



# Implementing Evidence-Based Prevention Programs

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## Four Things Policymakers Need to Know with Related Policy Recommendations

Implementing Evidence Based Prevention Programs:  
Implications for Policymakers in Congress and Elsewhere  
January 14, 2014



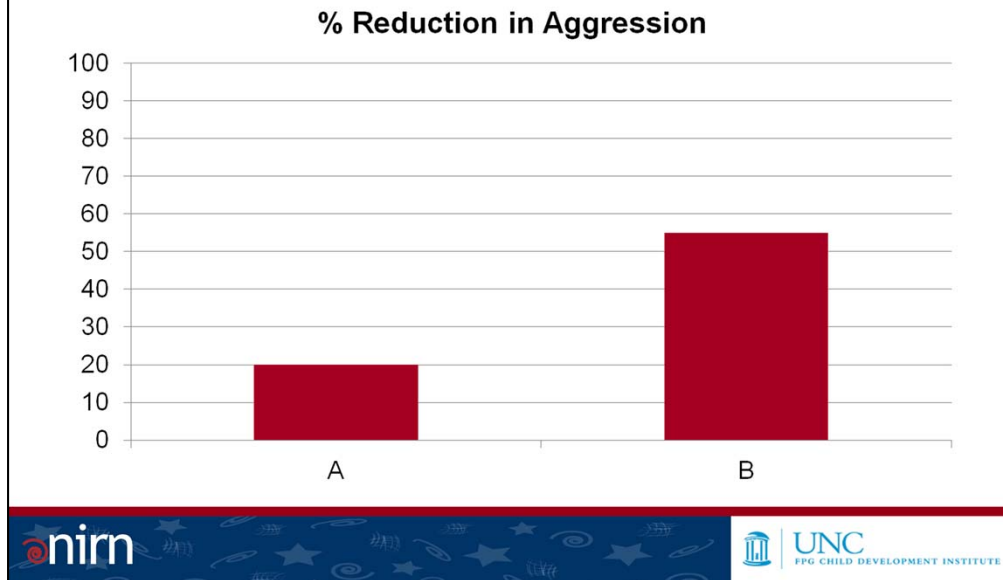
# Program Choices



Which would you want  
for your family?

*Program A*  
or  
*Program B*

# School Behavioral Health

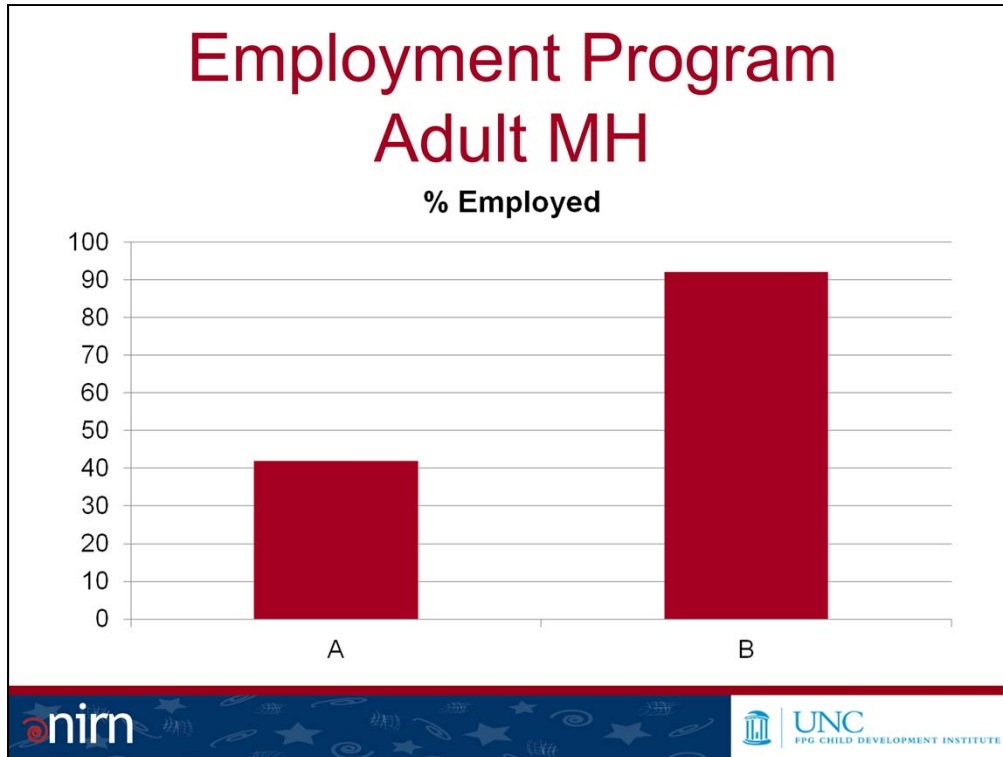


CASELS/PATHS program A = Low Principal Support; B = High Principal Support (proxy for fidelity)

PATHS – Promoting Alternative Thinking Strategies

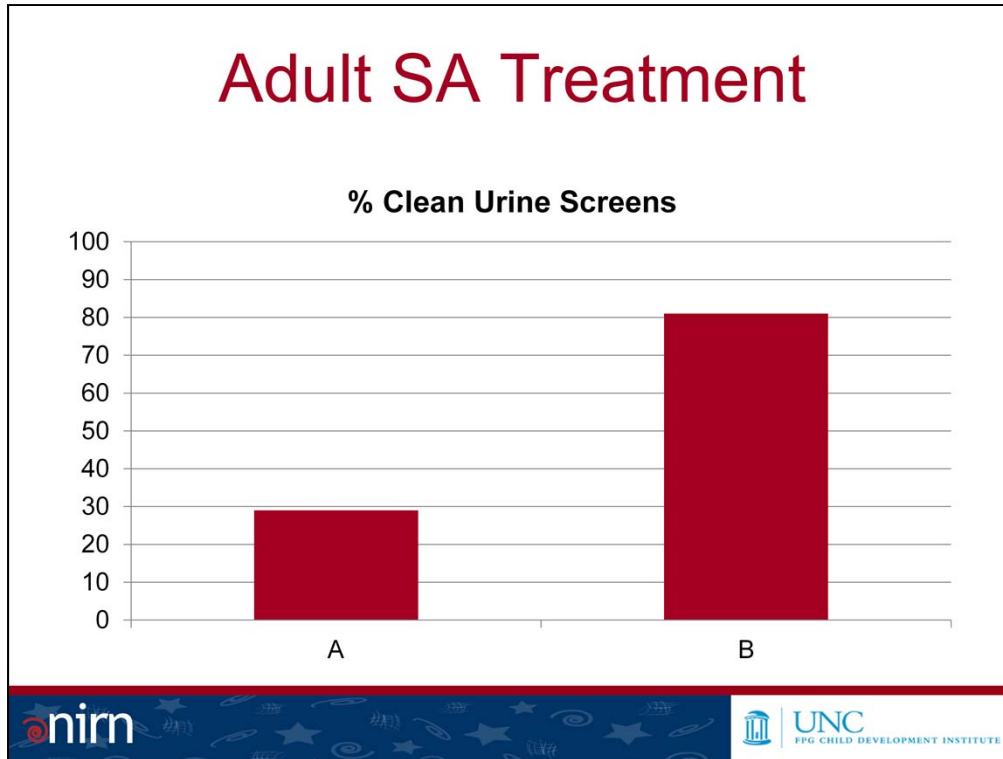
Kam, Greenberg, & Wells, 2004

Riggs, Greenberg, Kusche & Pentz, 2006



Supported Employment A = Low Fidelity; B = High Fidelity

Salyers, MP, Becker, DR, Drake, RE, Torrey, WC, Wyzik, PF. "A ten-year follow-up of a supported employment program." *Psychiatr. Serv.* 55: 302, 2004..



DBT A = Low Fidelity; B = High Fidelity

*Linehan, Dimeff et al., 2002*

# Program Choices

In each chart...

**A and B are the SAME PROGRAM!**

(Evidence-Based Programs = PATHS, SE, DBT)

**A = Low Fidelity use of EBP in practice**

**B = High Fidelity use of EBP in practice**

**Fidelity: is the program being delivered as intended?**



## 1<sup>st</sup> Thing You Need to Know

### Fidelity Predicts Outcomes:

Before you try to make changes to a program or practice, first do it as intended (if you can!)

## Policy Recommendation #1

Make sure you're getting the evidence-based prevention programs you're paying for: require regular reports of fidelity data

Did the grantee/contractor do what they said they would do?

Without evidence of fidelity, we cannot be confident in achieving the outcomes supported by scientific trials. Not all prevention programs have readily available or practical fidelity assessments that have shown to predict program outcomes. In such cases, practical fidelity assessments can be developed in service settings by allocating time and funding for usability testing.

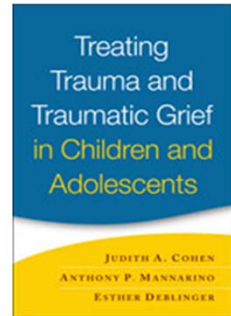
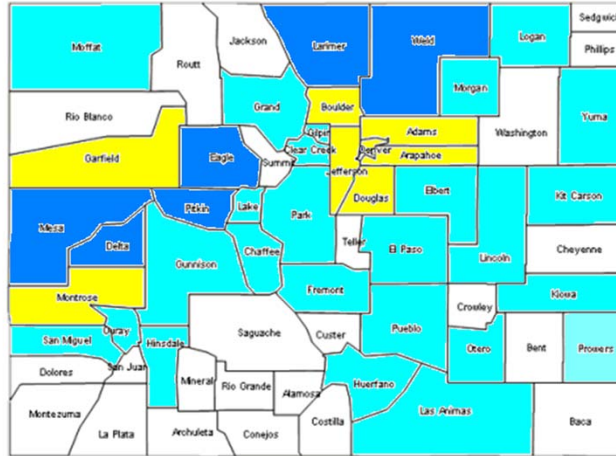


Can evidence-based programs be  
scaled across a population?

...with some evidence of fidelity?

...and/or impact?

## Trauma Focused – Cognitive Behavioral Therapy (TF-CBT) in Colorado



**439  
clinicians  
trained**

≤5 Trained Clinician

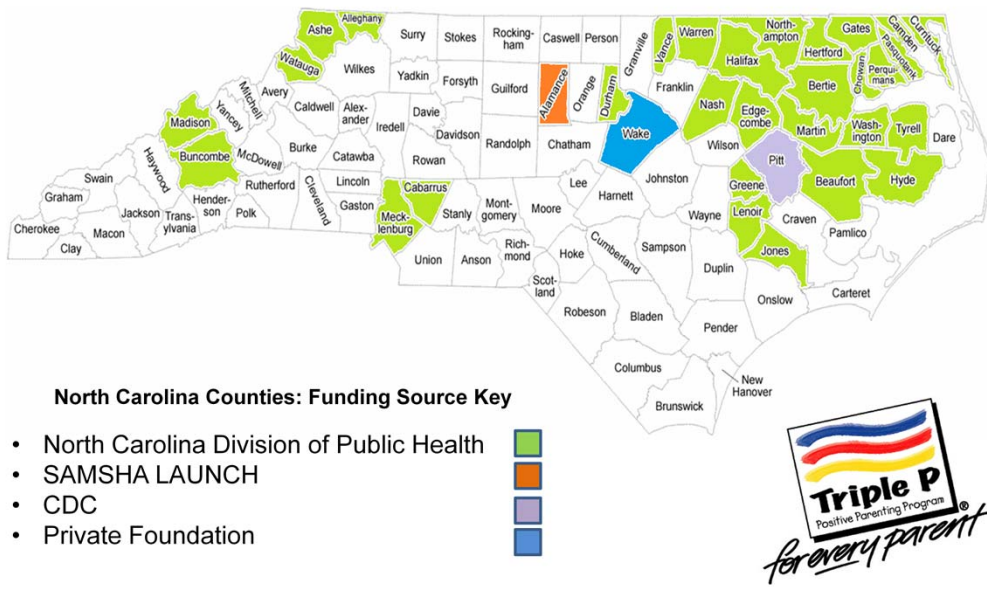
6-15 Clinicians

16+ clinicians

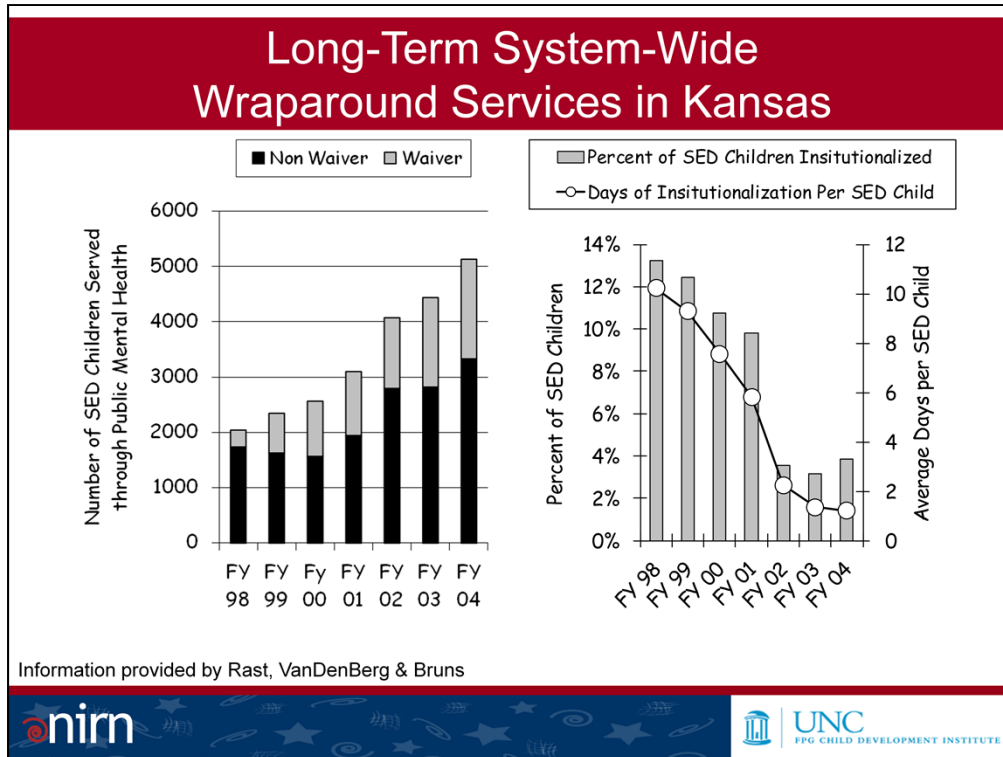
Kempe Center EBTI

Kempe Center EBTI

## Triple P – Positive Parenting Program in North Carolina

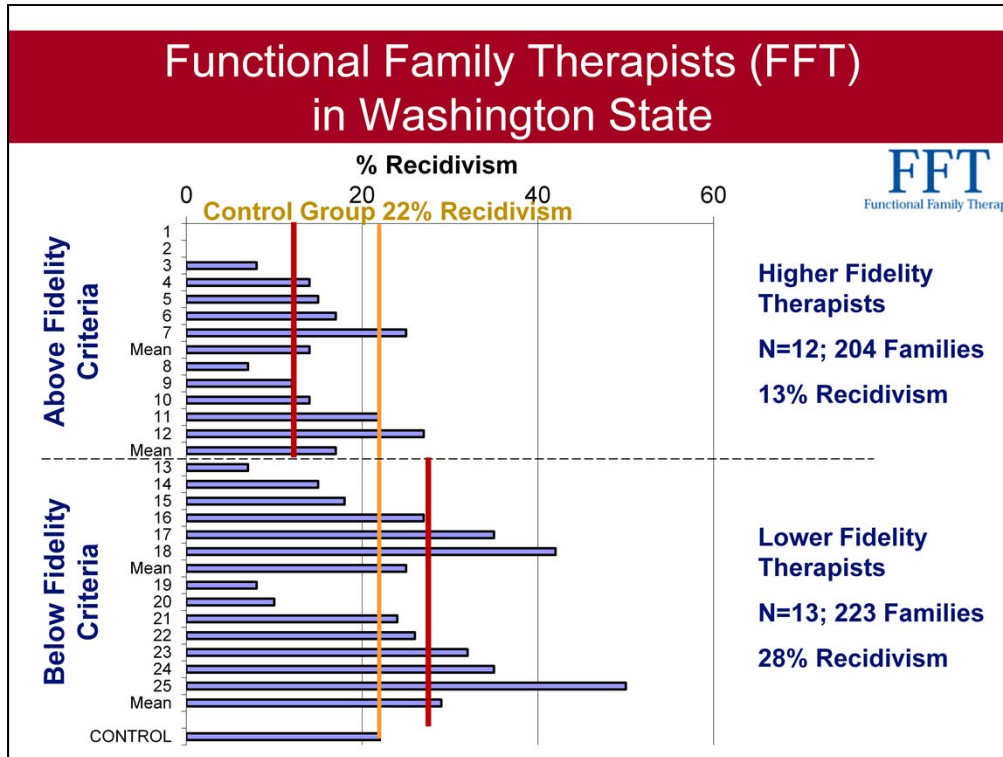


From Triple P America (January, 2014)



**Impacts of Long Term and System Wide Implementation of Wraparound.** These data are from the evaluation of the statewide Kansas wraparound initiative that was partially implemented through a 1915-C Home and Community Based Medicaid waiver.

In 1994 Kansas implemented wraparound services coordination through two federally funded pilot projects in urban (Wichita) and rural (13 Southeast) counties. Following the success of these programs Kansas funded statewide implementation in a stepwise fashion beginning in FY 1998 with full implementation in FY 01. Through this process Kansas was able to reduce institutionalization costs by 67% (over \$4.3 million) and use this to leverage over \$10 million in new community-based services. The result was that many more children with SED were served and the rate of institutionalization and length of stays were significantly reduced resulting in positive outcomes in behavior, mental health symptoms and school performance.



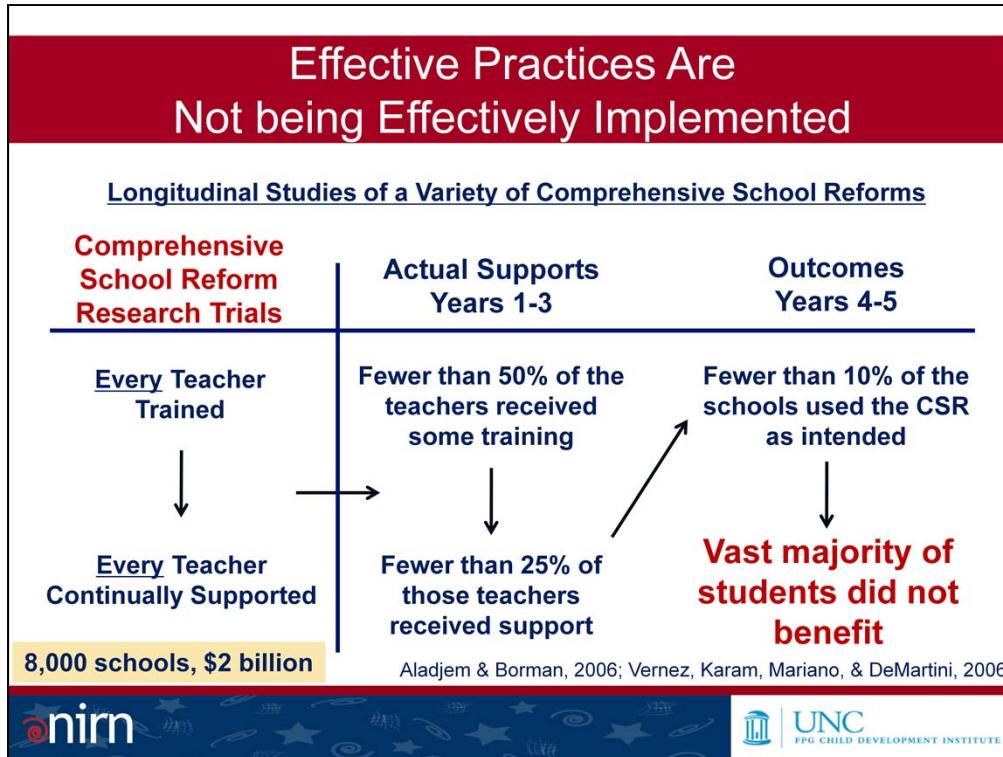
Washington State Institute for Public Policy. (2002). *Washington State's Implementation of Functional Family Therapy for Juvenile Offenders: Preliminary Findings* (No. 02-08-1201). Olympia, WA: Washington State Institute for Public Policy.

<http://www.wsipp.wa.gov/pub.asp?docid=02-08-1201>

“These results highlight the importance of having reliable and valid measures of therapist competence for the evaluation. More importantly, measuring FFT adherence is a critical operational tool to ensure that when the state pays for FFT actually gets FFT. This seems especially significant because the evidence portrayed on Figure 2 indicates that recidivism rates can actually be higher than regular court processing when FFT is delivered by therapists who are not competent. FFT Inc. is a leader in emphasizing the importance of model adherence, and this large scale implementation of the program indicates the value and need of a more sensitive system to measure program adherence.” (p 4)



What's the normal course for  
rolling out evidence-based  
programs at scale?



Aladjem, D. K., & Borman, K. M. (Eds.). (2006). *Examining comprehensive school reform*. Washington, DC: Urban Institute Press.

Vernez, G., Karam, R., Mariano, L. T., & DeMartini, C. (2006). Evaluating comprehensive school reform models at scale: Focus on implementation. Santa Monica, CA: RAND Corporation.

Four CSR models designed for grades K–8 are included in this study: Accelerated Schools (AS), Core Knowledge (CK), Direct Instruction (DI), and Success for All (SFA).

To date, the nation has more than 20 years of experience with CSR. More than 8,000 elementary and secondary schools (mostly low performing) have adopted a CSR model, and more than \$2 billion of federal funds have been used to implement CSR strategies. Nonetheless, the potential of this school reform to improve student achievement and meet the No Child Left Behind goal of 100 percent proficiency in reading and mathematics by the year 2014 is unknown.



**Traditional Methods of Implementation**

**Best Data Show These Methods, When Used Alone, Do Not Result in Use of Innovations as Intended**

- Diffusion/ Dissemination of information
- Training
- Passing laws/ mandates/ regulations
- Providing funding/ incentives
- Organization change/ reorganization

**5 to 15% intended outcomes  
NECESSARY BUT NOT SUFFICIENT**

Photo thanks to Bill Miller

**nirn** | **UNC**  
FPG CHILD DEVELOPMENT INSTITUTE

Nutt, P. (2002). *Why Decisions Fail: Avoiding the Blunders and Traps That Lead to Debacles*. San Francisco: Berrett-Koehler Publishers Inc.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, National Implementation Research Network. (FMHI Publication No. 231).

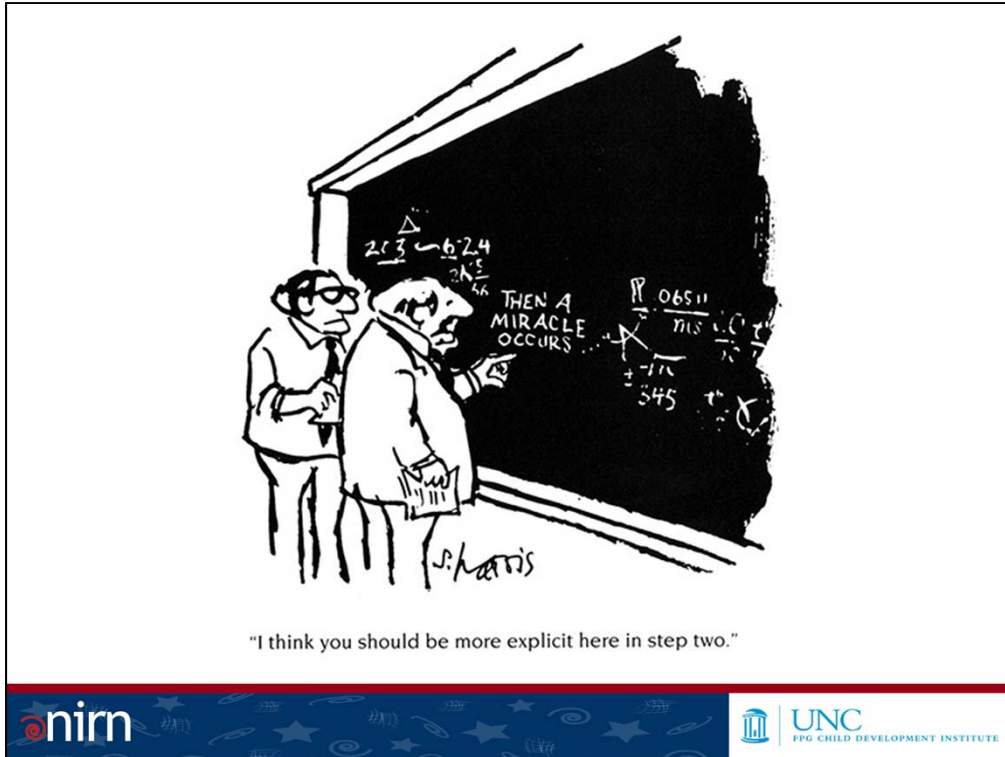
Green, L. W. (2008). Making research relevant: if it is an evidence-based practice, where's the practice-based evidence? *Family Practice*, 25, 20-24.

Wiltsey Stirman, S., Kimberly, J., Cook, N., Calloway, A., Castro, F., & Charns, M. (2012). The sustainability of new programs and innovations: a review of the empirical literature and recommendations for future research. *Implementation science : IS*, 7(1), 17-17. doi: 10.1186/1748-5908-7-17

From Bill Miller in NM (People cannot benefit from interventions they do not experience):

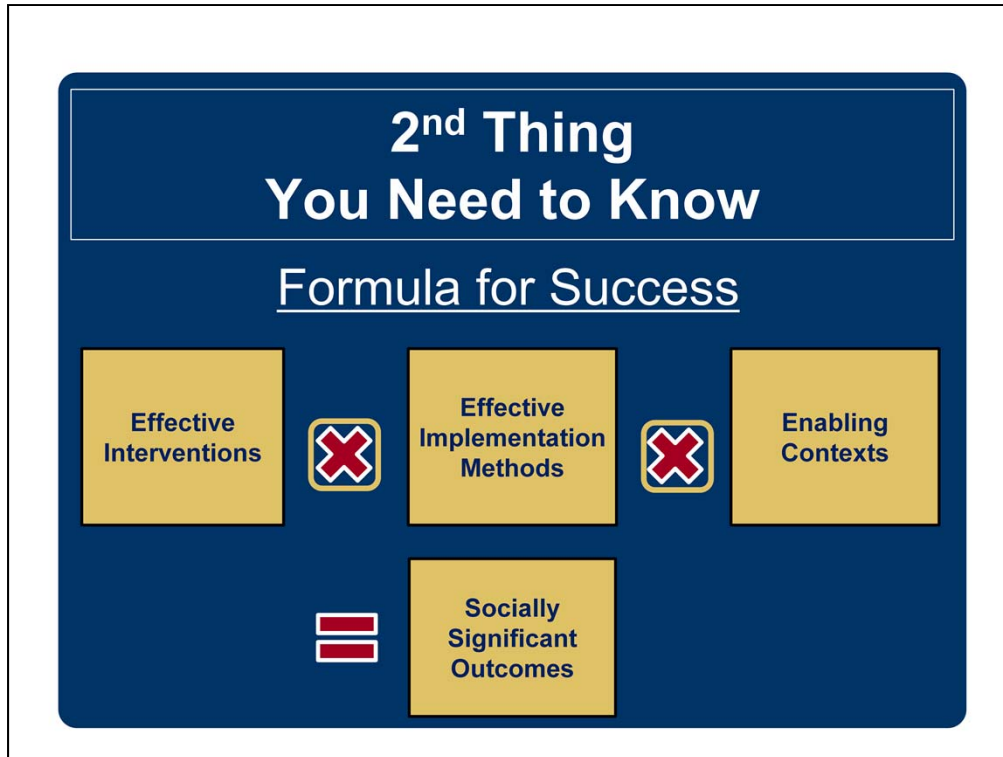
Virga is any form of precipitation that doesn't reach the ground. There could be rain virga or snow virga. But in either case, the precipitation evaporates somewhere on the journey from clouds toward earth. Virga is pretty common and you've probably seen it but didn't know it had a special name. Mostly in the summer, virga can be seen falling away in streaks from the bottom of one of those puffy gray and white cumulus clouds on a crisp afternoon. It looks like a torn drape or a curtain hanging from the cloud, but only down about halfway to the ground below. **Sometimes the air thousands of feet above the ground is moist enough to produce clouds and rain at the same time that the air closer to the ground is as dry as a bone.** So when rain falls in these conditions it evaporates on its freefall to earth.





"I think you should be more explicit here in step two."





Formula for Success: © 2012 Dean Fixsen and Karen Blase, National Implementation Research Network

Dobson, L., & Cook, T. (1980). Avoiding Type III error in program evaluation: results from a field experiment. *Evaluation and Program Planning*, 3, 269 - 276.

Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A metaanalytic overview. *Victims and Offenders*, 4, 124-147.

Lipsey, M. W., Chapman, G. L., & Landenberger, N. A. (2001). Cognitive-behavioral programs for offenders. *The ANNALS of the American Academy of Political and Social Science*, 578(1), 144-157.

## Applied Implementation Science: Active Implementation Frameworks



- ✓ Usable Interventions
- ✓ Implementation Drivers
- ✓ Improvement Cycles
- ✓ Implementation Teams
- ✓ Implementation Stages

Over the past decade, applied implementation science has identified core sets of effective implementation strategies to transform human service systems and ensure full and effective use of evidence-based prevention programs. At the National Implementation Research Network, we organize these strategies within the *Active Implementation Frameworks*

<http://implementation.fpg.unc.edu>

<http://www.all-about-forensic-science.com/dna-pictures.html>

## Policy Recommendation #2

Initiatives to use evidence-based prevention programs need to incorporate effective implementation methods based on applied implementation science

## Existing Service Systems

All organizations [and systems] are designed, intentionally or unwittingly, to achieve precisely the results they get.

R. Spencer Darling, Leadership Institute, Inc.

Systems trump programs.

Patrick McCarthy, Annie E. Casey Foundation

The tyranny of the status quo.

Fritz Oser

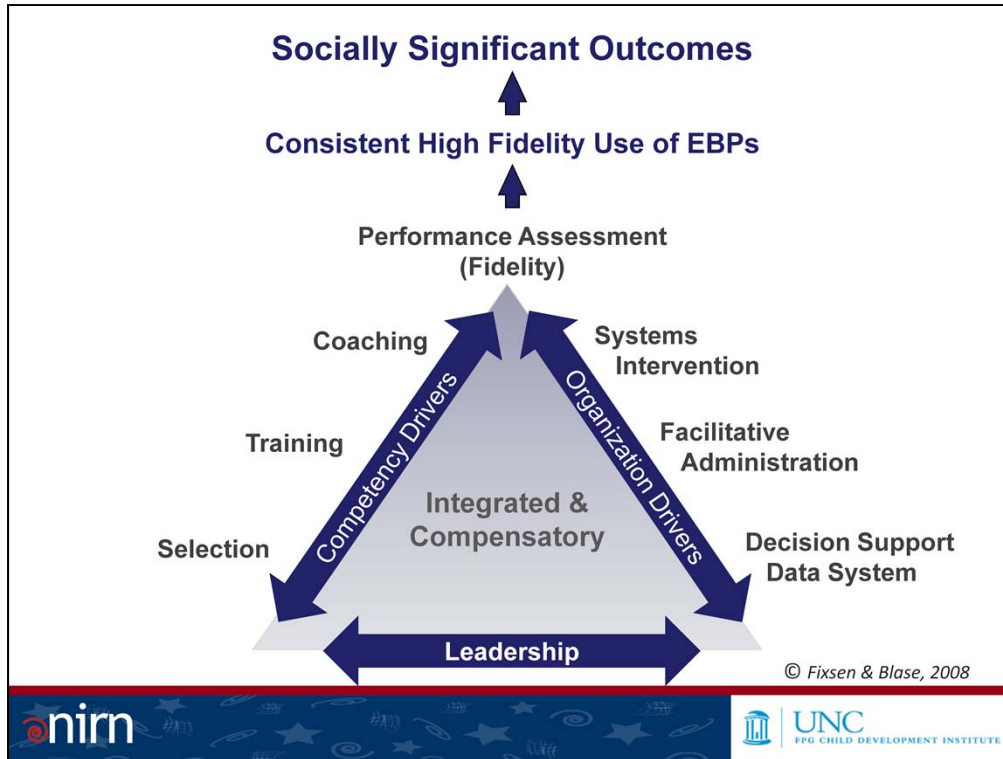


## 3<sup>rd</sup> Thing You Need to Know

Full and effective use of evidence-based prevention programs requires an active, supportive (and often transformed) organizational or systems environment.

*All organizations [and systems] are designed, intentionally or unwittingly, to achieve precisely the results they get.*

R. Spencer Darling



Creating implementation INFRASTRUCTURE and BEST PRACTICES

Fixsen, D., Blase, K., Metz, A., & Van Dyke, M. (2013). Statewide implementation of evidence-based programs. *Exceptional Children*, 79, 213-230.


Fixsen, D. L., Blase, K. A., Naoom, S. F., & Wallace, F. (2009). Core implementation components. *Research on Social Work Practice*, 19, 531-540.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, National Implementation Research Network. (FMHI Publication No. 231).

Metz, A., & Bartley, L. (2012). Active Implementation Frameworks for Program Success. *Zero to Three*, 32, 11-18.

Case Example: Metz et al.		Results from Child Wellbeing Project		
Imp. Component	Time 1	Time 2	Time 3	
Selection	1.44	2.00	1.89	
Training	1.33	1.50	1.10	
Coaching	1.27	1.73	1.83	
Perf. Assessment	0.78	1.34	2.00	
DSDS	0.18	1.36	2.00	
Fac. Administration	1.38	2.00	2.00	
Systems Intervention	1.29	1.86	2.00	
<b>Average Composite Score</b>	<b>1.1</b>	<b>1.68</b>	<b>1.83</b>	
<b>Fidelity (% of cases)</b>	<b>18%</b>	<b>83%</b>	<b>83%</b>	

Success Coach model involved intense program development of core intervention components and accompanying implementation drivers



**Hypothesis: Is a composite score >1.5 the magic number?**

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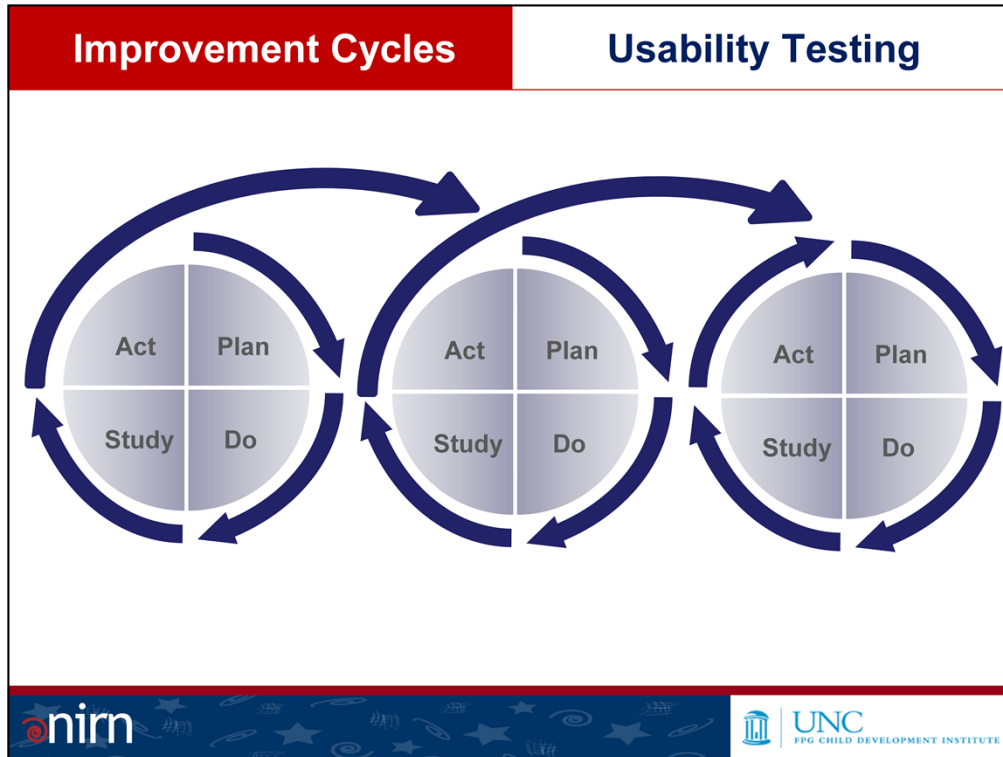
Different metrics used to measure fidelity.

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At T1, fidelity criteria were not firmly established. An early indicator of fidelity was whether family assessment data MATCHED goals in Success Plan (the creation of change-focused plans). The goodness of fit between assessments and goal planning were used to assess fidelity in T1.

The T2 and T3 fidelity score was derived from matching notes, (notes detailing what clinicians did with families in the field) with the interventions they checked in the database. Did they do the things they were supposed to do with families? This number is based on the SC service through May 2012.





### Creating organizations that can LEARN and IMPROVE using DATA

Deming, W. E. (1986). *Out of the crisis*. Cambridge, MA: MIT Press.

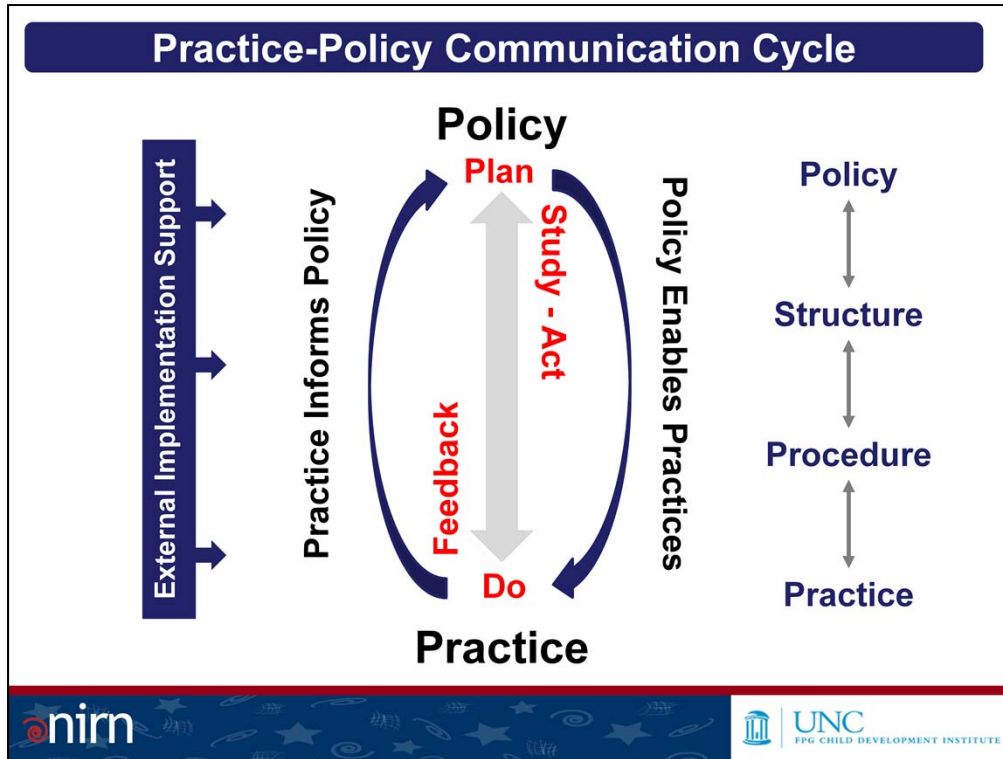
Shewhart, W. A. (1931). *Economic control of quality of manufactured product*. New York: D. Van Nostrand Co.

Shewhart, W. A. (1939). *Statistical method from the viewpoint of quality control*: Dover Publications.

Nielsen, J. (2000). Why you only need to test with 5 users. Retrieved April 22, 2007, from <http://www.useit.com/alertbox/20000319.html>.

Rubin, J. (1994). *Handbook of usability testing: How to plan, design, and conduct effective tests*. New York: John Wiley & Sons.

Fixsen, D., Blase, K., Metz, A., & Dyke, M. V. (in press). Statewide implementation of evidence-based programs. *Exceptional Children (Special Issue)*.



## Fidelity Predicts Outcomes, AND...

The lesson is, first do it as intended (if you can!)...then change it as needed

Fidelity First.

Achieve Intended Outcomes.

Improve after experience & with data.

1. Improve outcomes
2. Make the program more acceptable to the community (e.g., culturally and linguistically appropriate), while maintaining outcomes
3. Reduce burdens of implementation (e.g., cost, other resources), while maintaining outcomes



## Building Implementation Capacity: Implementation Teams



### Functions

- 1) Ensure Implementation
- 2) Engage the Community
- 3) Create Hospitable Environments
- 4) Use data for decision making

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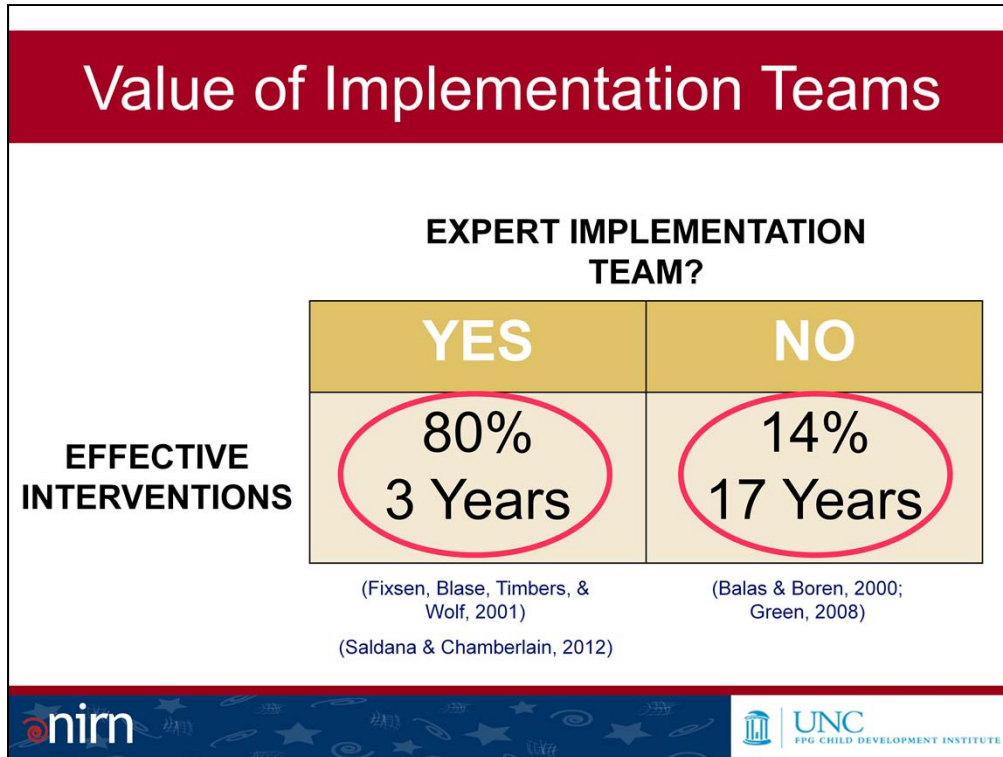
Champions, heroes, or transformative leaders, alone, are not enough to build and sustain the necessary system supports to ensure effective implementation. We need to create TEAMS that are accountable for INITIATING and SUSTAINING the work

Higgins, M., Weiner, J., & Young, L. (2012). Implementation teams: A new lever for organizational change. *Journal of Organizational Behavior*. Retrieved from [doi:10.1002/job.1773](https://doi.org/10.1002/job.1773)

Patras, J., & Klest, S. (in press). Group size and therapists' workplace ratings: Three is the magic number. *Journal of Social Work*. ISSN 1468-0173.

Saldana, L., & Chamberlain, P. (2012). Supporting implementation: The role of community development teams to build infrastructure. *American Journal of Community Psychology*. [doi: 10.1007/s10464-012-9503-0](https://doi.org/10.1007/s10464-012-9503-0)

Aarons, G. A., Green, A. E., Palinkas, L. A., Self-Brown, S., Whitaker, D. J., Lutzker, J. R., . . . Chaffin, M. J. (2012). Dynamic adaptation process to implement an evidence-based child maltreatment intervention. *Implementation Science*, 7. [doi: 10.1186/1748-5908-7-32](https://doi.org/10.1186/1748-5908-7-32)



**It takes an estimated average of 17 years for only 14% of new scientific discoveries to enter day-to-day clinical practice** (Balas & Boren, 2000)

Balas EA, Boren SA. *Yearbook of Medical Informatics: Managing Clinical Knowledge for Health Care Improvement*. Stuttgart, Germany: Schattauer Verlagsgesellschaft mbH; 2000.

Green, L. W. (2008). Making research relevant: if it is an evidence-based practice, where's the practice-based evidence? *Family Practice*, 25, 20-24.

**With the use of competent Implementation Teams, over 80% of the implementation sites were sustained for 6 years or more (up from 30%) and the time for them to achieve Certification was reduced to 3.6 years.**

Fixsen, D. L., Blase, K. A., Timbers, G. D., & Wolf, M. M. (2001). In search of program implementation: 792 replications of the Teaching-Family Model. In G. A. Bernfeld, D. P. Farrington & A. W. Leschied (Eds.), *Offender rehabilitation in practice: Implementing and evaluating effective programs* (pp. 149-166). London: Wiley.

Saldana, L., & Chamberlain, P. (2012). Supporting Implementation: The Role of Community Development Teams to Build Infrastructure. *American Journal of Community Psychology*, 50, 334-346.

## **Policy Recommendation #3**

Set aside 15% of funding for developing effective implementation infrastructure and teams, and embedding active implementation practices

## 4<sup>th</sup> Thing You Need to Know

**Full implementation of *usable* evidence-based-prevention programs takes, on average, 2-4 years.**

Full Implementation benchmark: 50% or more of intended service providers are delivering the program with fidelity.

**Scaling fully implemented programs takes additional time.**

Scaling-up benchmark: 60% of consumers who could benefit from a prevention program are experiencing that program in their service environment.

Bierman, K. L., Coie, J. D., Dodge, K. A., Greenberg, M. T., Lochman, J. E., McMahon, R. J., et al. (2002). The implementation of the Fast Track Program: An example of a large-scale prevention science efficacy trial. *Journal of Abnormal Child Psychology*, 30, 1-17.

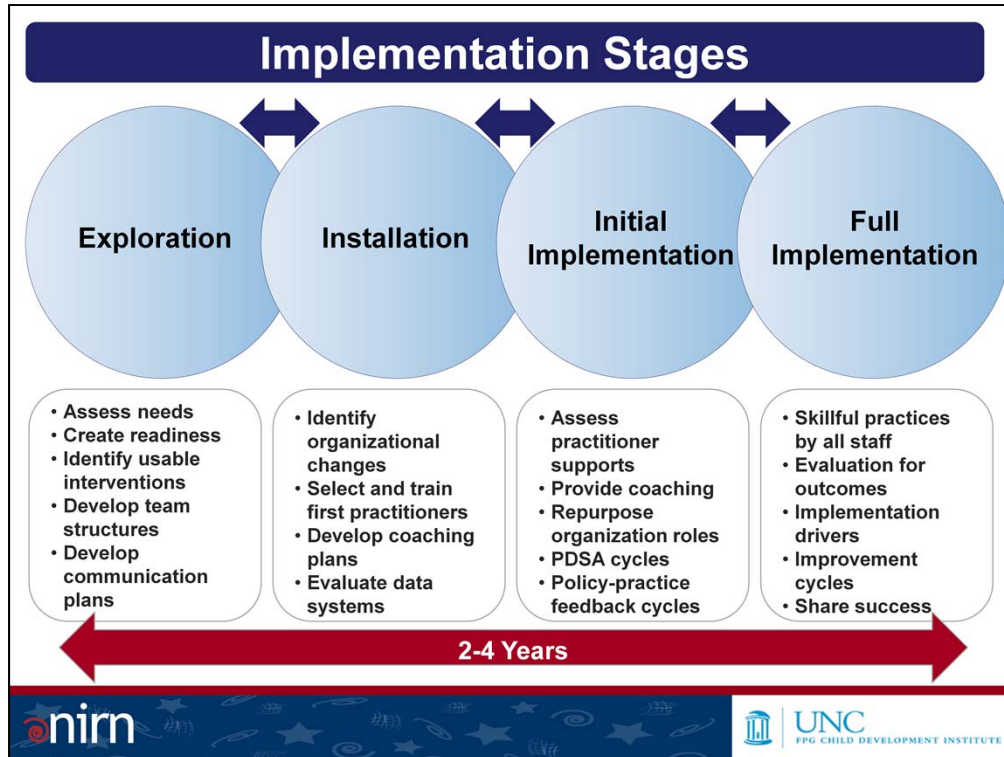
Fixsen, D. L., Blase, K. A., Timbers, G. D., & Wolf, M. M. (2001). In search of program implementation: 792 replications of the Teaching-Family Model. In G. A. Bernfeld, D. P. Farrington & A. W. Leschied (Eds.), *Offender rehabilitation in practice: Implementing and evaluating effective programs* (pp. 149-166). London: Wiley.

Panzano, P. C., & Roth, D. (2006). The decision to adopt evidence-based and other innovative mental health practices: Risky business? *Psychiatric Services*, 57, 1153-1161.

Prochaska, J. O., & DiClemente, C. C. (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: Theory, Research and Practice*, 19, 276-287.

Saldana, L., Chamberlain, P., Wang, W., & Brown, H. C. (2011). Predicting program start-up using the stages of implementation measure. *Administration and Policy in Mental Health*, 39, 419-425.





Because we don't appreciate the amount of time it takes, we keep throwing out effective programs before they have a chance to achieve outcomes.

Bierman, K. L., Coie, J. D., Dodge, K. A., Greenberg, M. T., Lochman, J. E., McMahon, R. J., et al. (2002). The implementation of the Fast Track Program: An example of a large-scale prevention science efficacy trial. *Journal of Abnormal Child Psychology*, 30, 1-17.

Fixsen, D. L., Blase, K. A., Timbers, G. D., & Wolf, M. M. (2001). In search of program implementation: 792 replications of the Teaching-Family Model. In G. A. Bernfeld, D. P. Farrington & A. W. Leschied (Eds.), *Offender rehabilitation in practice: Implementing and evaluating effective programs* (pp. 149-166). London: Wiley.

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Prochaska, J. O., & DiClemente, C. C. (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: Theory, Research and Practice*, 19, 276-287.

Saldana, L., Chamberlain, P., Wang, W., & Brown, H. C. (2011). Predicting program start-up using the stages of implementation measure. *Administration and Policy in Mental Health*, 39, 419-425.



## Policy Recommendation #4

Initiatives need to allow for stage-based implementation activities (e.g., a planning year) and incorporate realistic time frames to achieve full implementation and expected outcomes

# For More Information

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<http://nirn.fpg.unc.edu/>  
[www.scalingup.org](http://www.scalingup.org)



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- **Substance Abuse and Mental Health Services Administration (Implementation Strategies Grants; National Implementation Awards)**
- **Centers for Disease Control & Prevention (Implementation Research)**
- **National Institute of Mental Health (Research And Training Grants)**
- **Juvenile Justice and Delinquency Prevention (Program Development And Evaluation Grants)**
- **Office of Special Education Programs (Scaling up and Capacity Development Center)**
- **Administration for Children and Families (Child Welfare Leadership; Capacity Development Center)**
- **The Duke Endowment (Child Welfare Reform)**



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