Practical Use of Implementation Science to Meet Your Community's Goals

SISEP | UNC Frank Porter Graham Child Development Institute | NIRN National Implementation Research Network

University of North Carolina at Chapel Hill

Frank Porter Graham Child Development Center

NIRN National Implementation Research Network

SISEP State Implementation and Scaling-up of Evidence-based Practices

Goals for Today

- Share **high leverage talking points** about implementation science
- Promote **thinking** about the **relationship** between implementation science and your work

Learning

The process of developing sufficient surface knowledge to then move to deeper understanding such that on can appropriately transfer this learning to new tasks and situations.

Hattie, 2009

- Provide information about **next steps** for additional readings or resources for **deeper learning**

What we ask of you

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Lets Answer these Questions Together…

- What strategies and practices are needed to ensure effective use of positive behavior supports?
- How do we ensure these strategies and practices are relevant and feasible for our different contexts (e.g., rural, urban, clinic, community) and fields (e.g., early childhood, K-12 education, adult education and services) in Minnesota?

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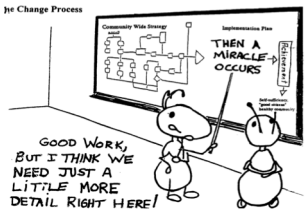
Implementation Science…



Implementation science refers to the "methods or techniques used to enhance the adoption, implementation, and sustainability" of an intervention (Powell et al., 2015)

Implement = Use

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Which program would YOU want?

A or B

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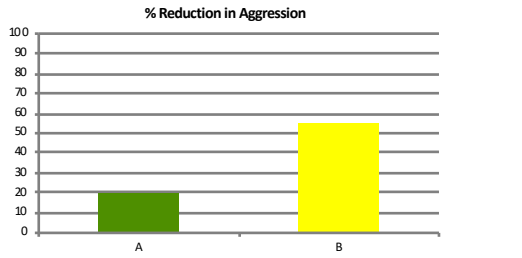
School Behavioral Health



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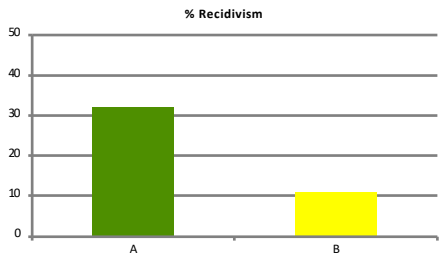
Delinquency Treatment: Residential



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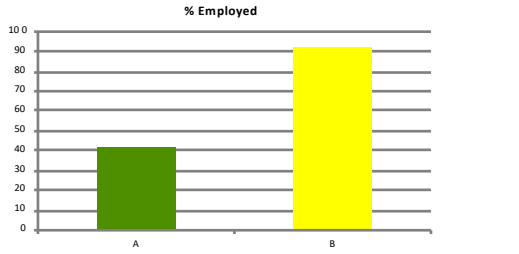
Adult MH Employment Program



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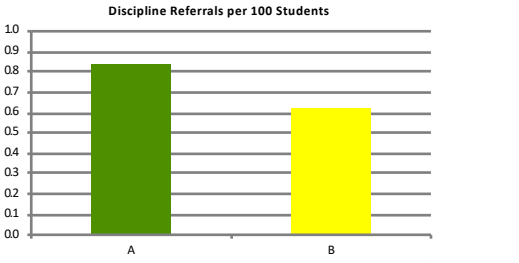
Behavior-Bullying School Program



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Choose a Program

In each chart

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

(EBPs = PATHS, TFM, SE, PBIS, DBT)

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

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

First do it as intended (if you can) then change it.

Fidelity **FIRST** → Achieve intended **outcomes** → Improve with **use** of data

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Fidelity: Definition & Purpose

"the degree to which teachers and other program providers implement programs as intended by the program developer (emphasis in original)"

(Dusenbury, Brannigan, Falco & Hansen, 2003 , p. 240)

Fidelity Data Help Us Understand Our Outcomes

Fidelity Data Help Us Improve and Sustain Outcomes

- Improve Individual Performance
- Improve Organizational Supports

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Activity: Reflect on Current Work..

Think-Pair-Share

With a partner, answer the following question:

1. What do you think it takes to achieve use of your practice/program as intended? (2 min)
2. Discuss as a whole group. (2 min)
3. Post top 3 common in chat box.

Fidelity…

The field recognizes the importance of fidelity but fidelity is integrated inconsistently in studies and usual care.

Seay, et al. 2015

What does it take to achieve the use of practice as intended and its intended outcomes?

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Active Implementation

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Effective Practices

- What works, for whom, why, and in what circumstances?
- Who are we supporting to use the practice?

Contextual fit is the match between the strategies, procedures, or elements of a practice/program and the values, needs, skills and resources of those who implement and experience the practice/program.
(Horner, Blitz & Ross, 2014)

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Active Implementation

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Effective Implementation

- What are the visible supports needed?
- How we do transition those supports?

Supports throughout the system and for multiple programs
- Competency
- Organizational
- Leadership

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Effective Implementation

- What are the visible supports needed?
- How we do transition those supports?

Common Implementation Dilemmas
- Program developer supports diminish
  (e.g., Coaching, fidelity assessments transition to local agency)
- Federal/State or Research/Evaluation Funding ends or is insufficient
  (e.g., Decision-support data systems are no longer funded)
- "Special" accommodations end
  (e.g., Planning periods end; integration of new services into overall service system takes place)

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Active Implementation

Effective Practices × Effective Implementation × Enabling Contexts = Improved Outcomes

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Enabling Context

VALUE: Implementation is a *collaborative* act

Collaboration leads to:

- Knowledge and evidence that is more implementable
- Infrastructure that brings research evidence and implementation closer together
- Attention to local needs and increased relevance and impact of implementation activity
- Enhanced capacity and capability of implementation

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Active Implementation

Effective Practices × Effective Implementation × Enabling Contexts = Improved Outcomes

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Activity: Reflect on Current Work..

Reflection Poll

- Reflect on current implementation work..
  - Are all three factors from formula present? Yes or No

Comment Box

- If no, what is missing?
- If yes, what is a key factor of success? (e.g. No, supportive leadership was missing)

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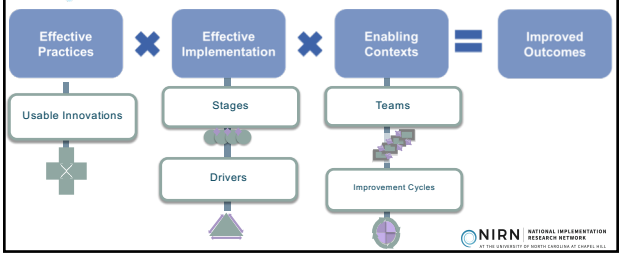
Change is great…

…you go first!

Active Implementation Frameworks



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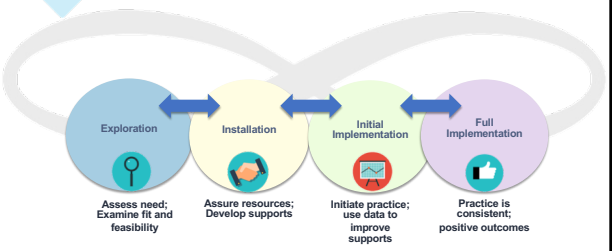
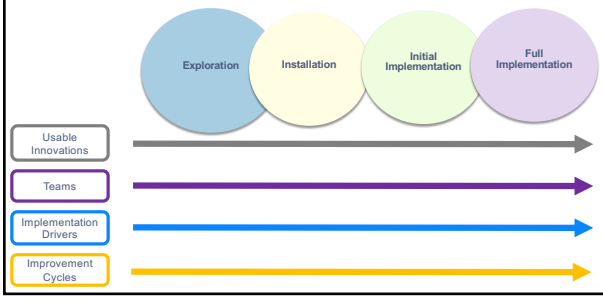
Implementation Stages



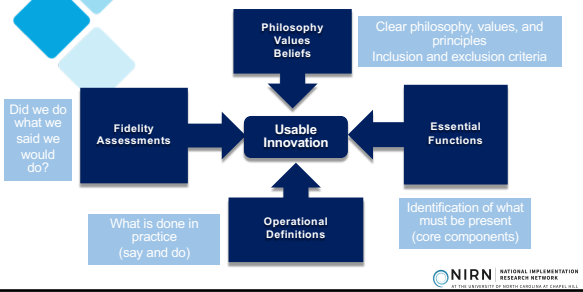
In each stage….



Exploration Case Example: Usable Innovation & Importance of Selection

PBIS & Responsive Classroom

Usable Innovation



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Selection Matters…..

School A (Urban – Southeast)

- Implementing PBIS for 10 years with fidelity
- Designated a "magnet" school in 2015
- Given funds $
- Principal and magnet transition team reviewed several new programs to choose from offered by county
- Chose new program with a different underlying philosophy than PBIS and sent select group of teachers to training

School B (Rural – Midwest)

- Implementing "PRIDE" for past 3 years
- District mutually selected to participate in state's MTSS program
- Principal along with teacher representation from school along with other district leaders reviewed data to determine:
  - Need
  - Fit
  - Evidence
  - Resources
  - Capacity
  - Usability
- PBIS selected as intervention

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Selection Matters….. One year later

School A (Urban – Southeast)

- Neither PBIS or new program used with fidelity
- Behavior and intervention referrals ↑
- Teachers unable to explain to parents how the programs work together or aligned
- Teachers asking for training in one or the other

School B (Rural – Midwest)

- Training Secured for School Teams & identified Coach for coach training
- Readiness activities engaged in with staff and community
- ↑ in District Capacity and Fidelity
- School leaders and teachers able to explain why and how PBIS

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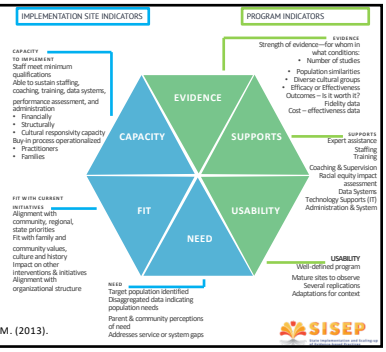
Practice Selection: Hexagon Tool

Developed for use in implementation informed assessments

Reviewed and edited by the Racial and Ethnic Equity and Inclusion Team (REEI)

For use by organizations and communities



Adapted from Blase, K., Kiser, L. and Van Dyke, M. (2013).

Activity:

Poll

- What factors do you see organizations consider when selecting programs/practices for adoption? (select all that apply)
  - Need
  - Fit
  - Local Capacity
  - Resources - Supports
  - Evidence
  - Usability

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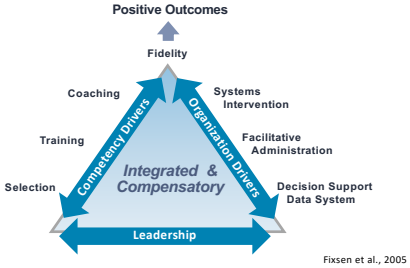
Installation Case Example: Primary Care Practices

Comprehensive Medication Management

Implementation Drivers



Fixsen et al., 2005

Context..

Problem..

- $310 Billion spent on medications each year in US
- $290 Billion avoidable medical costs due to misuse, underuse, overuse of medications
- Clinical Pharmacists trained in Comprehensive Medication Management not reimbursed for practice
- Target population: High risk geriatric populations

Barriers to Implementation of CMM..

- Limited understanding of the medication management intervention itself
- Limited targeting of patients most in need
- Wide variability and inconsistency in implementation across care settings
- Wide variability in outcomes
- Fidelity lacking in most studies
- Limited reimbursement to support such services in primary care

CMM in Primary Care Research Team

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More Context..

Primary Care Medical Practices :

- Minnesota (n=23)
- North Carolina (n=8)
- American Academy Family Physicians (n=9)
- 5 states
- Committed and engaged

CMM in Primary Care Research Team

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Designing an Infrastructure

Competency Drivers

- Selection of CMM Implementation Team differed by context
  - Single, Rural,
  - Network,
  - University Affiliated – Training Program
- Training of Teams:
  - Practice of CMM
  - Use of Rapid Plan-Do-Study- Act Cycles
- Coaching of Teams (N = 4 coaches):
  - Each site had access to virtual coach
- Fidelity Measure:
  - Developed a fidelity assessment:
    - Interviews
    - Self-Report,
    - Product Review, &
    - Patient Engagement Survey

Designing an Infrastructure

Organizational Drivers

- Decision Support Data System
  - Use of measurement strategies
  - Reporting results to improve and expand
  - Ensuring Consistent & Quality Care:
    - Quality Assurance Processes
    - Practitioner Training and Coaching
- Systems Intervention
  - Practice-Policy Feedback loop established
  - Stakeholder groups:
    - Payer-Payee Advisory Board
    - Steering Committee
  - Strategic Communication Plan
- Facilitative Administration
  - Care Team Engagement
    - Availability of support staff
    - Interprofessional collaboration
    - Presence and scope of CPAs
  - Leadership support
  - Availability and adequacy of clinic space
  - Fiscal resources to support service delivery
  - Rational methods to identifying patients in need of CMM
  - Effective systems for patient scheduling
  - Systems for efficient and effective care documentation

Outcomes of CMM use by Pharmacists in Primary Care Clinics:

Primary Care Physicians reported…

- Decreased workload
- Higher Satisfaction -patients are receiving better care
- Reassurance – partnership with professional providing support to patients,
- Greater confidence in treatment recommendations
- Decreased mental exhaustion,
- Enhanced professional learning,
- Increased provider access, and
- Achievement of clinic quality measures.

Funk, Pestka, McClurg, Carroll, & Sorenson (2018)

Analyses being run to determine..

- What effect does CMM have on:
  - quality of care?
  - health services utilization?
  - cost of care?
- What is the Return on Investment (ROI) for CMM?

Activity:

Quick Think-Pair-Share

- With a partner, answer the following question regarding your current work:
  - Which implementation driver(s) is/are a current strength? (1 min)
  - Which driver is/are an area of improvement? (1 min)
  - What is one step you can take to improve infrastructure? (1min)
- Share thoughts with a partner

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Initial - Full Implementation Case Example: Early Childhood

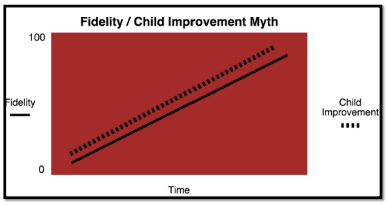
Pyramid Model for Supporting Social Emotional Competency

Continuous Quality Improvement (CQI)

Best Practices:

- Clear accountability for PDSA processes
- Support for those accountable for PDSA processes
- PDSA activities built into regular practice routines
- PDSA cycles used to support data-driven decision-making for the purpose of improvement
  - Outcomes
  - Implementation Supports

Adults Supported By Coaching To Fidelity



Strain, 2016

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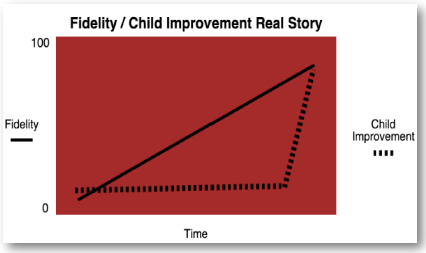
Fidelity / Child Improvement Real Story



Strain, 2016

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Context..

Implementation Site

- Large District in Southeast
- 14th Largest District in Country
- Preschool eligible thru Title 1 (need of academic support) and Special Education services (need of individualized education program)
- Supported by grant funding from Foundation last 5 years

Program:

- The Pyramid Model for Supporting Social Emotional Competence in Infants and Young Children
- Practice Based Coaching

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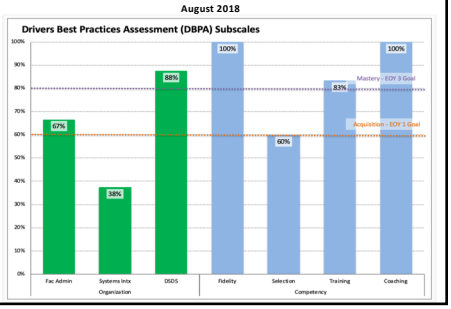
School Year	Pre-Coaching TPOT	Post-Coaching TPOT
2013-2014	Avg: 54% (30-77%) 21 of 30 Teachers with Red Flags (49 flags total)	Avg: 86% (57-96%) 27 Teachers at fidelity 2 Teachers with Red Flags (14 flags total)
2014-2015	Avg: 48% (30-73%) 20 of 25 Teachers with Red Flags (84 flags total)	Avg: 84% (70-92%) 17 Teachers at fidelity; 2 Teachers at fidelity from last cohort 2 Teachers with Red Flags (3 flags total)
2015-2016	Avg: 49% (33-68%) 15 of 19 Teachers with Red Flags (52 flags total)	Avg: 77% (60-95%) 10 Teachers at fidelity; 1 Teacher at fidelity from last cohort 6 Teachers with Red Flags (23 flags total)
2016-2017	Avg: 47% (31-67%) 12 of 13 Teachers with Red Flags (40 flags total)	Avg: 89% (82-95%) 10 Teachers at fidelity; 3 Teachers at fidelity from last cohort 1 Teachers with Red Flag (1 flag total)
2017-2018	Avg: 46% (32-54%) 10 of 11 Teachers with Red Flags (27 flags total)	Avg: 81% (62-91%) 6 Teachers at fidelity; 2 at fidelity from last cohort 2 Teachers with Red Flags (2 flags total)

Assessing Implementation Infrastructure

Where is support or strengthening needed?



Moving from Initial to Full Implementation…

Implementation Challenges…

- Teacher Turnover
- Additional funding to maintain support of the program
- Leadership support

Next Drivers Assessment May 2019!

Strengthening Implementation Supports:

- Formalizing their coaching system (Quick Win)
- Strengthening validity of outcome measure
- Formalizing feedback loop with executive leadership
- Alignment of program with schools' social-emotional programing
- Engaging stakeholders – Extension Team
- Tackling Teacher Selection for Coaching

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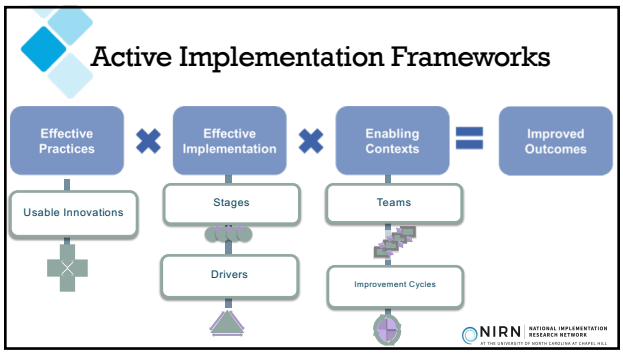
Active Implementation Frameworks
Effective Practices
Effective Implementation
Enabling Contexts
Improved Outcomes
Usable Innovations
Stages
Drivers
Teams
Improvement Cycles
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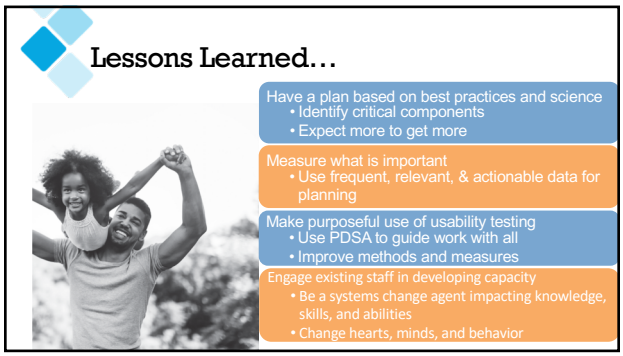
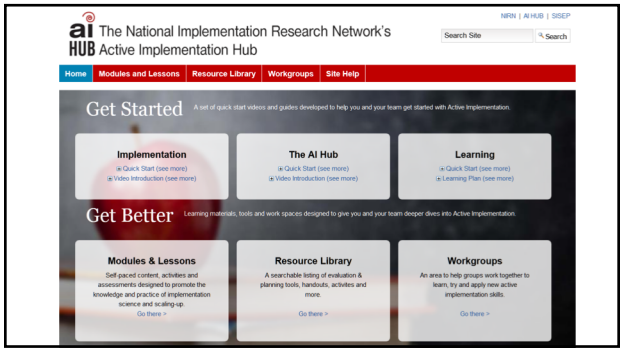

Lessons Learned…
Have a plan based on best practices and science
• Identify critical components
• Expect more to get more
Measure what is important
• Use frequent, relevant, & actionable data for planning
Make purposeful use of usability testing
• Use PDSA to guide work with all
• Improve methods and measures
Engage existing staff in developing capacity
• Be a systems change agent impacting knowledge, skills, and abilities
• Change hearts, minds, and behavior

Believe in Possibilities….



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