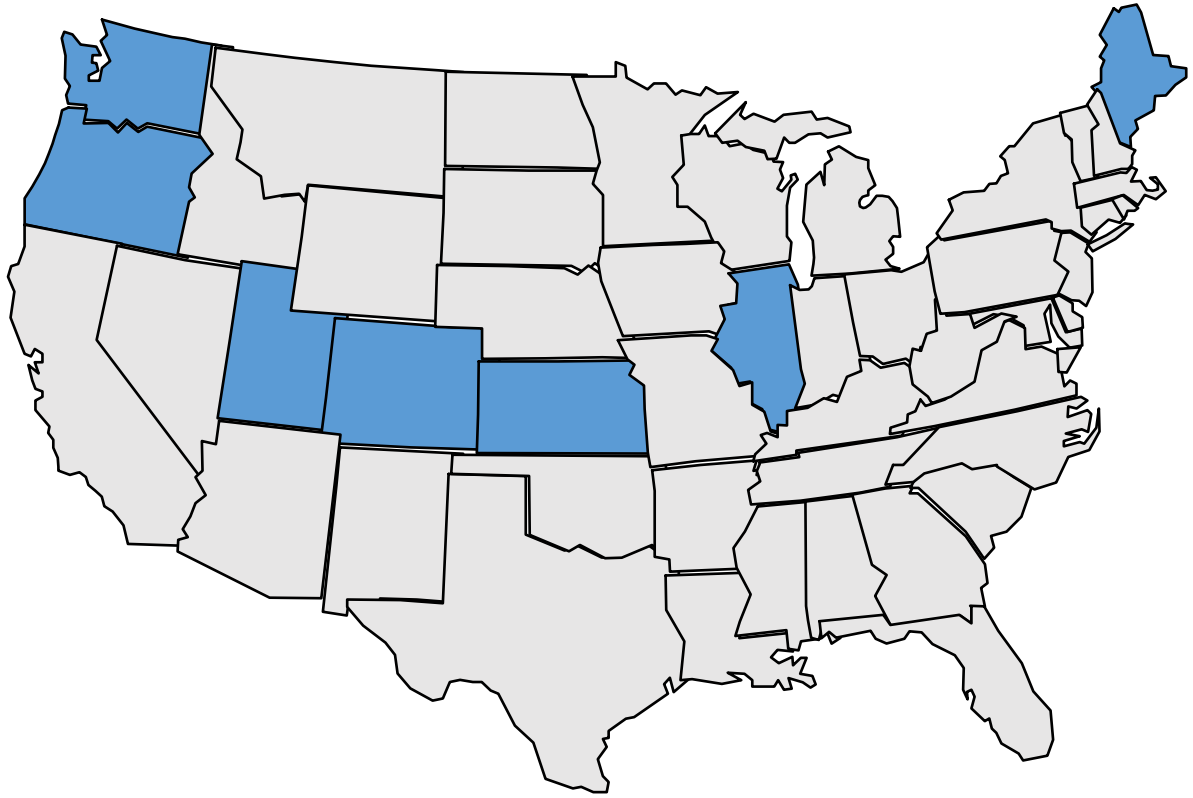
months

The CTC Strategy was tested in 24 communities across 7 states.

2003-2013

24 incorporated towns

- Matched in pairs within state
- Randomly assigned to CTC or control condition



Longitudinal panel of 4407 students

- All 5th graders in public schools
- Surveyed annually from grade 5

Effective Programs Implemented in CTC Trial

School-Based

All Stars Core
Life Skills Training (LST)
Lion's Quest SFA (LQ-SFA)
Project Alert
Olweus Bullying Prevention Program
Towards No Drug Abuse (TNDA)
Class Action
Program Development Evaluation Training

Selective After school

Participate and Learn Skills (PALS)
Big Brothers/Big Sisters
Stay SMART
Tutoring
Valued Youth

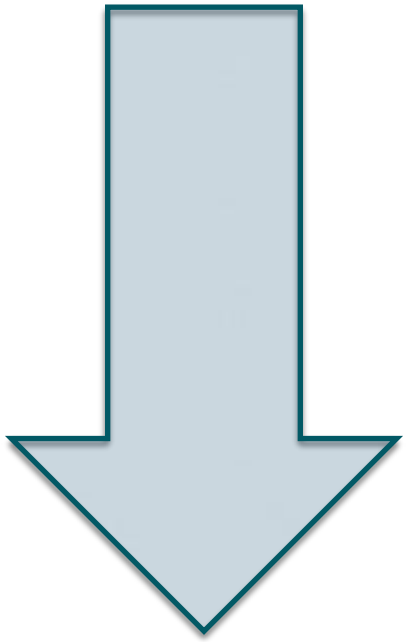
Family Focused

Strengthening Families 10-14
Guiding Good Choices
Parents Who Care
Family Matters
Parenting Wisely

Different communities selected different combinations of interventions.

But they all chose Blueprints programs.

Communities That Care:
Results in 3 Years- End of Grade 8



tobacco – down 33%

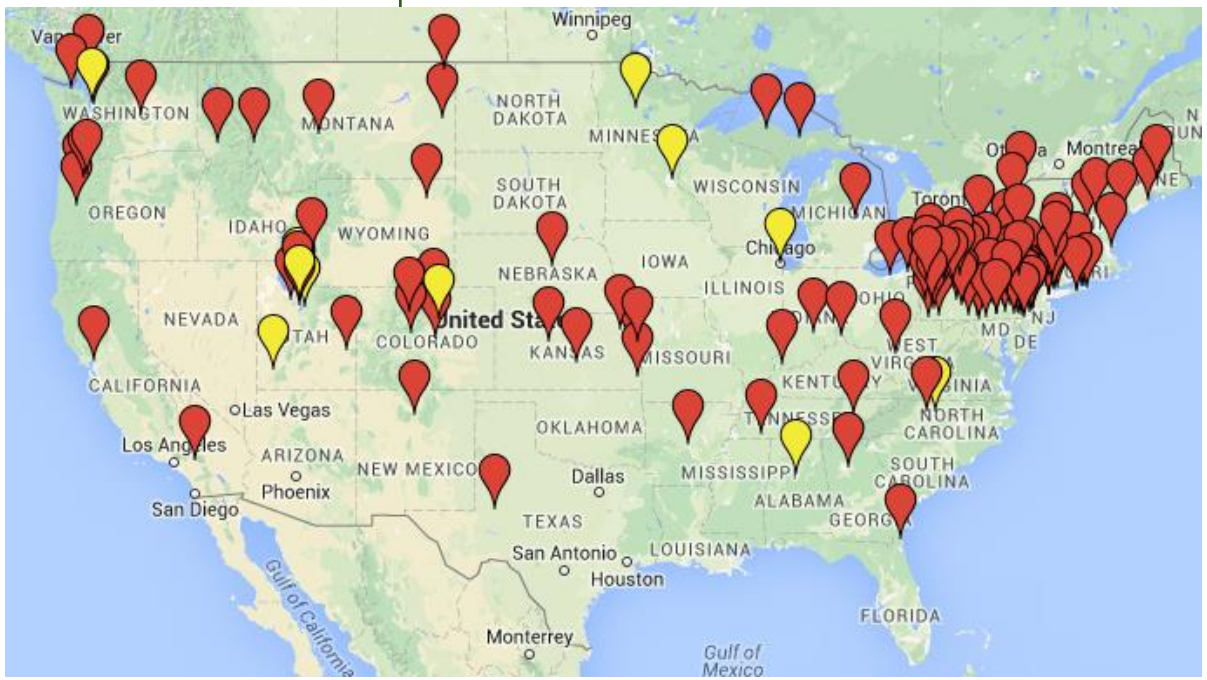
alcohol – down 32%

delinquent behavior – down 25%

On a community-wide level!

Hawkins et al. (2009). *Arch Pediatr Adolesc Med.163(9):789-798.*

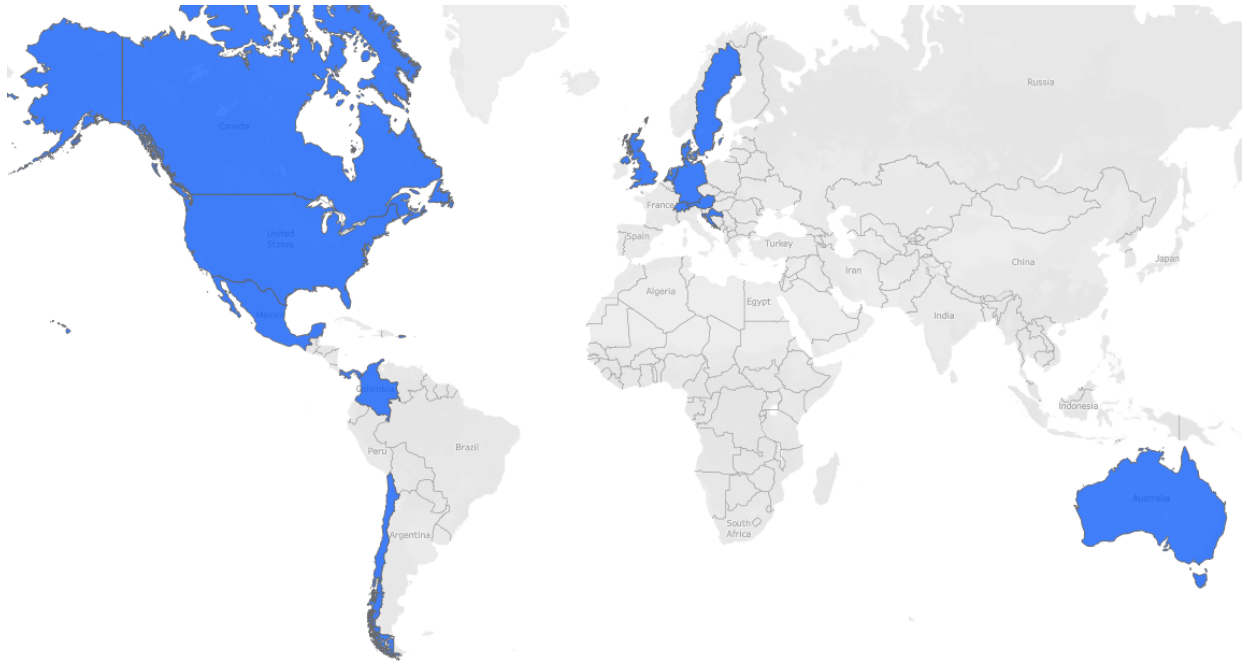
CTC is Scaling Up Across the US and Globally



CTC is currently successfully operational in

- over 130 communities in the US

CTC is Scaling Up Across the US and Globally



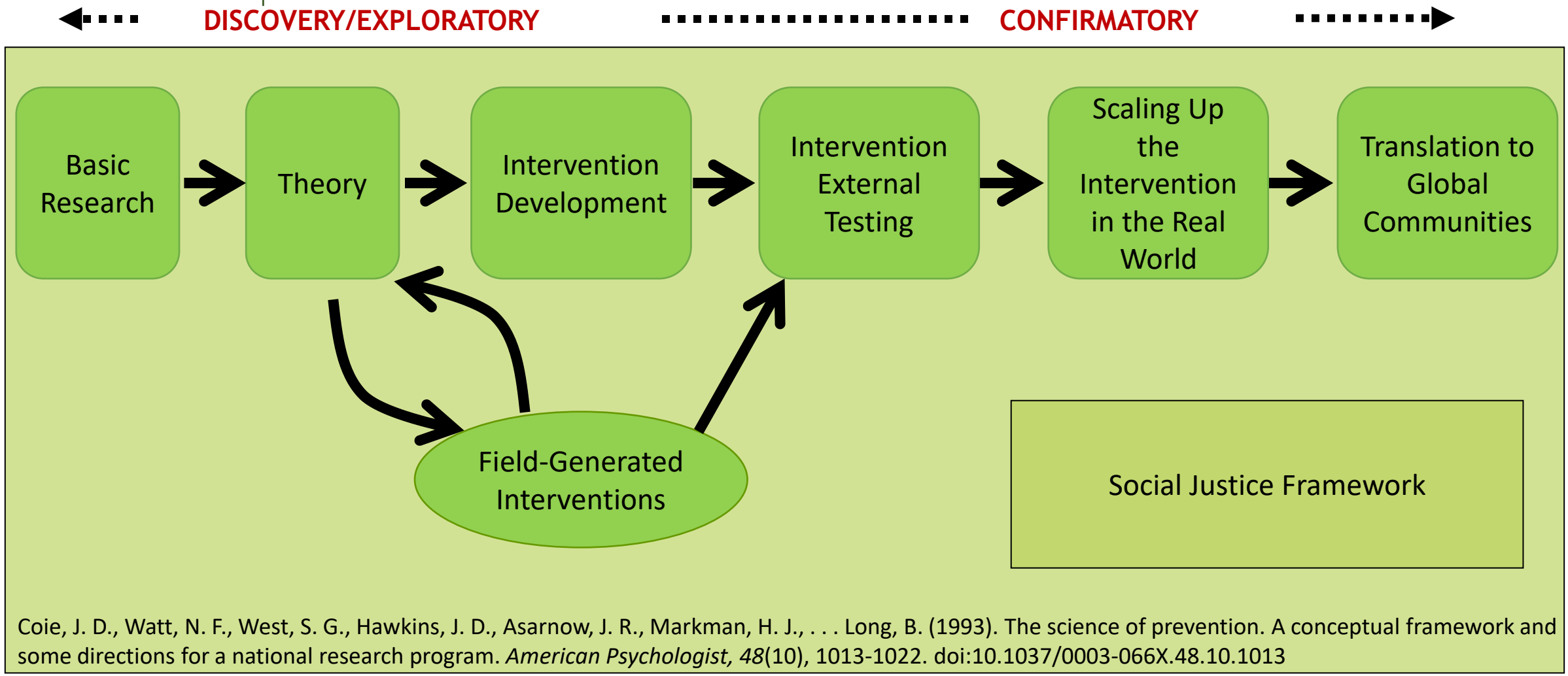
CTC is currently successfully operational in

- over 130 communities in the US
- dozens of communities around the world…
- including Germany, Sweden, Denmark, The Netherlands, the United Kingdom, Croatia, Austria, Switzerland, Canada, Mexico, Colombia, Chile, Panama and Australia

Talk Overview

- Prevention Science
  What have we learned as a field in the last 30 years, and why does it matter?
- Community Based Prevention
- Blueprints
- What do we still not know?

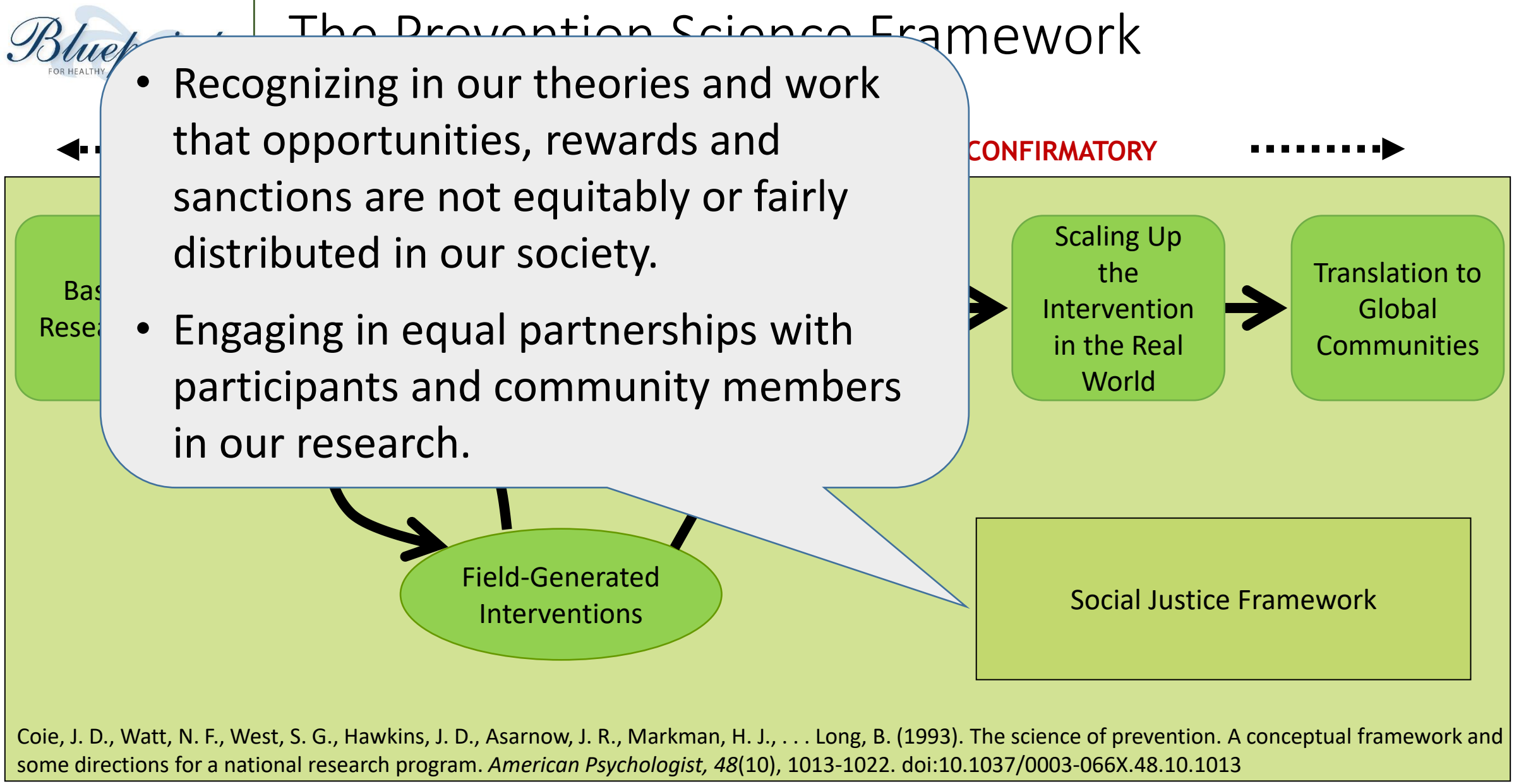
The Prevention Science Framework



Coie, J. D., Watt, N. F., West, S. G., Hawkins, J. D., Asarnow, J. R., Markman, H. J., . . . Long, B. (1993). The science of prevention. A conceptual framework and some directions for a national research program. *American Psychologist, 48*(10), 1013-1022. doi:10.1037/0003-066X.48.10.1013

The Prevention Science Framework

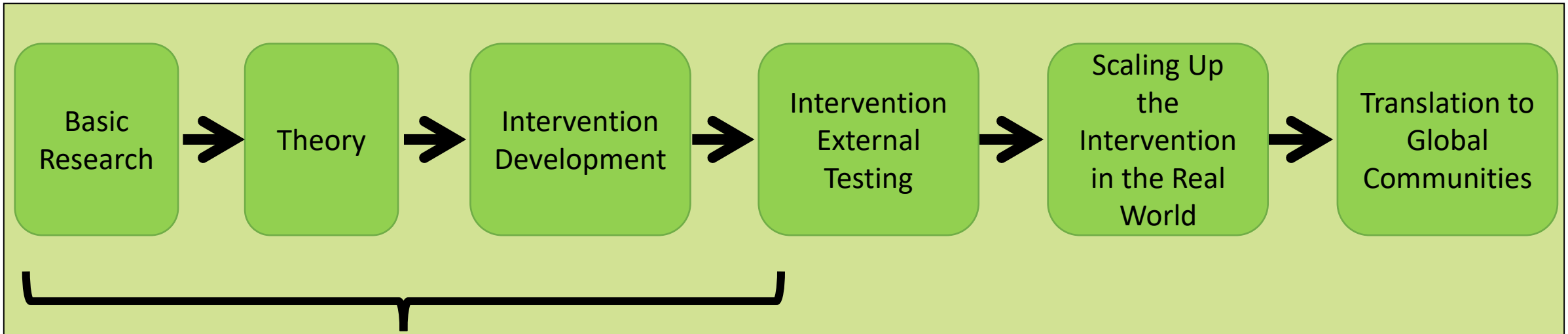
- Recognizing in our theories and work that opportunities, rewards and sanctions are not equitably or fairly distributed in our society.
- Engaging in equal partnerships with participants and community members in our research.



Coie, J. D., Watt, N. F., West, S. G., Hawkins, J. D., Asarnow, J. R., Markman, H. J., . . . Long, B. (1993). The science of prevention. A conceptual framework and some directions for a national research program. *American Psychologist, 48*(10), 1013-1022. doi:10.1037/0003-066X.48.10.1013

The Prevention Science Framework

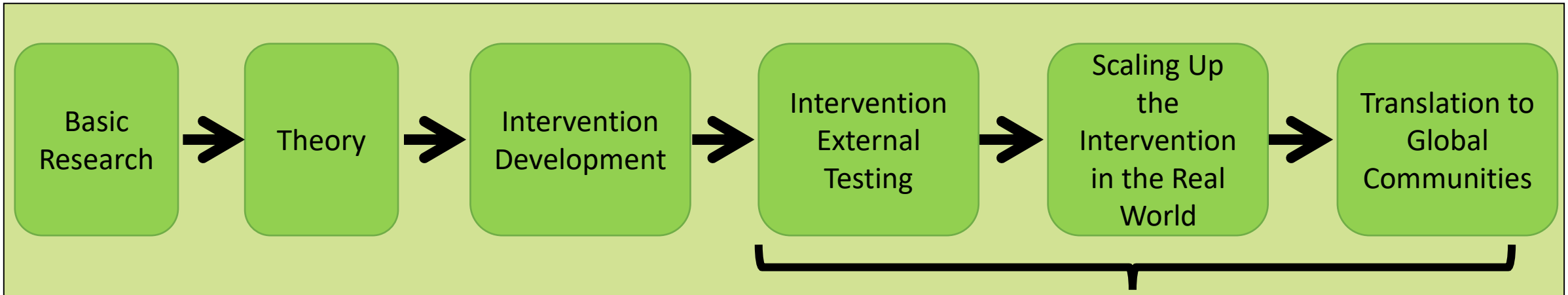
DISCOVERY/EXPLORATORY ..... CONFIRMATORY .....



MOST of the work done to date has been in this area, but challenges still remain

The Prevention Science Framework

DISCOVERY/EXPLORATORY ..... CONFIRMATORY .....



Really BIG challenges remain in these areas

- Transportability of interventions to new populations
- Going to scale with fidelity
- Adaptation without invalidating the intervention

Talk Overview

- Prevention Science
  What have we learned as a field in the last 30 years, and why does it matter?
- Community Based Prevention
- Blueprints
- What do we still not know?

What do we still not know?

1. How do the multiple causes of substance use disorder work together over development?

All of these factors influence this teen's addiction.

- national policy
- community laws & norms
- family, school, peer, neighborhood environments
- psychological systems
- neuroanatomy
- cellular biology
- genetics

However, we are still figuring out how all of these things work together over the life course, from birth into adulthood.

What do we still not know?

1. How do the multiple causes of substance use disorder work together over development?
2. Transportability of interventions

Many interventions on these registries were developed and tested in one population...

…but now we would like to implement them in other populations.

- Should we assume that the intervention will not work without adaptation?
- Or should it be implemented <u>exactly as designed</u> in the new community with high fidelity?

Many interventions on these registries were developed and tested in one population...

…but now we would like to implement them in other populations.

Can interventions be transported cross-culturally?

Transportability of interventions across cultures

- One view is that preventive interventions are effective in new cultural contexts
  - only if there is an extensive multi-stage adaptation process (Castro, et al.)
  - if there is limited "cultural distance" between the populations (Sussman, et al.)

- However, meta-analyses of cross-country transportability do not support this.

Transportability of interventions across cultures

Journal of Clinical Child & Adolescent Psychology, *45*(6), 749–762, 2016
Published with License by Taylor & Francis Group, LLC
ISSN: 1537-4416 print/1537-4424 online
DOI: 10.1080/15374416.2015.1015134

Routledge
Taylor & Francis Group

Transporting Evidence-Based Parenting Programs for Child Problem Behavior (Age 3–10) Between Countries: Systematic Review and Meta-Analysis

Frances Gardner, Paul Montgomery, and Wendy Knerr
Centre for Evidence-Based Intervention, Department of Social Policy and Intervention, University of Oxford

Gardner, et al. (2016)

Frances Gardner

Examined 17 studies that transported four parenting interventions.

Three were originally designed and tested in the United States

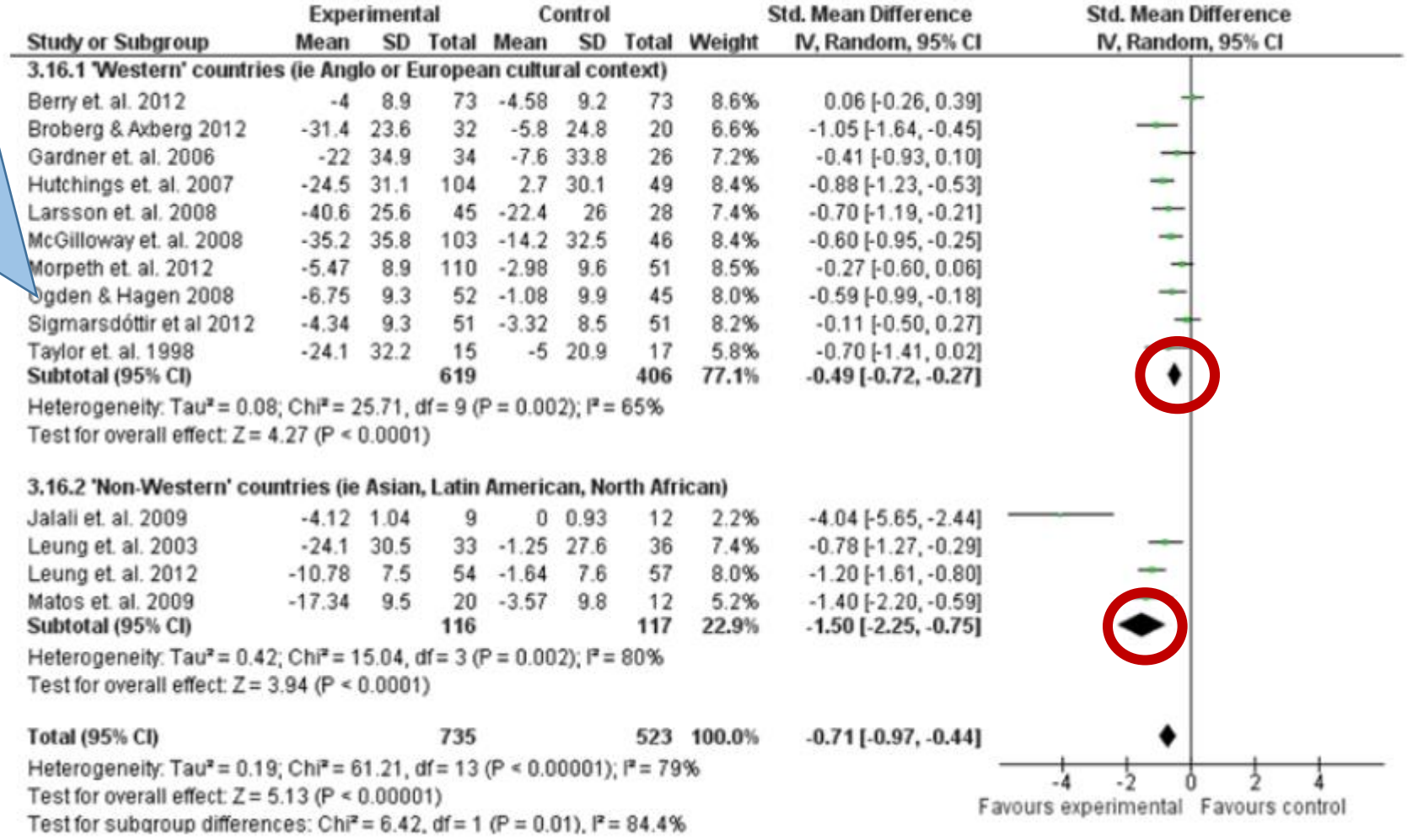
- Incredible Years
- Parent–Child Interaction Therapy [PCIT]
- Parent Management Training Oregon [PMTO]

and one in Australia

- Triple P

Transportability of interventions across cultures

Canada, Iceland,
Iran, Ireland,
Sweden, Holland,
Puerto Rico, Norway,
Hong Kong,
the United Kingdom



Study or Subgroup	Experimental Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
3.16.1 'Western' countries (ie Anglo or European cultural context)								
Berry et. al. 2012	-4	8.9	73	-4.58	9.2	73	8.6%	0.06 [-0.26, 0.39]
Broberg & Axberg 2012	-31.4	23.6	32	-5.8	24.8	20	6.6%	-1.05 [-1.64, -0.45]
Gardner et. al. 2006	-22	34.9	34	-7.6	33.8	26	7.2%	-0.41 [-0.93, 0.10]
Hutchings et. al. 2007	-24.5	31.1	104	2.7	30.1	49	8.4%	-0.88 [-1.23, -0.53]
Larsson et. al. 2008	-40.6	25.6	45	-22.4	26	28	7.4%	-0.70 [-1.19, -0.21]
McGilloway et. al. 2008	-35.2	35.8	103	-14.2	32.5	46	8.4%	-0.60 [-0.95, -0.25]
Morpeth et. al. 2012	-5.47	8.9	110	-2.98	9.6	51	8.5%	-0.27 [-0.60, 0.06]
Ogden & Hagen 2008	-6.75	9.3	52	-1.08	9.9	45	8.0%	-0.59 [-0.99, -0.18]
Sigmarsdóttir et al 2012	-4.34	9.3	51	-3.32	8.5	51	8.2%	-0.11 [-0.50, 0.27]
Taylor et. al. 1998	-24.1	32.2	15	-5	20.9	17	5.8%	-0.70 [-1.41, 0.02]
Subtotal (95% CI)			**619**			**406**	**77.1%**	**-0.49 [-0.72, -0.27]**
Heterogeneity: Tau² = 0.08; Chi² = 25.71, df = 9 (P = 0.002); I² = 65%								
Test for overall effect: Z = 4.27 (P < 0.0001)								
3.16.2 'Non-Western' countries (ie Asian, Latin American, North African)								
Jalali et. al. 2009	-4.12	1.04	9	0	0.93	12	2.2%	-4.04 [-5.65, -2.44]
Leung et. al. 2003	-24.1	30.5	33	-1.25	27.6	36	7.4%	-0.78 [-1.27, -0.29]
Leung et. al. 2012	-10.78	7.5	54	-1.64	7.6	57	8.0%	-1.20 [-1.61, -0.80]
Matos et. al. 2009	-17.34	9.5	20	-3.57	9.8	12	5.2%	-1.40 [-2.20, -0.59]
Subtotal (95% CI)			**116**			**117**	**22.9%**	**-1.50 [-2.25, -0.75]**
Heterogeneity: Tau² = 0.42; Chi² = 15.04, df = 3 (P = 0.002); I² = 80%								
Test for overall effect: Z = 3.94 (P < 0.0001)								
Total (95% CI)			**735**			**523**	**100.0%**	**-0.71 [-0.97, -0.44]**
Heterogeneity: Tau² = 0.19; Chi² = 61.21, df = 13 (P < 0.00001); I² = 79%								
Test for overall effect: Z = 5.13 (P < 0.00001)								
Test for subgroup differences: Chi² = 6.42, df = 1 (P = 0.01), I² = 84.4%								

Transportability of interventions across cultures

values than those ranked more individualistic. There were no differences in effects by country-level policy or resource factors. Contrary to common belief, parenting interventions appear to be at least as effective when transported to countries that are more different culturally, and in service provision, than those in which they were developed. Extensive adaptation did not appear necessary for successful transportation.

Intervention, University of Oxford

Gardner, et al. (2016)

Transportability of interventions across cultures

ASSESSMENT OF RISK AND PROTECTION IN NATIVE AMERICAN YOUTH: STEPS TOWARD CONDUCTING CULTURALLY RELEVANT, SUSTAINABLE PREVENTION IN INDIAN COUNTRY

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 DOI: 10.1002/jcop.21852

What about indigenous communities in the US & Canada?

Compared CTC risk and protective factors for 5,095 self-identified Native American youth to those of 284,000 youths in a nationally representative CTC database.

Transportability of int… …sultures

Scale reliabilities w… …e two groups

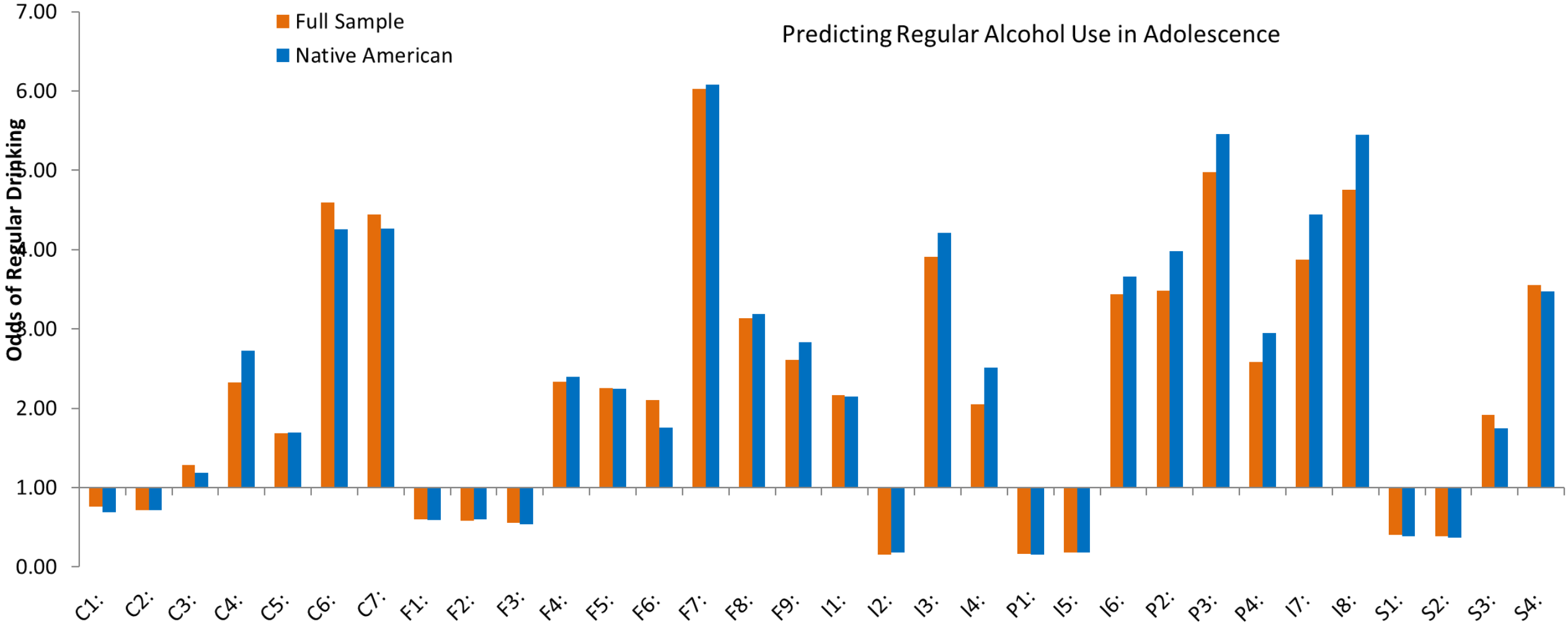
Risk and Protective Factor scales were similarly reliable across groups.

	Reliability Coefficients	
	Full Sample	Native American Sample
Community Domain		
C1: Positive Community Opportunities	0.77	0.76
C2: Positive Comm. Rewards	0.82	0.80
C3: Low Neighborhood Attachment	0.80	0.78
C4: Comm. Disorganization	0.82	0.82
C5: Personal Transitions and Mobility	0.71	0.73
C6: Laws and Norms Favorable to Drug Use and Firearms	0.81	0.80
C7: Perceived Availability of Drugs and Firearms	0.88	0.88
Family Domain		
F1: Family Attachment	0.81	0.77
F2: Family Opportunities for Positive Involvement	0.82	0.80
F3: Family Rewards for Positive Involvement	0.80	0.78
F4: Poor Family Supervision	0.80	0.80
F5: Poor Family Discipline	0.83	0.80
F6: Family Conflict	0.73	0.72
F7: Family History of Antisocial Behavior	0.85	0.86
F8: Parental Attitudes favorable to ATOD Use	0.86	0.88
F9: Parental Attitudes favorable toward Antisocial Behavior	0.83	0.84
(table continued in next column)		

	Reliability Coefficients	
	Full Sample	Native American Sample
School Domain		
S1: School Opportunities for Prosocial Involvement	0.65	0.70
S2: School Rewards for Prosocial Involvement	0.72	0.73
S3: Poor Academic Performance	0.63	0.60
S4: Low School Commitment	0.69	0.69
Peer/Individual Domain		
I1: Low Perceived Risks for Drug Use	0.87	0.86
I2: Early Initiation of Drug Use and Antisocial Behavior	0.80	0.78
I3: Sensation Seeking	0.79	0.81
I4: Gang Involvement	0.90	0.90
P1: Social Skills	0.65	0.69
I5: Belief in the Moral Order	0.70	0.71
I6: Rebelliousness	0.74	0.76
P2: Friends' Delinquent Behavior	0.89	0.89
P3: Friends' Use of Drugs	0.87	0.86
P4: Peer Rewards for Antisocial Behavior	0.88	0.88
I7: Favorable Attitudes Toward Antisocial Behavior	0.84	0.87
I8: Favorable Attitudes Toward ATOD Use	0.88	0.89
I9: Religiosity	N/A (only one item)	N/A (only one item)

Transportability of interventions across cultures

Prediction of outcomes was similar across the two groups



Transportability of interventions across cultures

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CTC survey measures of risks, protection and outcomes are reliable and valid within this Native American youth sample.

Transportability of interventions across cultures

Potential other factors influencing health and health-related behaviors beyond the RPFs measured here that are specific to the circumstances in which Native American youth grow up.

- institutional racism
- disparities in access to and delivery of health services
- exposure to trauma
- stressors related to discrimination
- historical trauma
- colonization
- loss of culture specific to their sociohistorical context
- dissonance between cultural ideals and behavioral realities
- involvement in traditional and spiritual practices
- cultural identity
- presence of strong extended families and social networks that can provide culturally competent care

What do we still not know?

1. How do the multiple causes of substance use disorder work together over development?
2. Transportability of interventions
3. Adaptation of interventions

Many tested, effective interventions are adapted over time, e.g. Good Behavior Game

At what point are they still "the same" intervention that was or was not replicated?

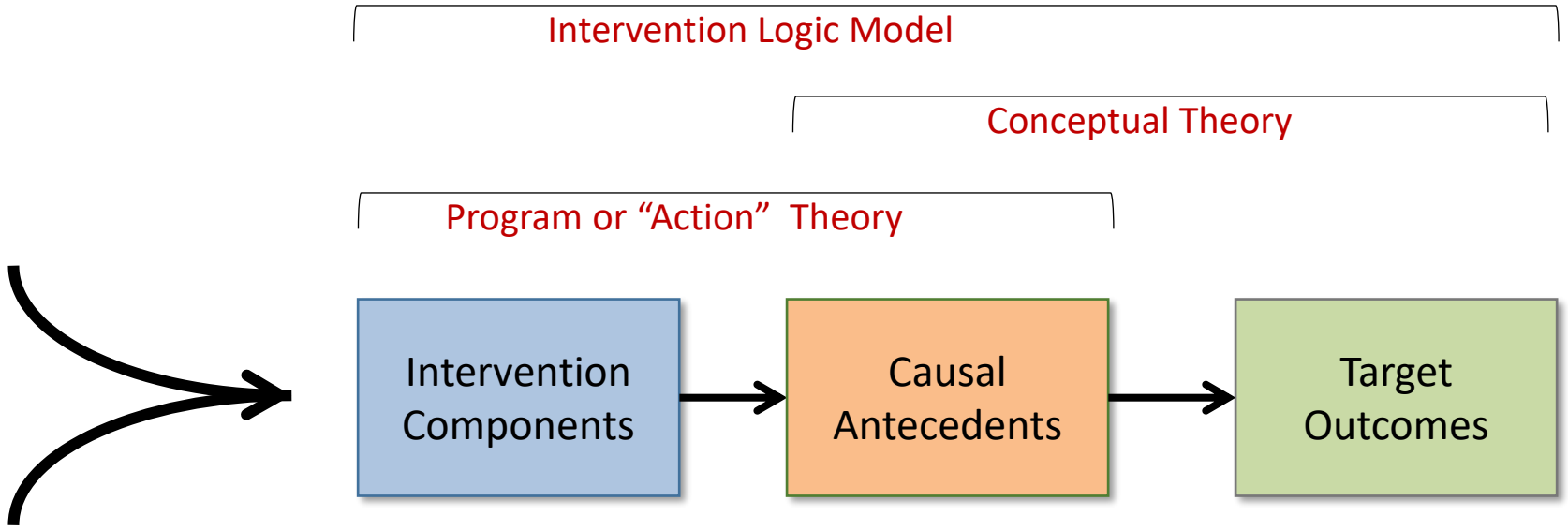
- **GBG tested alone** (Dolan et al., 1993; Kellam, et al. 1994; 2008, 2014; Wilcox et al. 2008; Petras et al. 2008; Michalic et al, 2011)
- **GBG tested in combination with Enhanced Academic Curriculum** (Ialongo et al., 1999; Storr et al., 2002; Furr-Holden et al. 2004)
- **GBG tested alone in Belgium** (Leflot et al. 2010)
- **GBG tested alone in England** (Humphrey et al., 2018)

- **PAX GBG** adds in…
  - Team cohesion enhancers
  - Child-driven focus
  - Additional structure
  - Additional support for teachers
  - Additional peer support?

Intervention Logic Model

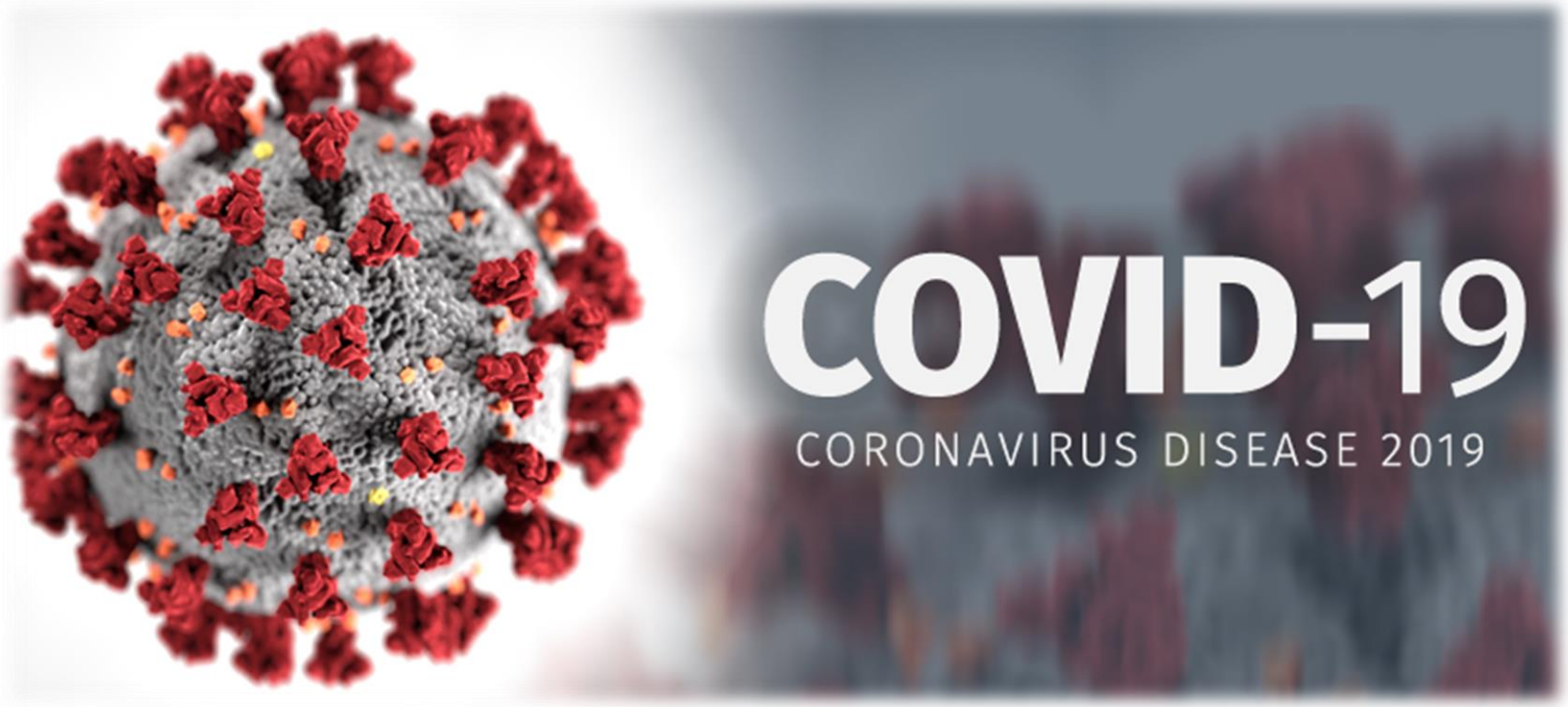
Researchers should stipulate the full logic model of their intervention

In particular adaptations that deal more with intervention delivery.

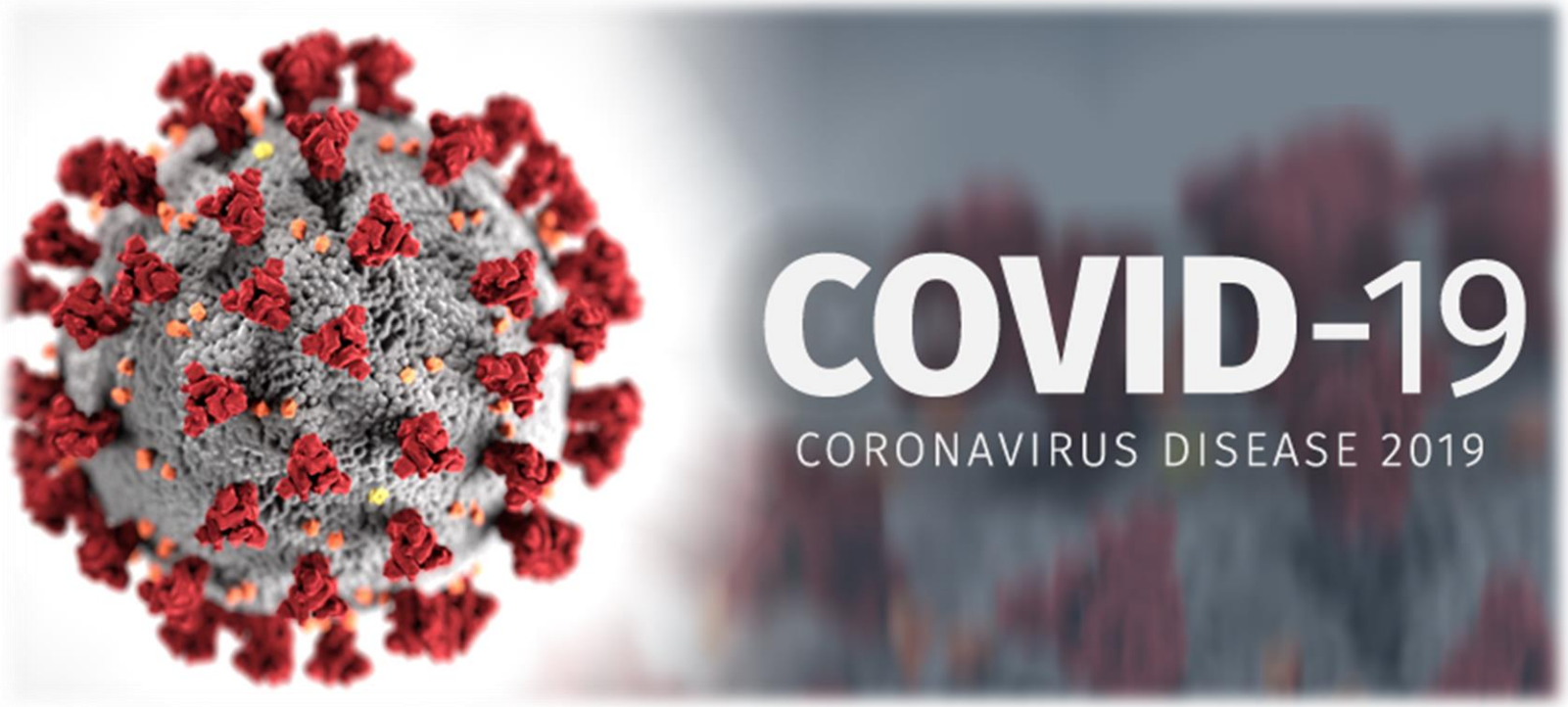


Adaptations that are consistent with the logic model of the intervention might be OK.

But, ultimately, adapted interventions should also be tested to see if they still work.



Since many of our preventive interventions are conducted in schools, families and communities, the question of adaptation becomes important in the wake of COVID-19.



Please respond to the poll:

How has COVID-19 affected your work in prevention?

1. *It has not affected our work*
2. *We have changed the way we do service delivery*
3. *We have suspended our prevention activities*

Blueprints COVID Survey

Which, if any, of the following modifications have been made to your intervention or its delivery to ensure the safe continuity of programming in the context of the COVID outbreak?

Blueprints COVID Survey

We are rapidly developing a virtual training option.

We have developed guidance for tele-delivery of the program.

Because of the interactive nature of the classroom-based program and no data to support online implementation, we cannot recommend changes to delivery at this time until we have data to support the implementation change.

Unless online delivery has been tested, there is no way of knowing if the intervention still works!

What do we still not know?

1. How do the multiple causes of substance use disorder work together over development?
2. Transportability of interventions
3. Adaptation of interventions
4. How best to represent evidence to communities?

Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

Original Meaning of Term Evidence-Based

Experimental evidence from rigorous trials providing statistically significant positive effects: Evidence of a *causal relationship*

- **Society for Prevention Research** (Flay, et al., 2005; Gottfredson et al., 2015
- **American Psychological Association** (APA Task Force, 1995)
- **Institute of Medicine** (2015)
- **Shadish, Cook & Campbell** (2001)
- **All Major Registries of EB Interventions**

New Use of Term Evidence-Based

- Refers to a continuum of evidence justifying a “Best Evidence” selection policy

Continuum of Evidence

Evidence Continuum	Type of Evidence	Confidence
Experimentally Proven (Ready for Scale)	Independent Replication Multiple Randomized Controlled Trials	Very High
Experimentally Proven (Ready for Scale)	Randomized Controlled Trials with Replication	High
Single RCT or Strong Quasi-Experimental	Regression Discontinuity, Interrupted Time Series, Matched Comparison	Moderate
Research Informed	Correlational, Pre/Post Study Post-test only	Low
Opinion Informed	Satisfaction, Personal Experience Testimonials, Anecdotes	Very Low

New Use of Term Evidence-Based

- Refers to a continuum of evidence justifying a "Best Evidence" selection policy
- Risk: Any level/type of evidence (even weak evidence) makes an intervention "evidence-based"
- A policy that assumes doing something, any level of positive evidence, is better than doing nothing may be unethical!
  - Ethical problems requiring participation in programs with unknown effects and no intention or commitment to evaluation.
  - Unethical to put in place potentially harmful programs.

Continuum of Evidence

Recommended for Community Scale-Up

Evidence Continuum	Type of Evidence	Confidence
Experimentally Proven (Ready for Scale)	Independent Replication Multiple Randomized Controlled Trials	Very High
Experimentally Proven (Ready for Scale)	Randomized Controlled Trials with Replication	High
Single RCT or Strong Quasi-Experimental	Regression Discontinuity, Interrupted Time Series, Matched Comparison	Moderate
Research Informed	Correlational, Pre/Post Study Post-test only	Low
Opinion Informed	Satisfaction, Personal Experience Testimonials, Anecdotes	Very Low

Continuum of Evidence

Evidence Continuum	Type of Evidence	Confidence
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Research Informed	Correlational, Pre/Post Study Post-test only	Low
Opinion Informed	Satisfaction, Personal Experience Testimonials, Anecdotes	Very Low

However most prevention registries present everything in their database (the good, the bad, and the ugly) along with its rating.

Imagine that your child is sick and you go to the doctor who then says..

Here's a bunch of drugs, some of them work and some of them don't. You choose! He would be sued for malpractice, but that is exactly what many prevention registries do: they present all interventions whether they work or not.

We should be VERY CLEAR to community members which interventions are recommended for scale-up

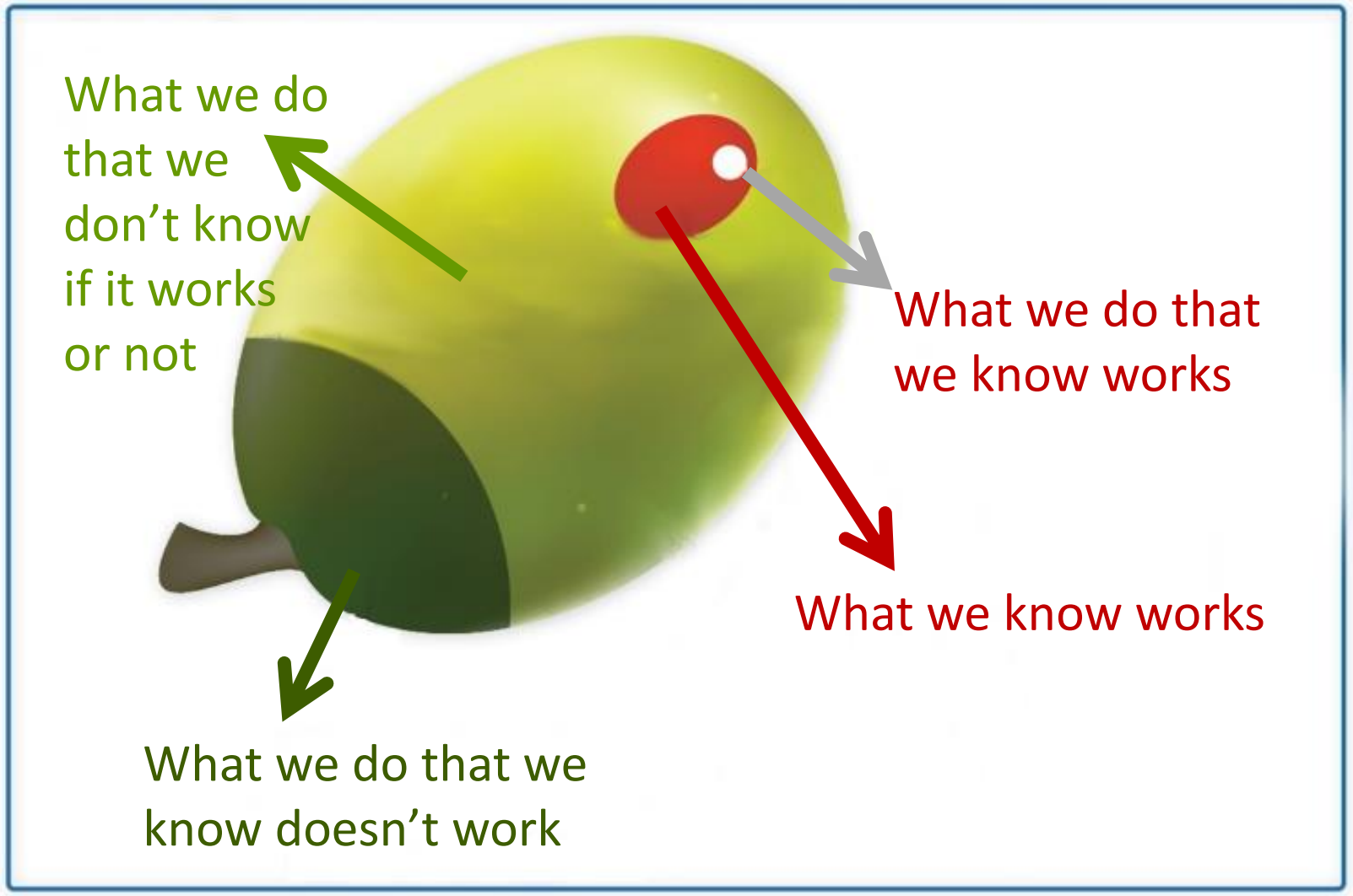
(and which are merely on the list for research or informational purposes).

HOWEVER: Certified and Not-Certified Interventions are presented in <u>different parts of our website</u> and <u>not on the same list</u>!

What do we still not know?

1. How do the multiple causes of substance use disorder work together over development?
2. Transportability of interventions
3. Adaptation of interventions
4. How best to represent evidence to communities?
5. How to encourage the use of evidence in our public health prevention planning?

The Olive of Prevention



We have at our disposal the means to reduce community substance use by 33% or more by implementing what we know works.

Why aren't we doing so?

The Olive of Prevention

+

Blueprints
FOR HEALTHY YOUTH DEVELOPMENT

We have at our disposal the means to reduce community substance use by 33% or more by implementing what we know works.

Why aren't we doing so?

We have community mobilization strategies that work …

and registries documenting what works…

why aren’t they being used?


If you build it,
they will come
they will say they already have one


If you build it,
they will come
they will say it probably doesn't work


If you build it,
they will come
they will get lost trying to use it
and give up


If you build it,
they will come
they will probably not know that
it exists

Current Challenge: Dissemination (Marketing)

- Local
- State
- National
- International
- Publications
- Press

We now have at our disposal the means to reduce community drug use by 25-30% through Community-Based Universal Prevention.

Globally, including here in the Northwest

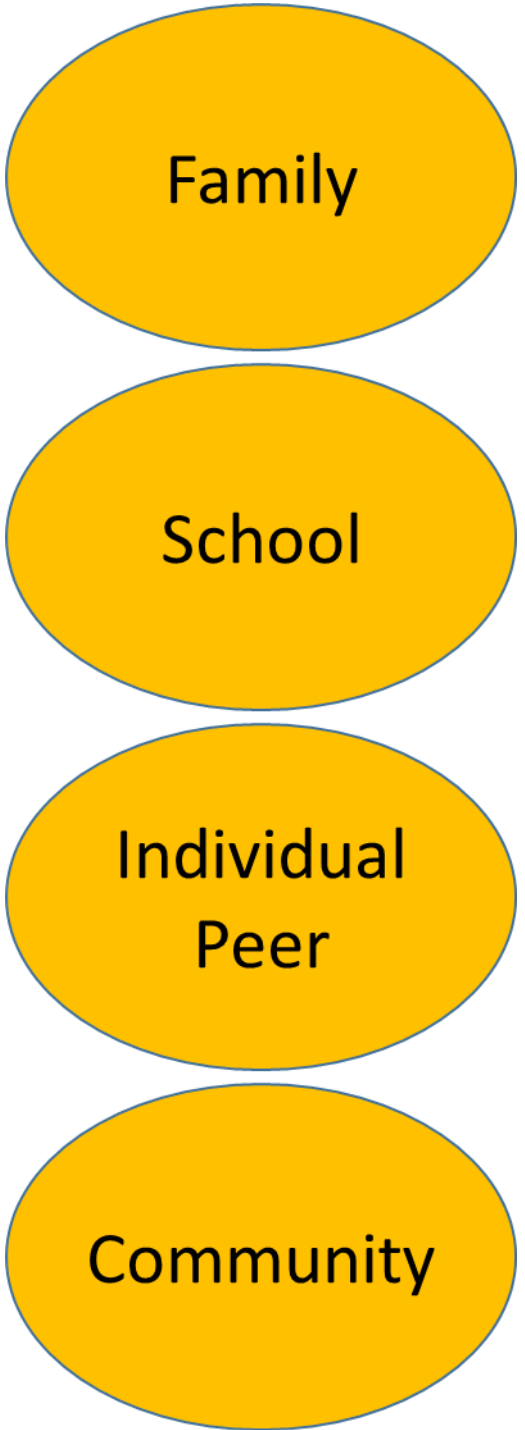
- Communities are working together
- Implementing Proven Programs
- Reducing crime, violence & drug use
- Improving the lives of children and young adults

Three things

1) **Everybody has a job to do.**
   (Don't blame others for community problems.)

2) **Do what you can, where you are.**
   (If you're a parent, be a good parent, if you're a teacher, be a good teacher. Be an active member of your community.)

3) **Work together.**



By working together, we can prevent substance abuse and related problems before they happen.

27 May 2020
Boulder, Colorado / Zoom
Northwest Prevention Technology Transfer Center
Webinar

Why Use Evidence and Where to Find It Blueprints for Healthy Youth Development

Karl G. Hill, PhD
Director, Prevention Science Program
Principal Investigator, ***Blueprints for Healthy Youth Development***
Professor Psychology and Neuroscience
Institute of Behavioral Science
University of Colorado Boulder

Karl.Hill@Colorado.edu

Thank you!

Last Thing!

Make sure to fill out a feedback form!

https://ttc-gpra.org/P?s=849360