Bridge over Troubled Waters: Using implementation science to improve outcomes for children

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The Parenting Research Centre is a non-government organisation who’s goal is to help parents raise happy and healthy children.
Goal

Build the capacity of child and family support organisations, health, and education services in achieving the sustainable implementation infrastructure and systemic change necessary for the full and effective implementation of evidence-informed practices and programs

... to improve outcomes for families and children
Implementation
What is implementation?

Implementation is defined as a specified set of activities designed to put into practice an activity or program of known dimensions (Fixsen et al, 2005)

Implementation is a process with core components:

- Research
- Implementation
- Practice
Why focus on implementation?

Children and families cannot benefit from interventions they do not experience.
The Context

For many reasons, best evidence is not being taken up in practice settings, and many children and their families are not receiving the best possible programs and support.
Why focus on implementation?

Many programs and practices found to be effective in child and family support research fail to translate into meaningful outcomes across a number service settings.

Some research indicates that two-thirds of organisations’ efforts to implement change fail (Burns, 2004).
“Evidence” on effectiveness helps you select what to implement for whom

“Evidence” on these outcomes does not help you implement the program or practice

Fixsen & Blase (2008)
Science to service gap

Often, what is known is not what is adopted to help children, families and caregivers.

Implementation gap

There are no clear pathways to implementation.

Often, what is adopted is not used with fidelity and good effect.

What is implemented often disappears with time and staff turnover.

(Fixsen et al, 2005)
### Implementation Matters (from Fixsen et al., 2005)

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Implementation matters

“. . . in some analyses, the quality with which the intervention is implemented has been as strongly related to recidivism effects as the type of program, so much so that a well-implemented intervention of an inherently less efficacious type can outperform a more efficacious one that is poorly implemented.”

High drop outs, staff turnover, poorly trained staff, incomplete service delivery all associated with smaller effects

When program developer involved in delivery, larger effects

Lipsey et al (2010)
Implementation matters

500 studies evaluated in five meta-analyses indicates that the magnitude of mean effect sizes are two to three times higher when programs are carefully implemented and free from serious implementation problems than when these circumstances are not present.

59 additional quantitative studies found that higher levels of implementation are associated with better outcomes, particularly when fidelity or dosage is assessed.

Durlak & DuPre (2008)
Implementation is affected by organisational context

Relationship between organisational support for EBP, attitudes towards EBP and use of EBPs in practice.

Findings:

• gap between public and private sector organisations regarding innovation and implementation.

• private agencies provided greater support for EBP implementation

• staff working for private agencies reported more positive attitudes toward adopting EBPs.

• organisational support was significantly positively associated with attitudes toward EBP and EBP use in practice.

Aarons et al. (2009)
Implementation: The How
Insufficient methods for implementation

Implementation by laws/ compliance by itself does not work

Implementation by “following the money” by itself does not work

Implementation without changing supporting roles and functions does not work

Diffusion/dissemination of information by itself does not lead to successful implementation

Training alone, no matter how well done, does not lead to successful implementation

(Fixsen et al., 2005)
Successful uptake of knowledge requires more than one-way communication and one-off training events.

Instead requiring genuine interaction among researchers, decision makers, and other stakeholders

AND active, purposeful and planned implementation activities.
Are we ready?

To successfully implement and sustain evidence-based programs and practice we need:

The What:

What is the program/practice

The How:

Effective implementation frameworks (e.g. strategies to change and maintain behaviour of practitioners and create hospitable organisational systems)

The Who:

Expert implementation assistance
Evidence-based practice and programs

Evidence-based practices

• skills, techniques, and strategies that can be used by a practitioner.

• common elements (Chorpita et al) / kernels (Embry, 2004)

Evidence-based programs

• collections of practices that are done within known parameters (philosophy, values, service delivery structure, and treatment components)
Impact of Evidence-Based Practice on Staff Turnover (Aarons, et al., 2009)

Effect of EBP implementation on staff retention in context of statewide, randomized trial of intervention designed to reduce child neglect

SafeCare with & without fidelity monitoring; Services as usual with and without monitoring.

Greater staff retention in the condition where the EBP was implemented along with ongoing fidelity monitoring presented to staff as supportive consultation
Perspectives on EBP Implementation and Turnover

Learning new skills like SafeCare were motivators to stay with current employers.

Implementation of EBPs helps to recruit and retain new staff.
Implementation frameworks

The value of frameworks is

• To promote the ability to generalise beyond the immediate project or initiative

• To enhance communication among partners (e.g. better understanding of one another)

• To more easily share and apply improvements

• To increase the relevance of the “lessons learned”
Stages of Implementation

**Exploration**—defining client group, consider which EBP/Practices, examine fit with current workforce, assess readiness for change, assesses feasibility, and looks at TA needs and resources.

**Installation**—Assure the availability of resources necessary to initiate the project, such as staffing, space, equipment, organizational supports, and new operating policies and procedures.

**Initial Implementation**—Organization learns the new ways of work, learns from mistakes, and continues the effort to achieve buy-in by those who will need to implement the project components. This stage is characterized by frequent problem-solving at the practice and program levels.

**Full Implementation**—Assure components are integrated into the organization and are functioning effectively to achieve desired outcomes. Staff have become skillful in their service delivery, new processes and procedures have become routine, and the new program or practice is fully integrated into the organization.
Knowledge to Implementation Cycle
(based on Fixsen et al 2005)

Development & Adoption
Identify and assess evidence based practices and programs.

Innovation
Implementing positive innovations for continual practice and program improvement.

Installation
Plan and prepare what needs to be in place to ensure the organisation is ready to implement practices or program.

Early Implementation
Initiating and maintaining change. Support provided through early stages of change.

Full Implementation
Maintaining and improving implementation of practices and programs.

Sustainability
Create a permanent organisational capacity and a sustainable infrastructure.
Exploration and adoption

• Specify the who
• Specify outcomes
• Consider which EBP/Practices (being a good consumer)
• Examine fit with current workforce
• Assess readiness for change
• Assesses feasibility
• Look at TA and resource needs and what is provided
Specify the who

Fundamental demographics

• geography, age range, ethnicity, gender, SES,

Narrowing ....

• social situation or condition (teens aging out of foster care, children leaving school early)

• skill development needs (parents identified for neglect, parents intellectual disability)

• behaviour (domestic violence)
Specify outcomes

Enduring changes that program participants exhibit

• Change in status
• Change in skills
• Change in behaviour
• Change in achievement
Specify outcomes

Free from abuse and neglect                        Safe from injury and harm
Free from child exposure to conflict or family violence
Ability to pay for essentials                      Optimal language development
Adequate family housing                             Optimal cognitive development
Positive family functioning                         Healthy teeth and gums
Optimal antenatal and infant development            
Healthy weight                                       
Adequate nutrition
Positive child behaviour and mental health
Identify the “what”

Clearly understand needs of young children and their families in your area

• Attention to cultural and linguistic issues

• Determine what you get and don’t get from expert assistance

• Determine whether moving ahead with the initiative and implementation is desirable and feasible

• Create readiness for change at many levels
The promise of the kernel/common element

Evidence based Kernels (Embry & Biglan, 2008)

Active ingredients in evidence-based programs

Active ingredients that make those programs work

Scientifically proven

Irreducible and cannot be made simpler

May be combined with other kernels to create change
Not all EBPs are created equal

Manualised: is it written down?

Have the developers identified essential components vs those that can be adapted?

Are there comprehensive measures of fidelity available?

Are all the core components of TA available?
Knowledge to Implementation Cycle
(based on Fixsen et al 2005)

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**Sustainability**
Create a permanent organisational capacity and a sustainable infrastructure.
Installation

Plan and prepare what needs to be in place to ensure organisation is ready to implement

- Assess readiness of service or organisation.
- Ensure right resources and structures are in place.
Improved outcomes for children and families

Performance Assessment

Coaching

Training

Selection

Adaptive
Integrated & Compensatory

Technical Leadership

Implementation Drivers

Systems Intervention

Facilitative Administration

Decision Support Data System

© Fixsen & Blase, 2008

Graphics by Steve Goodman, 2009
Implementation drivers

Competency Drivers

• develop, improve, and sustain ability to implement an intervention with fidelity and benefits to consumers. Drivers include: Selection, Training, Coaching, and Performance Assessment

Organizational Drivers

• create and sustain hospitable organizational and systems environments for effective services. Drivers include: **Decision Support Data System, Facilitative Administration, and Systems Intervention**

Leadership Drivers

• methods to manage technical problems
Competency drivers

**Staff selection:** key ingredient of implementation at every level includes selection of practitioners and organisation staff (trainers, coaches, evaluators, administrators), and

**Training:** efficient ways to provide knowledge of background information, theory, philosophy, and values; introduce the components and rationales of key practices; and provide opportunities to practice new skills and receive feedback in a safe training environment.

**Coaching:** most skills needed by successful practitioners can be introduced in training but really are learned on the job with the help of a *consultant/coach*. Coaching needs to be work based, opportunistic, readily available, and reflective (e.g., debriefing discussions).
Organisational drivers

**Decision Support Systems:** quality improvement information, organisational fidelity measures, and child and family outcomes

**Facilitative intervention:** leadership that makes use of a range of data inputs to inform decision making, supports the overall processes, and keeps staff focused on the desired intervention outcomes (champions)

**System alignment intervention:** strategies to work with external systems to ensure the availability of the financial, organisational, and human resources required to support the work of the practitioners (Strategies for strengthening key partnerships)
Leadership

- Inspire with a vision
- Align agency values, mission and practice
- Provide resources to do the job
- Create a learning environment
- Communicate
- Celebrate performance
Training

• Based on adult learning principles
• Skill-based
  - Behavior Rehearsals
  - Knowledgeable feedback providers
  - Practice to criteria
• Transfer of learning activities
Coaching

Purposes:
• Teach effective practice
• Ensure good judgment
• Secure fidelity
• Increase staff satisfaction through support and skill acquisition
Intervention fidelity

**Exposure**: amount of an intervention that is offered to the participants in relation to the amount prescribed in the validated intervention model (the number of sessions or hours of programmed activity offered).

**Adherence**: extent to which the intervention was delivered according to the program developer’s specifications for content.

**Quality of delivery**: pertains to practitioners/manager performance on dimensions that are thought to enhance delivery of the intervention (e.g., enthusiasm, style, ability to facilitate client participation, etc.).
Decision Support Data System: Sector level

Purposes:

• Provide information to assess effectiveness of evidence-based practices

• Analyse the relationship of fidelity to outcomes

• To guide further program development

• Engage in continuous quality improvement

• Celebrate success

• Be accountable to consumers and funders
Basic Structure of Database

Grant / contract funded

Agencies maintain ownership of data

Data are cleaned, structured for analysis, managed, and updated by PRC/Uni

PRC/Uni generates user-specified reports in dynamic web interface

Cleaned and structured data fed back to agencies
What others have done...

The US invested substantial dollars in the 1990’s to administrative data systems that could monitor children and families but:

- They generally failed to link federal performance management with the correct form of data resulting in substantial failure
- Are now spending a great deal of time and money to do this correctly and embarking on complex performance management program that incorporates longitudinal data

Ontario, Canada

- Despite no federal CPS oversight, university-led initiative to use advanced database techniques to move existing data into a provincial outcomes reporting system.
No single, comprehensive system

Individual systems designed for case management, not analysis

Limited to cross-sectional or panel data

Limited research infrastructure at individual agencies

Lack of funding for such development
Ontario Child Welfare Data System

Use existing data systems

Establish a low cost, longitudinal, event level database of children’s services in Ontario

Follow children and families from investigation to exit

Use local and regional data to guide practice and policy
History

Established in 2000 by Jim Barber (AUS) (University partnership with the field)

Expanded by Aron Shlonsky as a new initiative

Currently 11 different Children’s Aid Societies

• Able to produce detailed longitudinal analyses

• Able to evaluate policy and practice initiatives

• Building dynamic web interface that provides clear, reliable and valid data back to individual agencies
Facilitative Administration

Purposes:

• Facilitates installation and implementation of the Drivers

• Aligns policies and procedures

• Takes the lead on Systems Interventions

• Looks for ways to make work of practitioners and supervisors easier
Systems Intervention

Purposes:

• Identify barriers and facilitators for the new way of work

• Create an externally and internally “hospitable” environment for the new way of work

• Contribute to cumulative learning in multi-site projects.
Threats to Sustainability

**Individual level:** long-term effects of a program as assessed after 6 or more months following the most recent intervention contact.

**Organisational level:** extent to which an intervention becomes institutionalized or part of routine organizational policies and practices of an agency.

**Dosage:** The case of Early Risers “Skills for Success” program.

Early Risers is an evidence-based, early-age targeted conduct problems prevention program.
"I know nothing about the subject, but I'm happy to give you my expert opinion."
Purveyor organisations/Intermediary organisations

**Purveyor**

- an individual or group of individuals representing a program or practice who actively work implementation sites to implement that practice or program with fidelity and to good effect (Fixsen et al. 2005)

**Intermediary organisation**

- has a broader role in the development and support of multiple programs or practices. Often have a role in building the capacity within a system or agency to implement and sustain a ebp
Case studies: working with implementation as the ‘main thing’ in mind
Case Study 1. Agency Level
The ‘what’ is yet to be defined and developed

Development of a ‘way’ for practitioners in adult focused services to better support their adult clients to meet the immediate needs of children in their care
Case Study 1

Clarification of who:

adults supported by services at agency who are caring for children (birth to mid teens)

families have a range of complex issues and life circumstances, most homeless or at risk of being homeless
Case Study 1

Assessed needs of this group and clarify child outcomes:

Outcome 1. Improved child physical health and safety

• family enrolled to see doctor for a health maintenance and physical check (as opposed to only seeking medical assistance for acute needs);

• child has daily access to age appropriate, nutritious food

• safe place to sleep

Outcome 2. Participation in early childhood or education

• children in family are enrolled in local school or kindergarten
Case Study 1

Decision to develop and implement a practice framework

Identified guiding principles that underlie practice

Identify and document practice which will help meet outcomes by supporting practitioners to

• Gather information

• Engage on a parenting issue

• Outline a course of action (provide resources and/or refer to specialist services)
Installing the Drivers

Selection:

**re-aligning** characteristics and requirements embedded in job descriptions (e.g., skills to engage families with a diverse range of families at a clinic or in the home, conduct assessments, support effective goal planning)

Training:

develop a competency-based training package to complement framework (well defined skills and competencies)
Installing the Drivers

Coaching:

Develop plan for coaching, including who will take day to day responsibility for this

Decision-support data systems:

Selection of outcome data variables

Develop strategies to document outcomes

Select indicators of service delivery adherence data

Develop program review practices
Installing the Drivers

Performance assessment:

Fidelity criteria

Measures to assess this (both practitioners, managers/supervisors, administrators)
Case Study 2. Agency Level
The ‘what’ is in further development

Refinement of an agency wide practice framework aimed at promoting the resilience in vulnerable children and their families
Case Study 2

Further definition of the ‘it’

Evidence based Kernels (Embry & Biglan, 2008)

- Active ingredients in evidence-based programs
- Active ingredients that make those programs work
- Scientifically proven
- Irreducible and cannot be made simpler
- May be combined with other kernels to create change
Case Study 2

Consultation phase, where is the agency at?

Exploration? Assess readiness and fit, ensure platform built through implementation teams (planning)

Installation? Are the resources which are necessary to start project ready and available (installing)

Initial Implementation? frequent problem-solving at the practice and program levels. (supporting)

Full Implementation? Assure components are integrated into the organization and are functioning effectively to achieve desired outcomes. (improving and sustaining)
Case Study 3.
Multiple agencies/service system
Intensive family support services, NT

Development and support implementation of an intensive family support service across 21 sites in the NT
Defining the what

Family Support Programs

......defined as community-based services to promote the well-being of children and families.

(AIHW, 2000)
Exploration and Adoption

Ground-up approach and the development of linked implementation teams

Define target population and needs

Look for best evidence to address the need and match this to context

Assess current way family support being implemented (content and delivery)

Assess current way practitioners being supported to implement

Baseline context
Bridging the gap from science to service

Improving outcomes for families & children
LOW pay, a ton of paperwork, a massive caseload, upset parents?

SURE, SIGN ME UP!


It’s for people who believe they can make a difference in a world of challenges and hard knocks.

You know who you are. Find a job that matters.

Contact your County Department of Social Services.