Diffusion, Dissemination, and Implementation

Ontario KT Meeting 2012

Dean L. Fixsen, Karen A. Blase,

Leah Bartley, Michelle Duda,

Sandra Naoom, Allison Metz,

Barbara Sims, Melissa Van Dyke

National Implementation Research Network
Frank Porter Graham Child Development Institute
University of North Carolina at Chapel Hill

Today

Solving Problems

- Diffusion
- Dissemination
- Implementation
- System Reinvention

The Golden Age

During the Golden Age of research in human services, the field has been <u>dominated by the randomized, controlled experimental paradigm</u>

The Golden Age

A key lesson from the Golden Age is that the <u>effects of social programs in practice hover near zero</u>, a devastating discovery for social reformers

The Golden Age

A consequence of these findings is the recognition of the <u>importance of implementation</u> research in overall evaluations

The Golden Age

Rossi, P. H., & Wright, J. D. (1984). Evaluation Research: An Assessment. *Annual Review of Sociology, 10*, 331-352.

Summarized the Golden Age that began with Kennedy in 1962, flourished during Johnson's Great Society programs, and ended with Reagan in 1982

Teaching–Family Replications

Fixsen, Blase, Timbers, & Wolf (2001)
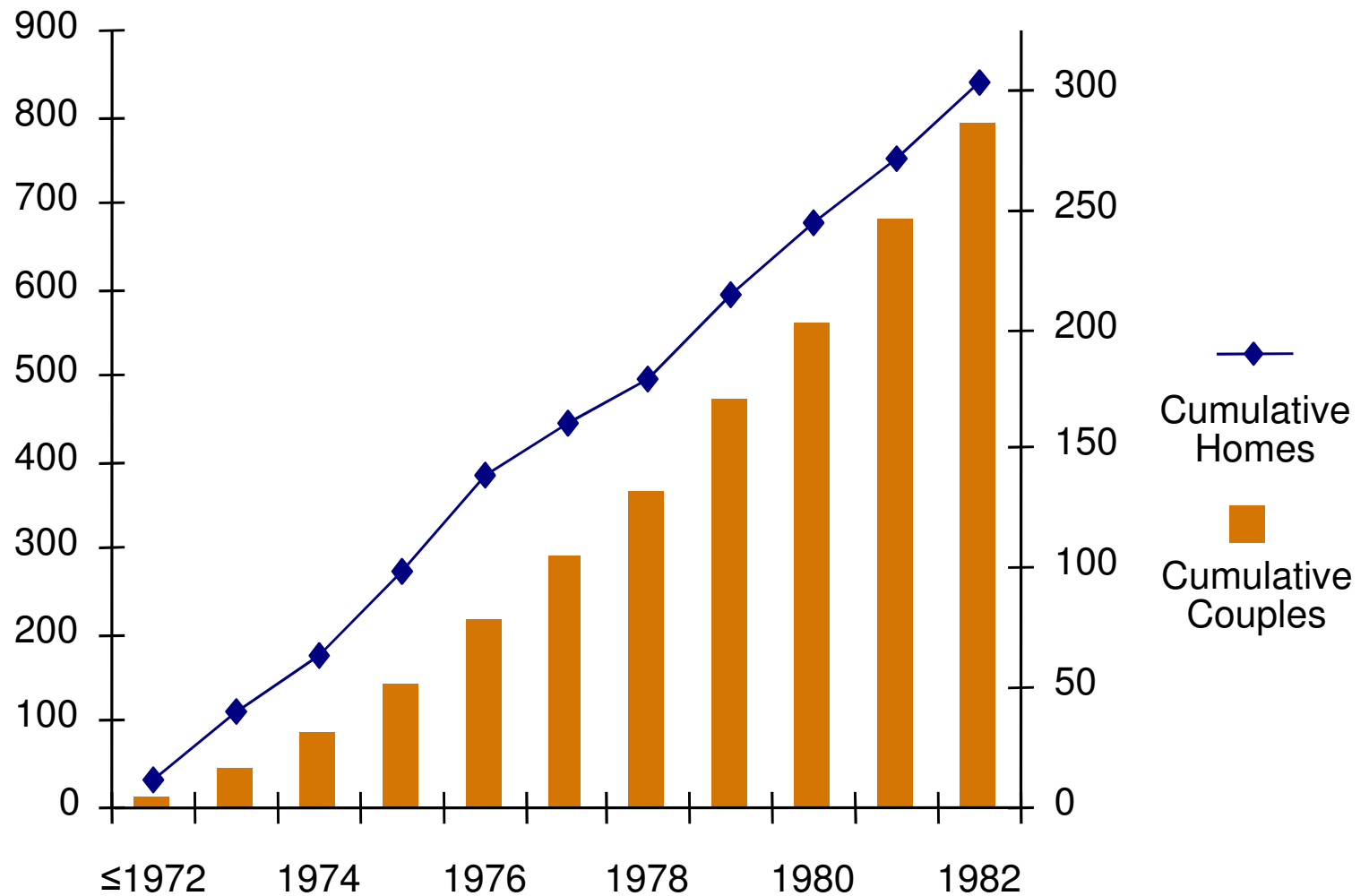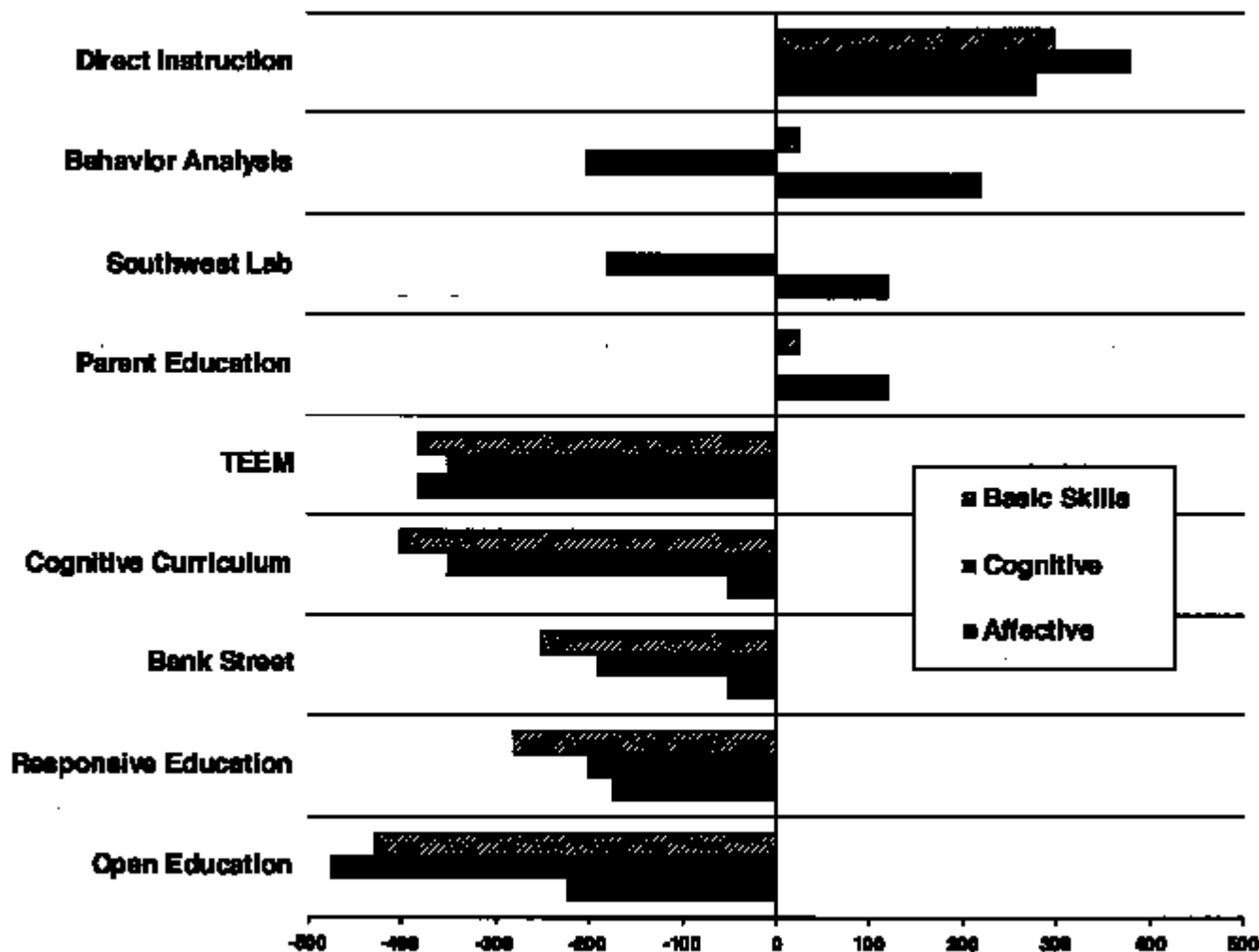
Follow Through Programs

Figure 1: *This figure shows the average effects of nine Follow Through models on measures of basic skills (word knowledge, spelling, language, and math computation), cognitive-conceptual skills (reading comprehension, math concepts, and math problem solving) and self-concept. This figure is adapted from Engelmann, S. and Carnine, D. (1982),* **Theory of Instruction: Principles and applications.** *New York: Irvington Press.*

The Golden Age

- **Community Lodges (Fairweather, Sanders, & Tornatzky)**

- **Assertive Community Treatment (Stein & Test)**

- **Homebuilders (Kinney, Haapala, & Booth)**

- **Functional Family Therapy (Alexander & Parsons)**

The *New* Golden Age

We have been here before!

The "evidence-based movement" is an <u>international experiment</u> to make better use of research findings in typical service settings.

<u>The purpose is to produce greater benefits to children, families, individuals, and society</u>.

Transtheoretical Stages of Change

- Precontemplation

- Contemplation

- Preparation

- Action

- Maintenance

Prochaska & DiClemente (1982)

Diffusion

- **Precontemplation**

    - **Mass media: awareness of problems and potential**

- **Contemplation**

    - **Networks: opinion leaders, persuasion, information sharing**

Prochaska & DiClemente (1982)

Dissemination

- **Preparation**

  - **Specificity: Presentations, workshops, manuals, websites, briefs, policies**

Prochaska & DiClemente (1982)

Implementation

- ### Action
  - #### *Active* Implementation Frameworks

- ### Maintenance
  - #### Start with the end in mind

Prochaska & DiClemente (1982)

The *New* Golden Age

🚩 **The evidence-based program movement**

👉 **Evidence-based**

👉 **Program**

👉 **Movement**

Evidence-based

- What defines "evidence"

- Two or more high quality research studies using randomized group designs (within subject designs)

- Preferably done by two or more independent research groups

- Preferably summarized in meta-analyses of findings across studies

The *New* Golden Age

- ☛ **The evidence-based program movement**
  - ☛ **Evidence-based**
  - ☛ **Program**
  - ☛ **Movement**

Programs

- What is a "program?"
- Clear <u>description</u> of the program
  - Philosophy, values, principles
  - Inclusion – exclusion criteria
- Identified <u>essential functions </u>that define the program & are linked to outcomes
- <u>Operational definitions </u>of essential components (do and say)
- <u>Evidence</u> that it is effective (worth it)
- Practical <u>performance assessment</u>
  - Highly correlated (0.70+) with outcomes

The *New* Golden Age

- About 18% of outcome studies (N=1,200+) assessed the independent variable

  - About 7% linked essential components to outcomes

Dane & Schneider, 1998; Durlak & DuPre, 2008

Programs

- **Know a lot about <u>Scientific Rigor</u>**

  - **<u>Standards for rigor *are not used*</u> by practitioners to impact the lives of people**

- **Know little about <u>Programs</u>**

  - **<u>Programs *are used*</u> by practitioners to impact the lives of people**

The *New* Golden Age

- The evidence-based program movement
  - Evidence-based
  - Program
  - Movement

Movement

- **Precontemplation**

- **Contemplation**

- **Preparation**

Diffusion and Dissemination are Effective

Google "evidence-based"

25,600,000 results (< 2 million 2001)

Prochaska & DiClemente (1982)

Movement

- **Prevention programs in 5,847 schools; 2004-2005 school year**

- **Avg. 9 innovations per school**

- **7.8% were evidence-based**

- **3.5% assessed fidelity**

US Department of Education, 2011

Movement

Longitudinal Studies of a Variety of Comprehensive School Reforms
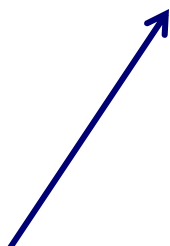
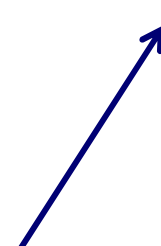| Evidence-base	Actual Supports Years 1-3	Outcomes Years 4-5
Every Teacher Trained	Fewer than 50% of the teachers received some training	Fewer than 10% of the schools used the CSR as intended
Every Teacher Continually Supported	Fewer than 25% of those teachers received support	**Vast majority of students did not benefit**

Aladjem & Borman, 2006; Vernez, Karam, Mariano, & DeMartini, 2006

The *New* Golden Age

- Few outcome studies (about 5%) measure fidelity
  - Fewer yet link fidelity to outcomes

Dane & Schneider, 1998; Durlak & DuPre, 2008

Fidelity and Outcomes

Bedlington, et al. (1988)
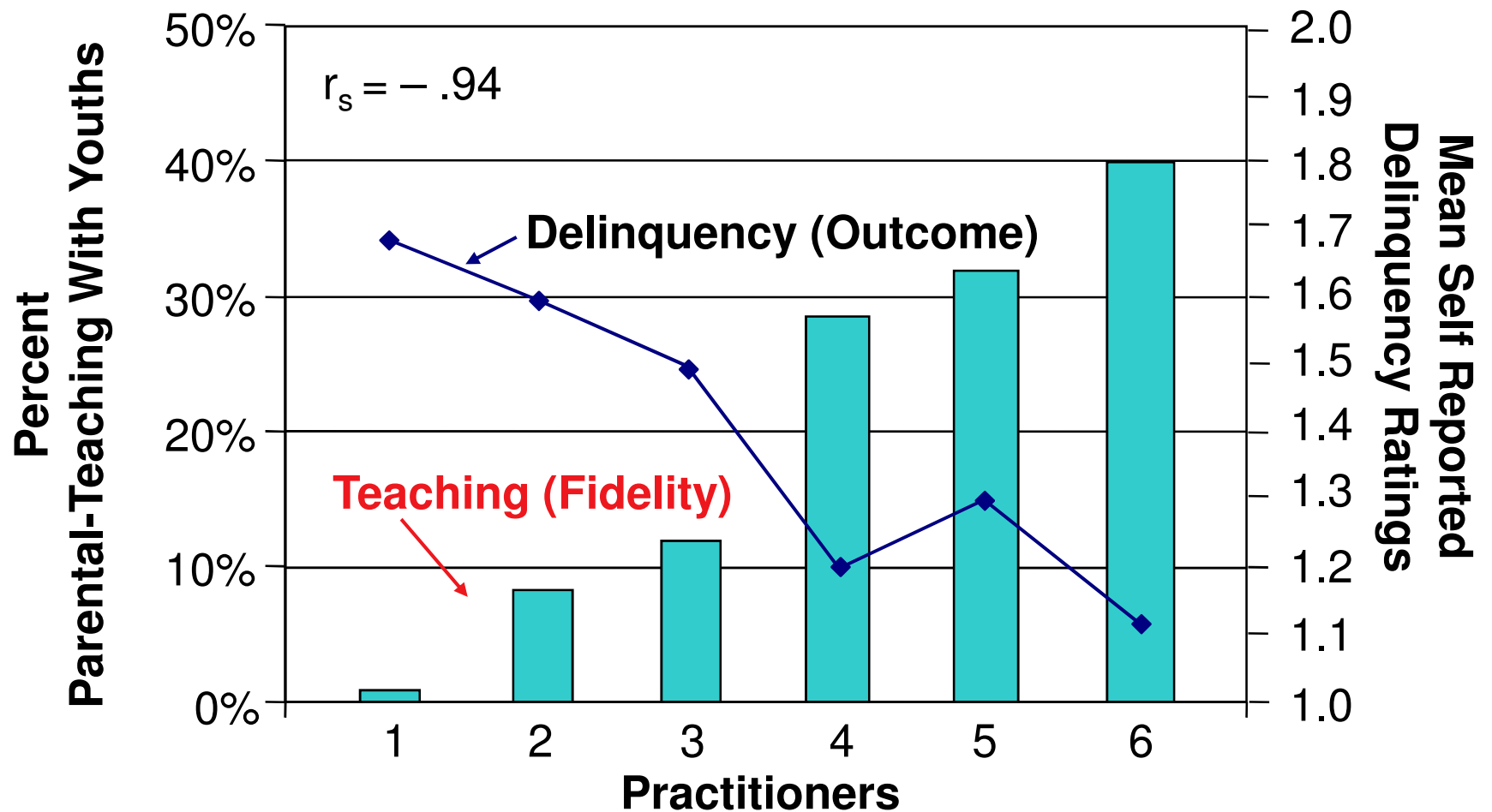
Fidelity and Outcomes
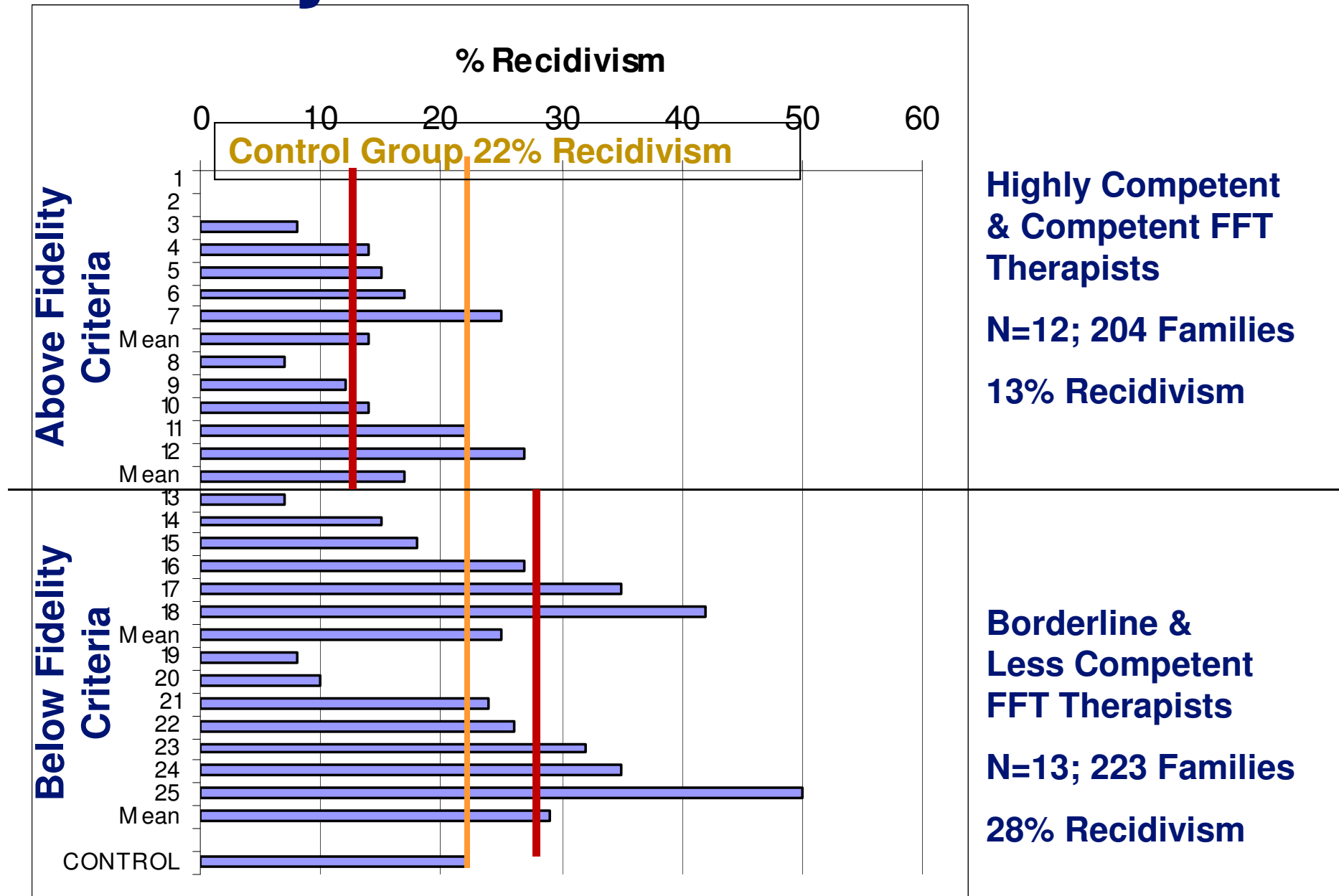
Fidelity and Outcomes

- **Physician error (low fidelity) is the third leading cause of death in the USA**
  - **Heart and Cancer are #1 and #2**

Mercola, 2001; Starfield, 2000

Fidelity and Outcomes

🚩📣 "**Total hysterectomy removes the uterus and cervix. A Pap test screens for cervical cancer. No cervix, no cancer. Yet a 2004 study found that some <u>10 million women lacking a cervix were still getting Pap tests</u>.**" (Begley, 2009, p. 49)

Past Federal Funding

$500 million invested in "Family Support Services" 1993-1998

- **No implementation supports funded**

- **No fidelity criteria insisted upon by the developers (e.g. Kinney, Haapala, Booth)**

- **National evaluation = not effective**

  - **Over 25% was spent on <u>in-office</u> interventions with parents or children (< 0 fidelity)**

  - **An <u>implementation failure</u> labeled Homebuilders as an intervention failure**

Current Federal Funding

- ▶ **$100 billion for innovative programs (USDE)**

- ▶ **$63 billion for maternal health programs (USAID)**

- ▶ **$4 billion for homevisiting programs (ACF)**

- ▶ **No funding set aside for implementation supports for these program initiatives**

Current Federal Funding

		IMPLEMENTATION	
		Effective	**NOT Effective**
INTERVENTION	**Effective**	**Good Outcomes**	Inconsistent; Not Sustainable; Poor outcomes
	NOT Effective	Poor outcomes	Poor outcomes; Sometimes harmful

(Institute of Medicine, 2000; 2001; 2009; New Freedom Commission on Mental Health, 2003; National Commission on Excellence in Education,1983; Department of Health and Human Services, 1999)

The *New* Golden Age

The "evidence-based movement" is an international experiment to make better use of research findings in typical service settings.

The purpose is to produce greater benefits to children, families, individuals, and society.
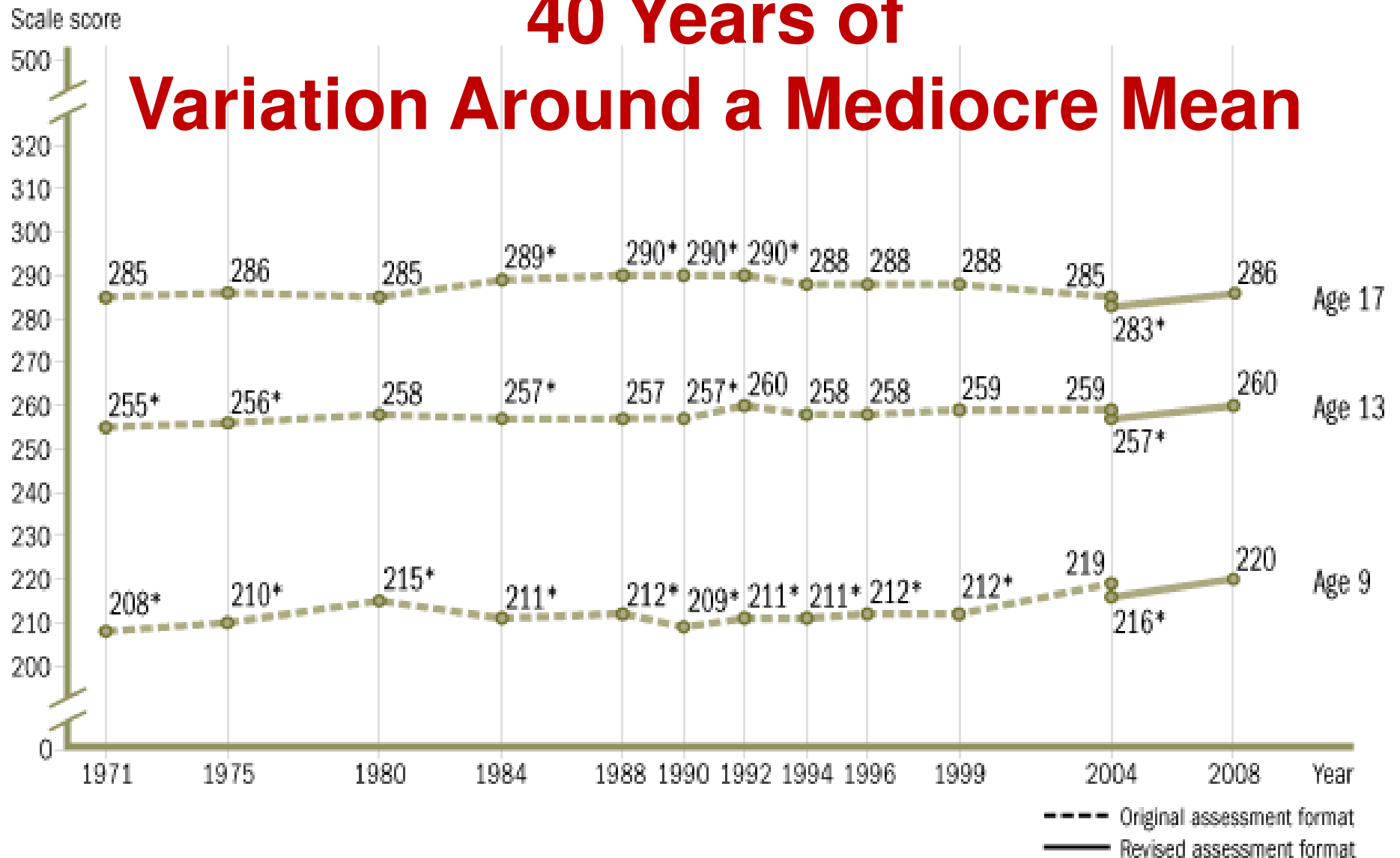
Implementation Science

Best Data Show These Methods, When Used Alone, <u>Produce About 5% to 20% of the Intended Benefits</u>

- Diffusion/ Dissemination of information

- Training

- Passing laws/ mandates/ regulations

- Providing funding/ incentives

- Organization change/ reorganization

National Assessment of Education Progress (NAEP)

40 Years of Variation Around a Mediocre Mean

The Challenge

Science to Service Gap

What is known is <u>not</u> what is used to help children, families, individuals, and communities

Implementation Gap

What is adopted is not used with <u>fidelity</u> and good outcomes for consumers.

What is used with fidelity is not <u>sustained</u> for a useful period of time.

What is used with fidelity is not used on a <u>scale</u> sufficient to impact social problems.

Implementation Science

Implementation Research:
A Synthesis of the Literature

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, The National Implementation Research Network (FMHI Publication #231).

Download all or part of the monograph at:

http://www.fpg.unc.edu/~nirn/resources/publications/Monograph/

Complex Problems

- **Human services involve interaction-based sciences and services**

- **Inherently more complex than atom-based sciences**

- **e.g., atom-based ingredients don't talk back or run away**

Practitioners

- In human services, the **PRACTITIONER** *IS* THE INTERVENTION

- **Everyone / everything else** needs to be aligned to provide effective supports so *all practitioners* can produce desired outcomes for *all recipients of services*

Formula for Success

Effective **intervention** 1.00

X $\boxed{\text{X}}$

Effective **implementation** 0.00

=

Effective **outcomes** .000

Brown & Flynn, 2002
Clancy, 2006

Implementation Science

- An <u>intervention</u> is one thing

- <u>Implementation</u> is something else altogether

- Like <u>serum and a syringe</u>
  - Very different evidence bases
  - Each is necessary
  - Neither one is useful without the other

Review of Literature

Letting it happen

> **Recipients are accountable**

Helping it happen

> **Recipients are accountable**

Making it happen

> **Implementation Teams are accountable**

Based on Hall & Hord (1987); Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou (2004); Fixsen, Blase, Duda, Naoom, & Van Dyke (2010)

ACTIVE Implementation

- Implementation Teams
- Implementation Drivers
- Implementation Stages
- Improvement Cycles

Implementation Team

📢 **Minimum of three people** (four or five preferred) with the <u>expertise</u> to promote effective, efficient, and sustainable implementation, organization change, and system transformation work

📢 **Tolerate turnover; <u>teams are sustainable</u> even when the players come and go** (Higgins, Weiner, & Young, 2012; Patras & Klest, 2012)
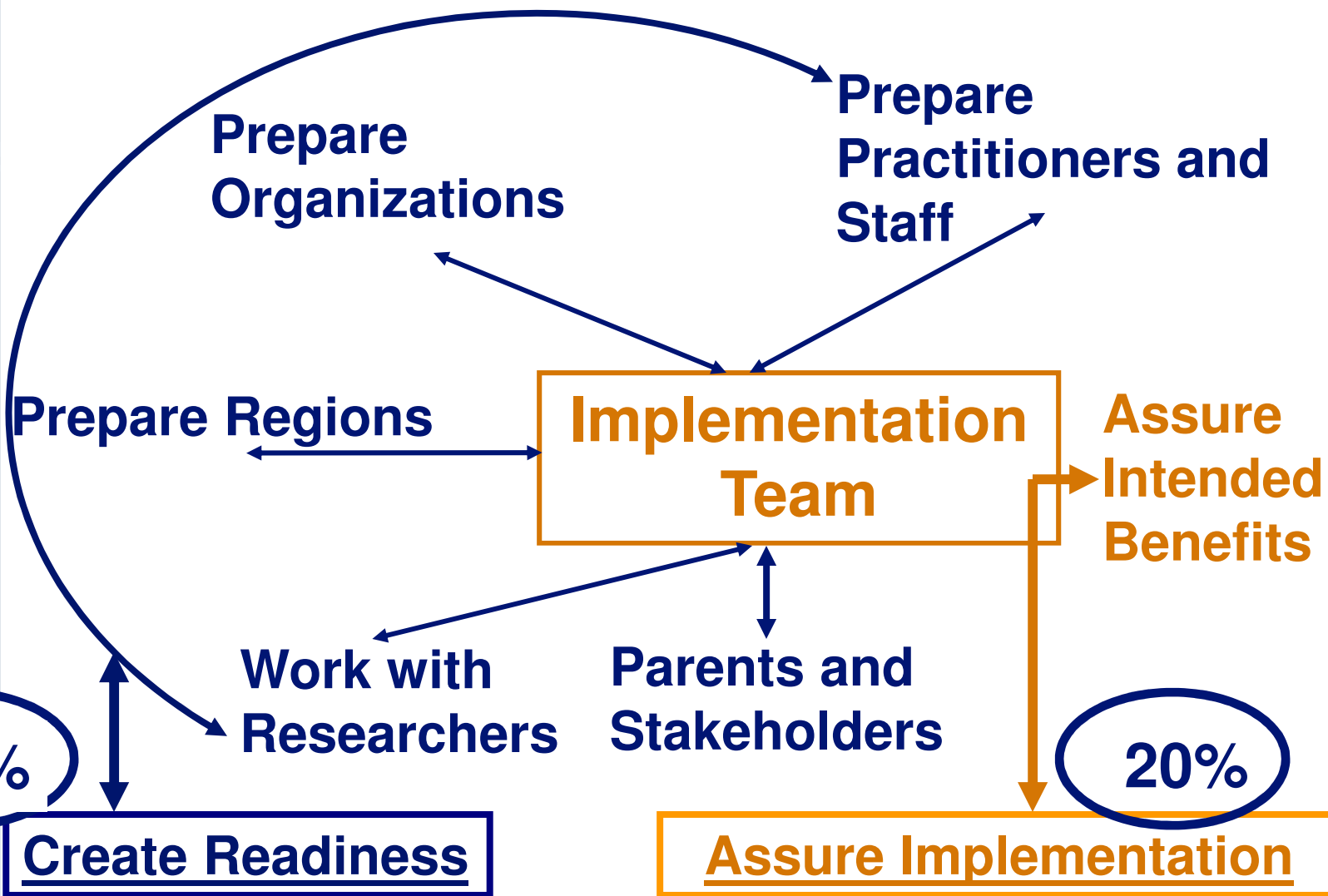
Implementation Team

Simultaneous, Multi-Level Interventions

Implementation Team

⟷ **Practitioner/Staff Competence**

⟷ **Organization Supports**

⟷ **Management (leadership, policy)**

⟷ **Administration (HR, structure)**

⟷ **Supervision (nature, content)**

⟷ **Regional Authority Supports**

⟷ **Provincial Supports**

⟷ **Federal Government Supports**

Implementation Team

© Fixsen & Blase, 2009
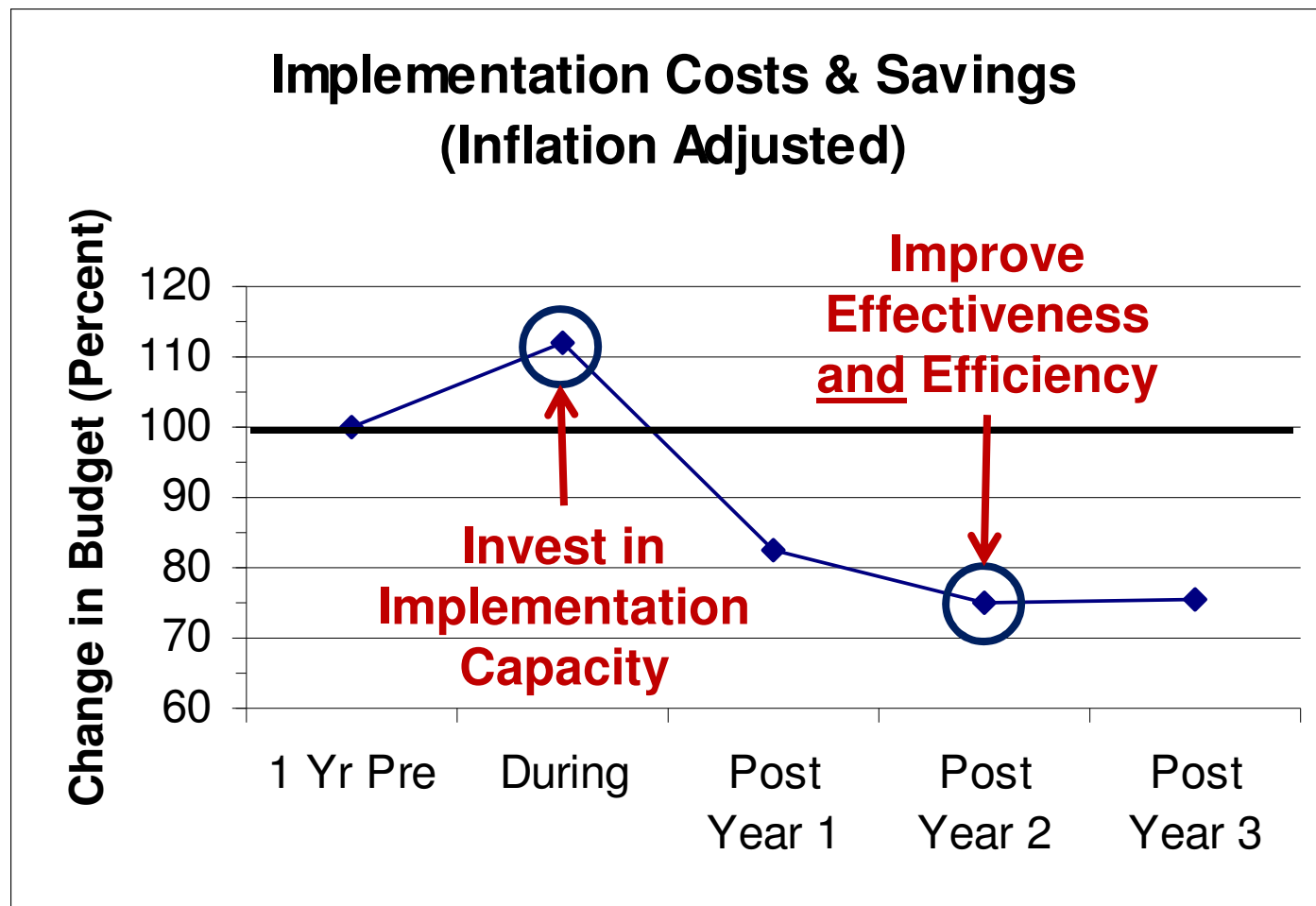
Implementation Team

IMPLEMENTATION

	Impl. Team	NO Impl. Team
Effective	**80%, 3 Yrs**	**14%, 17 Yrs**
INTERVENTION	**Effective use of Implementation Science & Practice**	**Letting it Happen Helping it Happen**

Fixsen, Blase, Timbers, & Wolf, 2001

Balas & Boren, 2000

Substantial Return on Investment

Costs and Savings

Implementation Costs & Savings (Inflation Adjusted)

Chart: Change in Budget (Percent) vs. time period

- 1 Yr Pre: 100
- During: 112 — *Invest in Implementation Capacity*
- Post Year 1: 82
- Post Year 2: 75 — *Improve Effectiveness and Efficiency*
- Post Year 3: 75

ACTIVE Implementation

Implementation Drivers

- Common features of successful supports to help make full and effective uses of a wide variety of innovations
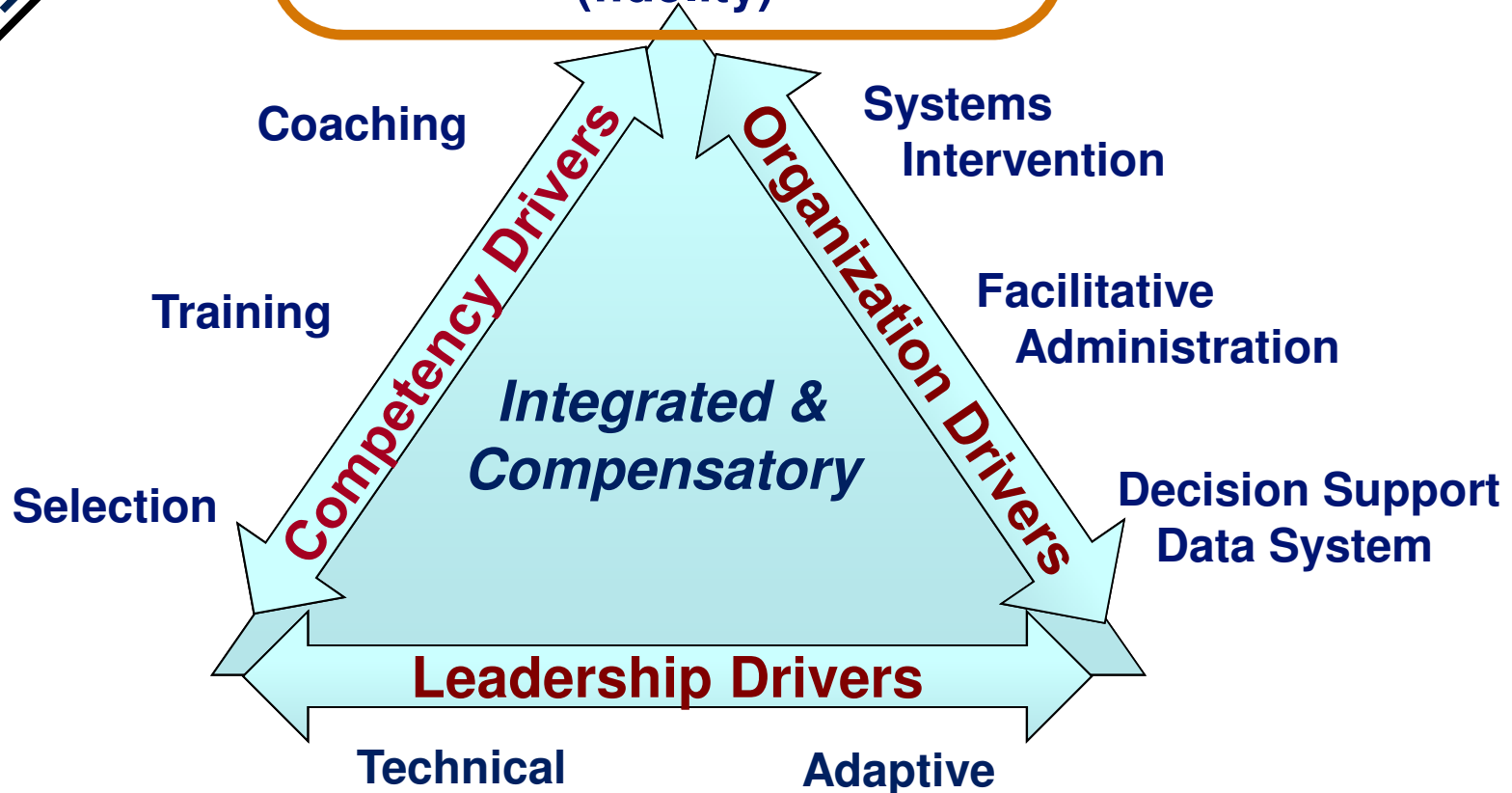
Implementation Drivers

Reliable Benefits
Consistent Uses of Innovations

Interventions meet Implementation

Performance Assessment (fidelity)

Coaching

Systems Intervention

Training

Facilitative Administration

Competency Drivers

Organization Drivers

Integrated & Compensatory

Selection

Decision Support Data System

Leadership Drivers

Technical

Adaptive

© *Fixsen & Blase, 2008*

ACTIVE Implementation

Implementation occurs in stages:

- Exploration
- Installation
- Initial Implementation
- Full Implementation

- Precontemplation
- Contemplation
- Preparation
- Action
- Maintenance

Fixsen, Naoom, Blase, Friedman, & Wallace, 2005

System Supports

- **Innovative practices do not fare well in existing organizational structures and systems**

- **Organizational and system changes are essential to successful use of innovations**

  - **Expect it**

  - **Plan for it**
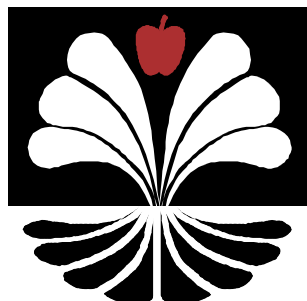
State Implementation & Scaling-up of Evidence-based Practices

Dean Fixsen and Karen Blase

University of North Carolina at Chapel Hill

Rob Horner and George Sugai

University of Oregon; University of Connecticut

Barbara Sims and Michelle Duda

University of North Carolina at Chapel Hill

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IDEAs that Work
U.S. Office of Special Education Programs

System Supports

- **<u>Supply side</u>: Effective programs go where they are most welcome**
  - **Let it happen; Help it happen**
  - **Islands of excellence**

- **<u>Demand side</u>: Effective programs go where they are most needed**
  - **Make it happen; whole populations**
  - **A sea of change**
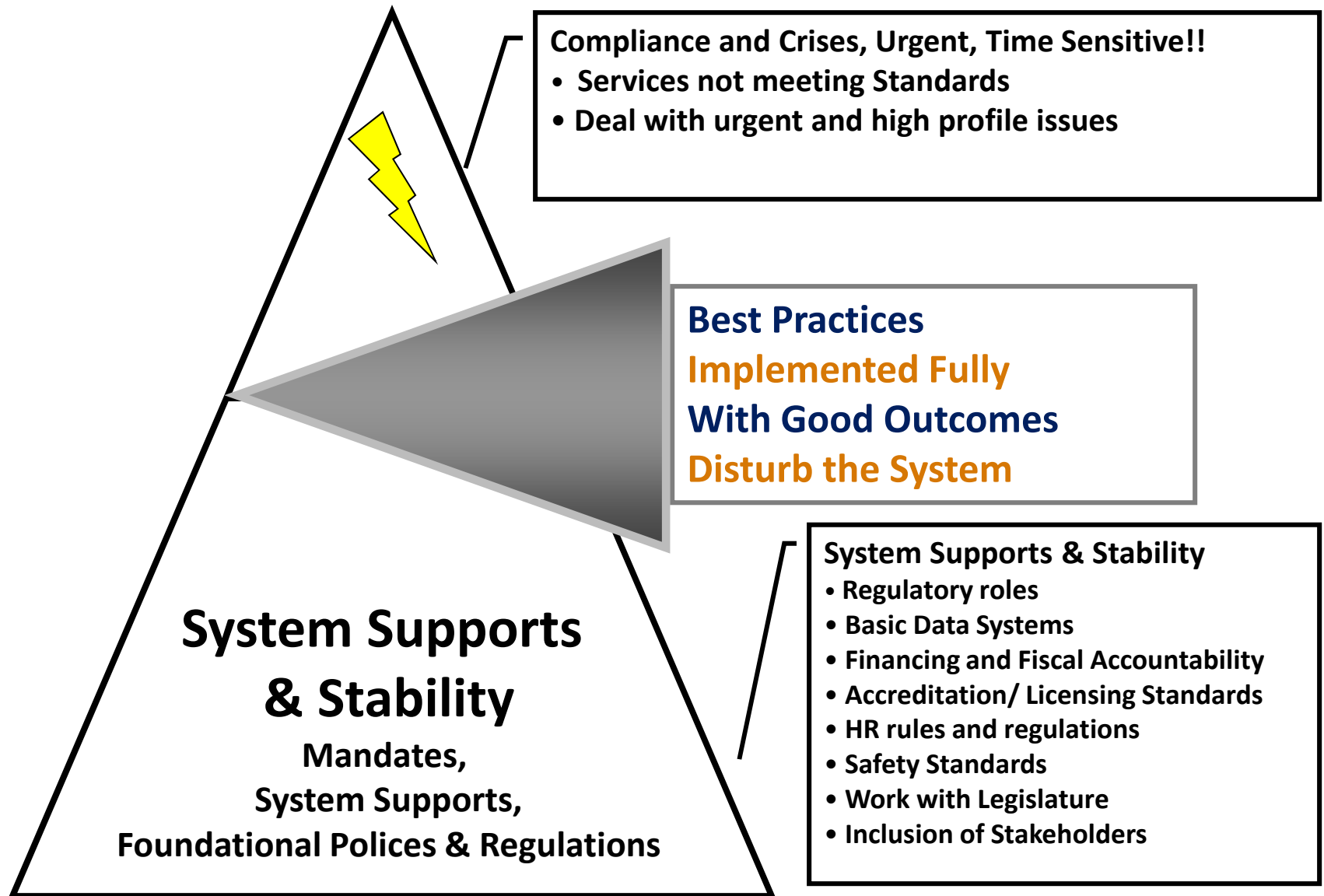
System Supports

Existing System

↓

Effective Innovations Are Changed to Fit The System

Existing System Is Changed To Support The Effectiveness Of The Innovation

↑

Effective Innovation

Compliance and Crises, Urgent, Time Sensitive!!
- Services not meeting Standards
- Deal with urgent and high profile issues

Best Practices
Implemented Fully
With Good Outcomes
Disturb the System

System Supports & Stability
- **Regulatory roles**
- **Basic Data Systems**
- **Financing and Fiscal Accountability**
- **Accreditation/ Licensing Standards**
- **HR rules and regulations**
- **Safety Standards**
- **Work with Legislature**
- **Inclusion of Stakeholders**

System Supports & Stability

**Mandates,
System Supports,
Foundational Polices & Regulations**

Leadership Responsibilities and Leverage Points

Thanks to Tom Bellamy

System Reinvention

Executive Management Team

"External" System Change Support

Policy Enabled Practice

System Change

Practice-Policy Communication Loop

Implementation Team

Practitioners
Innovations
Children, Families
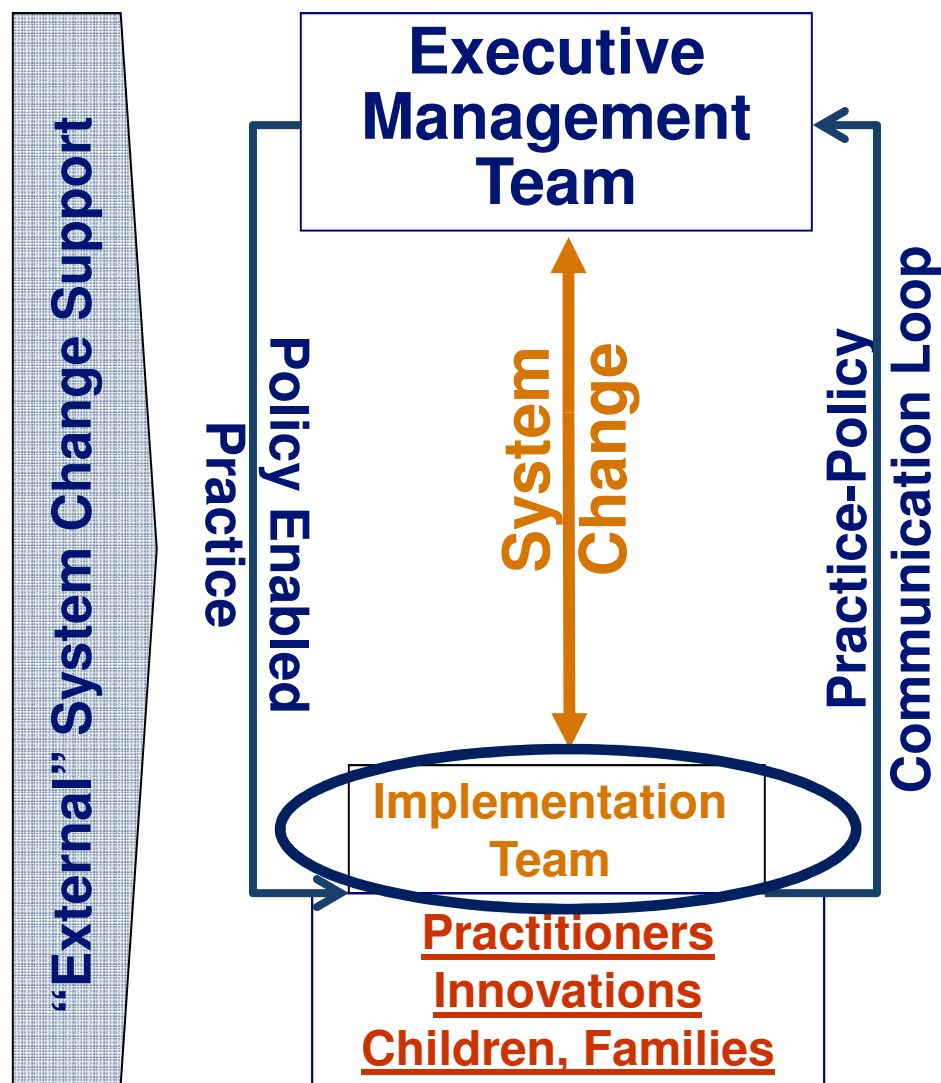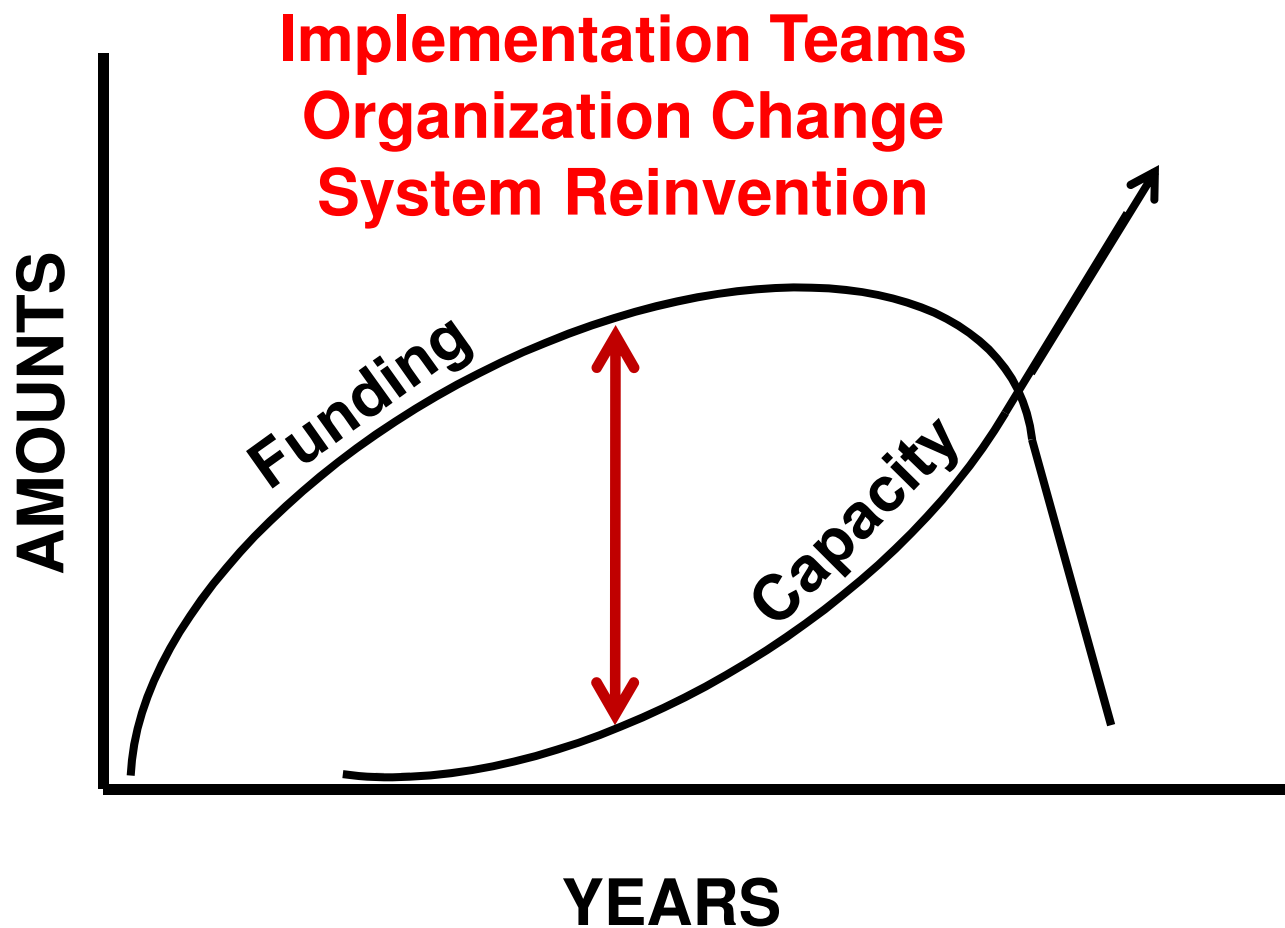
Adaptive Challenges
- Duplication
- Fragmentation
- Hiring criteria
- Salaries
- Credentialing
- Licensing
- Time/ scheduling
- Union contracts
- RFP methods
- Federal/ State laws

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Capacity Building

**Implementation Teams
Organization Change
System Reinvention**

AMOUNTS

Funding

Capacity

YEARS

Challenges

📣 **Children, families, and individuals cannot benefit from services they do not experience**

📣 **For the EBP Movement to be successful, we must actively implement evidence-based programs with fidelity and sustain/ improve their benefits on a socially significant scale**

GiC

Global Implementation Conference

The Science and Practice of Using Science in Practice

2013

www.implementationconference.org

For More Information

Karen A. Blase, Ph.D.

- 919-966-9050
- karen.blase@unc.edu

Dean L. Fixsen, Ph.D.

- 919-966-3892
- dean.fixsen@unc.edu

nirn National Implementation Research Network

Frank Porter Graham Child Development Institute

University of North Carolina

Chapel Hill, NC

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HTTP://NIRN.FPG.UNC.EDU

Thank You for your Support

- Annie E. Casey Foundation (EBPs and cultural competence)

- William T. Grant Foundation (implementation literature review)

- 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 Capacity Development Center)

- Administration for Children and Families (Child Welfare Leadership; Capacity Development)

- Duke Endowment (Child Welfare Reform)