



# USING IMPLEMENTATION SCIENCE TO SCALE UP A FAMILY-CENTERED, NATURAL- ENVIRONMENTS APPROACH

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Developmental Disabilities  
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# Outline

1. Changing approaches to serving young children with ASD, ID, and DD
2. Routines-Based Model
3. Using implementation science to foster change

# I. What's Changing

“PROGRESS  
*is* IMPOSSIBLE  
WITHOUT CHANGE,  
& those who cannot  
CHANGE THEIR *minds*  
CANNOT  
CHANGE *Anything.*”  
- George Bernard Shaw



# What's Changing in EI/ECSE

1. How we set goals
2. How we deliver services
3. How we monitor progress and outcomes



# Setting Goals

Traditionally	Now
Failures on tests or CBAs	Needs for participation in routines
Professionals collect data	Caregivers provide information
Professionals “recommend” goals	Families decide on priorities
Child only	Child and family
Preschool: School setting only	Preschool: Home, community, and school settings



# Delivering Services

Traditionally	Now
EI: Professionals provide direct, hands-on therapy/instruction	EI: Professionals consult with parents (“coaching”), so parents can “intervene”
Preschool: Self-contained classrooms	Preschool: Inclusion (reverse mainstream or community)
Multidisciplinary	Transdisciplinary
Focus on child alone	Focus on family



# Monitoring Progress and Outcomes

Traditionally	Now
Test or CBA scores or items	Functional-skill acquisition and generalization
Federal child outcomes	In addition, engagement, independence, social relationships
Idiopathic goal criteria	Idiopathic converted to goal attainment scale
Child only	Family (includes child)





## II. Routines-Based Model

YOU'LL NEVER CHANGE  
YOUR LIFE UNTIL YOU  
CHANGE SOMETHING  
YOU DO DAILY. THE  
SECRET OF YOUR  
SUCCESS IS FOUND IN  
YOUR DAILY ROUTINE~

JOHN C. MAXWELL



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*Intervention Plan Development*

*Consultative Service Delivery*



*Classroom Based*



# Setting Goals

- Routines-Based Interview
  - Engagement
  - Independence
  - Social Relationships
  - RBI always ends with family choosing 10-12 goals
    - Child
    - Family



# Dulcie's Goals

1. Natalie know colors (meals, dressing, school)
2. Stay in bed, including through the night
3. Play independently or in parallel play
4. Talk clearly to be understood
5. Consistency between Dulcie's and children's dad's
6. Natalie play and talk back and forth with others
7. Dulcie in school and finish and decide what to do
8. Natalie pulling up pants
9. Follow rules at supper
10. Natalie and Blake busy longer at dinner prep
11. Natalie recognize name in writing
12. Kids play in bath with little splashing



# Dulcie's Goals

## Natalie know colors (meals, dressing, school)

- Natalie will participate in meals, dressing time, and school time by identifying objects matching colors that adults say. We will know she can do this when she identifies objects matching 5 colors in all three types of routines in a day for 5 consecutive days.

## Stay in bed, including through the night

- Natalie will participate in bedtime, by staying in her bed, including through the night. We will know she can do this when she stays in bed from "good night" until 6 a.m. for 1 week.

## Play independently or in parallel play

- Natalie will participate in free play, centers time, and outside play time by playing independently, in parallel play. ....When she plays beside another child with similar materials for 10 minutes at 1 free-play time, 1 centers time, and 1 outside time in 1 day for 6 days in a 2-week period.

## Talk clearly to be understood

- Natalie will participate in meals at home and at school, in circle time, and at Grandma's house by speaking clearly. ...When she speaks and is understood 4x in 5 meals time, 2x in 3 circle times, and 3x at Grandma's house in 1 week for 3 consecutive weeks.

## Consistency between Dulcie's and children's dad's

- Dulcie will discuss with children's dad areas where they are inconsistent with each other, by 3/20/16.

## Natalie play and talk back and forth with others

- Natalie will participate in free play, centers, and play time at home by playing or talking back and forth with others. ...When she has 4 turns in a row with another person (2 turns each) in 2 free play times, 1 centers time, and 1 play time at home in 1 day for 5 consecutive days.

## Dulcie in school and finish and decide what to do

- Dulcie will finish school by December 2016.

## Natalie pulling up pants

- Natalie will participate in dressing time, toileting time, and bath time by pulling up her pants. ...When she pulls up her pants with only a verbal prompt at all 3 times of the day on 4 days in 1 week.

## Follow rules at supper

- Natalie will participate in supper by following rules. ...When she stays in her chair, waits for grace to be said, and uses utensils during 3 suppers in 1 week.

## Natalie and Blake busy longer at dinner prep

## Natalie recognize name in writing

## Kids play in bath with little splashing



# Delivering Services

- Family consultation on home visits
- Primary service provider (PSP)
- Engagement Classroom Model
  - Incidental teaching
  - RBI
  - Integrated therapy
  - Zone defense schedule
- Providing family support, including families of preschoolers



# Monitoring Progress and Outcomes

- Measure of Engagement, Independence, & Social Relationships (McWilliam & Younggren, 2014)
- Goal attainment scaling (GAS)
- Family Quality of Life (FaQoL; McWilliam, 2009)



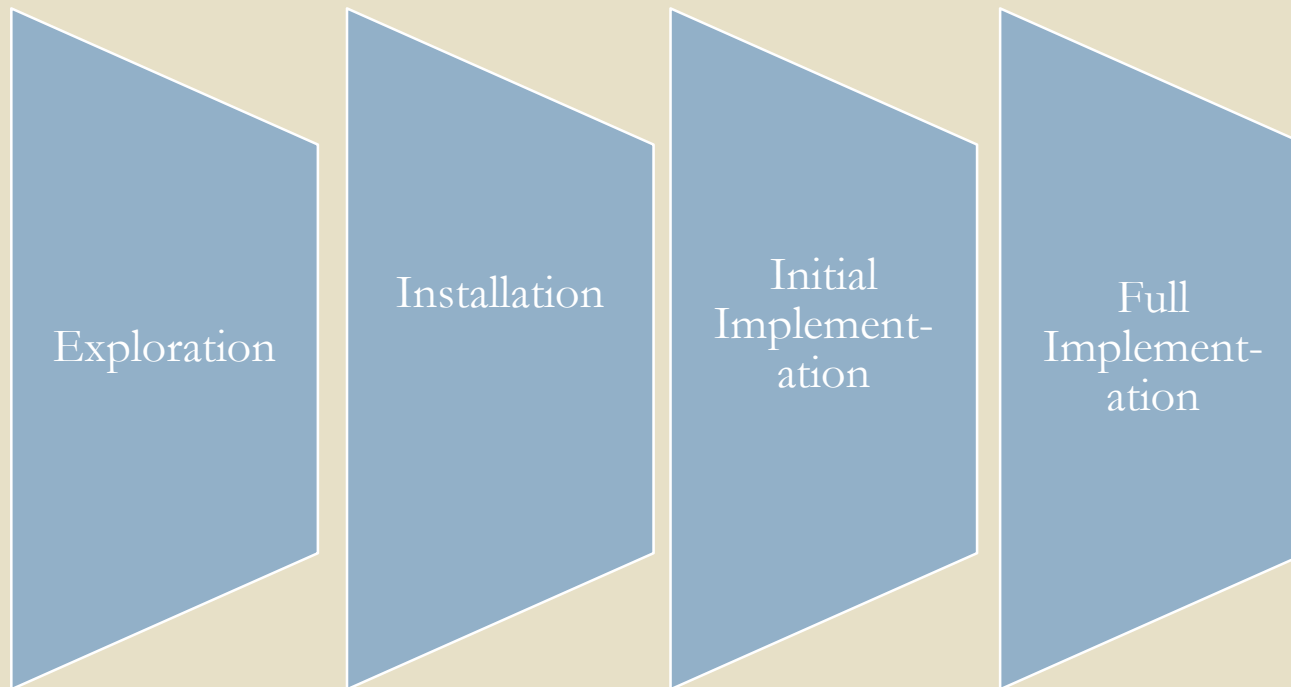
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# III. Using Implementation Science to Foster Change





# Implementation Stages





# Exploration

- Form implementation team
- Communicate to stakeholders
- Analyze need data
- Select target audience
- Review programs/practices to implement
- Assess buy-in
- Make final selections



# Installation

- Functional, structural changes
- Changes to initiate new prog, practice, framework
- Protocols for 1<sup>st</sup> practitioners
- Select 1<sup>st</sup> practitioners
- ID training resources
- Train 1<sup>st</sup> cohort
- Develop coaching
- Analyze sustainability of training



# Initial Implementation

- Inform stakeholders of launch dates
- Communication protocols
- Support plan
- Coaching system in place
- Data systems functioning to measure outcomes
- ...to measure fidelity
- Produce doc reviewing initial implementation
- Recommend revisions
- Plan for next cohort

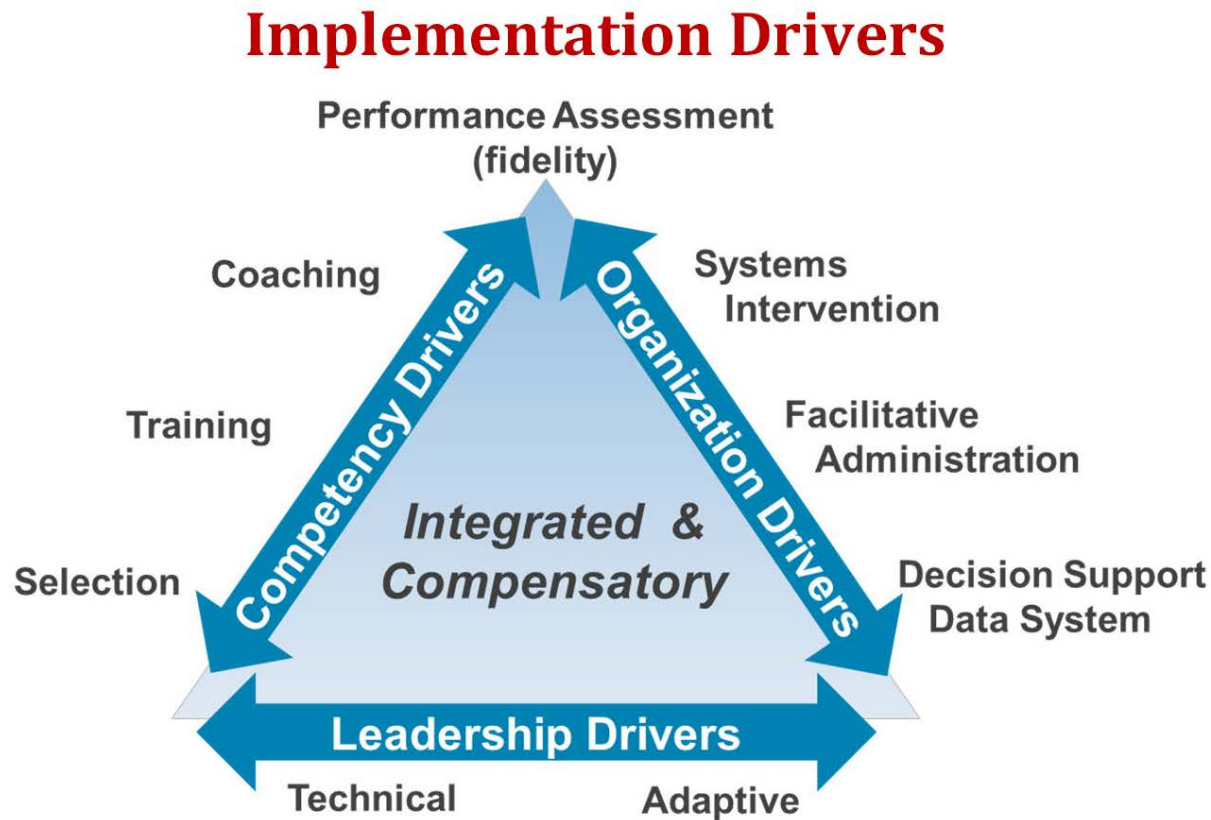


# Full Implementation

- Monitor each implementation driver:
- Recruitment, training, coaching processes, fidelity measures, outcome data, local policies, systems intervention, leadership support strategies
- Feedback process from practitioners to local admins
- ...from locals to state
- Data used to make decisions
- ...to improve processes



# Drivers





# Implementation Planning

- Ensure everyone knows general components of model to be discussed
- List practices group is interested in
- Discuss quality
  - Ignoring model, what needs to improve across the state (or other entity)
  - 15-20 needs



# Implementation Planning

- See whether practices address quality improvement needs
- What needs won't model address?
  - Document that these will remain unaddressed
- Timelines for practices





# Implementation Planning

- Action steps for implementation of each practice
  - i. How will practitioners become aware of the practice?
  - ii. How will you show that the desired practice is different from what they're currently doing?
  - iii. What materials are needed to describe the practice (e.g., checklists)?
  - iv. What materials are available as background on the practice (not that anyone will read them)?
  - v. Will you use pilot sites with replication statewide or statewide training and implementation from the beginning?
  - vi. How will you show the practice?
  - vii. What do you have to do to ensure coaching/supervision is available?



# Implementation Planning

- End of the day:
- List of practices
- Timelines for full implementation and PD periods
- Action steps
- List of improvements that will be addressed
- List of improvements still needing consideration



## R-BEI Best Practice Implementation Plan

Goal – Early intervention in Aotearoa will be engaged in these best practices by July 2018  
5 Year Time-line

Implementation	Now	July 2014	July 2015	July 2016	July 2017	July 2018
Ecomap & Cultural profile	_____→	_____	_____	_____→	_____	_____
RBI	_____→	_____	_____	_____→	_____	_____
Functional participation based goal writing	_____→	_____	_____	_____→	_____	_____
Keyworker (PSP)	_____→	Piloting model →	Model developed →	_____→	_____→	_____→
Support based home visits	_____→	_____	_____	_____→	_____	_____
Collaborative consultation & ECE engagement model/coaching	-----→	-----→	-----→	-----→	-----→	-----→
Incidental teaching (responsive teaching)	_____	_____	_____	_____→	_____→	_____→
Natural environments	_____→	_____→	_____	_____	_____	_____
Evaluation FINESSEII (adapted) Case Studies STARE data	_____	_____→	_____→	_____→	_____→	_____→

Check points along the way

## Montana Statewide RBEI Implementation Timeline

	August 2013	June 2014	June 2015	June 2016
All families 0-8 will receive RBI & participation – based outcomes				
Family Consultation in Home Visits				
Collaborative Consultation to Child Care				
Incremental Service Decision Making & Primary Service Provider				
Therapists' using consultative approach				

Billings ECI complete by  
June 2014

Goal – RBEI  
practices will be fully  
implemented in  
Montana by June  
2016  
(implementation by  
FSSs by December  
2015)



# Evidence

- Elusive!
- Model adoption: No. of entities (countries, states, programs)
  - Levels of implementation (stages, no. of practices, quality)
- Case study approach: Entity as case
  - Data: No. of sites using practices
- Checklist data: Being collected but not enough
- MEISR data: Being collected. Promising data—changing trajectories (proportional change index)



# Reasons for Drift?

- Resistance to change by frontline staff
- ...by administrators
- Competing priorities for PD
- Lack of job-embedded coaching
- Lack of data collection (i.e., unaware of drift)
- Leadership changes



# Take-Home Message

- Don't expect implementation (“uptake”) if you don't attend to **implementation science**
- To address systemic and practice needs, consider a sustainable, practical, research-based **model**
- To improve EI/ECSE, focus on child **engagement/participation** and family **empowerment**

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