

## What Do We Know about Assessing and Improving Fidelity of RTI

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## Intervention: The Centerpiece of RTI

- Many many effective interventions exist
- Interventions are ineffective if:
  - Not used with fidelity
  - Not properly matched to student need
- Most interventions in U.S Schools
  - Are not used with Fidelity
  - Are not properly Matched to Student Need
  - Have not been subjected to scientific scrutiny-  
The are “research based”!!

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## Intervention

- Intervention can produce serious results:
  - Improve state test scores in math and reading.
  - Students who get needed intervention by third grade become lifelong readers.
  - Students diagnosed as LD and placed in special education were “Cured” by a six-week intensive summer intervention program
  - Reduce by 50% students needing special education

Source: Jimmerson, et al (2007)

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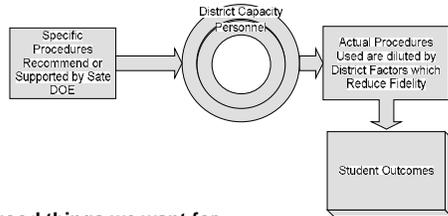
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## Dilution of State Support and Policy



All good things we want for students are “filtered” by how people use knowledge and tools.

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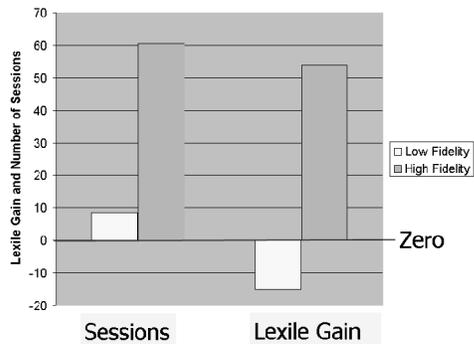
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## Fidelity Matters—Less than Zero in Low Fidelity Districts




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## Other Issues with Same Intervention

- Used the same intervention with all kids
  - Intervention should not be used with students when reading skills below 4<sup>th</sup> grade
- Left the intervention in place when it was not working for months.
- In other words, there was a lack of fidelity in applying the RTI PROCESS

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## Premise

- The science of intervention is advancing
  - More proven interventions
  - More is known about Screening and Prog Monitoring
  - Data management tools widely available
- But an intervention is of no value if not used
- Therefore improved student outcomes require a dual focus on
  - The performance and decision-making of people, and
  - Effective interventions

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## What is Fidelity

- Faithfulness to obligations, duties, or observances. (Dictionary)
- Using intervention as planned
  - Using it as frequently as planned
  - Using it correctly each time
- Fidelity of RTI Process
  - Planned: Progress monitor every two weeks
  - Planned: 8 weeks of intervention before considering a student for special education

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## Methods for Assessment of Fidelity

- Self-report
  - Ask via rating scales, checklists, interviews:  
Did you do the intervention?
- Direct Observation
  - A third party observes implementation
- Permanent Products
  - Direct evidence that the interventions was done

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## Which Method is Best?

- Self Report
  - People may do a little bit of the intervention and give themselves credit for actually doing it
  - It is Difficult for people to report accurately when they lack fidelity

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## Research on Assessment

- Wickstrom et al. studied 33 intervention cases
- Teachers agreed to do an intervention and were then observed in class.
- 0/33 Teachers had fidelity above 10%
- 33/33 on a self report measure indicated that they had used the intervention as specified by the team.

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## Direct Observation

- Accurate
- Reactive
  - People are different when being observed

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## Preferred Option

- Permanent Products--For both research and practice
- Merely using the intervention leaves “tracks” that it was done.
- Example: computer record
  - # of Sessions
  - # of Minutes
  - Correct and incorrect responses

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Grade 1

Addition Sums to 10

$\begin{array}{r} 2 \\ +5 \\ \hline 7 \end{array}$	$\begin{array}{r} 4 \\ +4 \\ \hline 8 \end{array}$	$\begin{array}{r} 2 \\ +4 \\ \hline 8 \end{array}$	$\begin{array}{r} 1 \\ +1 \\ \hline 2 \end{array}$	$\begin{array}{r} 5 \\ +1 \\ \hline 6 \end{array}$	3
$\begin{array}{r} 2 \\ +6 \\ \hline 8 \end{array}$	$\begin{array}{r} 2 \\ +3 \\ \hline 5 \end{array}$	$\begin{array}{r} 5 \\ +2 \\ \hline 7 \end{array}$	$\begin{array}{r} 1 \\ +5 \\ \hline 6 \end{array}$	$\begin{array}{r} 3 \\ +7 \\ \hline 10 \end{array}$	3
$\begin{array}{r} 3 \\ +1 \\ \hline 4 \end{array}$	$\begin{array}{r} 4 \\ +6 \\ \hline 10 \end{array}$	Completed by student. Scored. Scored Accurately.		$\begin{array}{r} 2 \\ +2 \\ \hline 4 \end{array}$	2

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## Research on Extent of Fidelity Problems

- Noell and Witt Several Studies
  - 1 out of 12 teachers implemented the intervention well.
- Interventions were not effective when implemented with poor fidelity.

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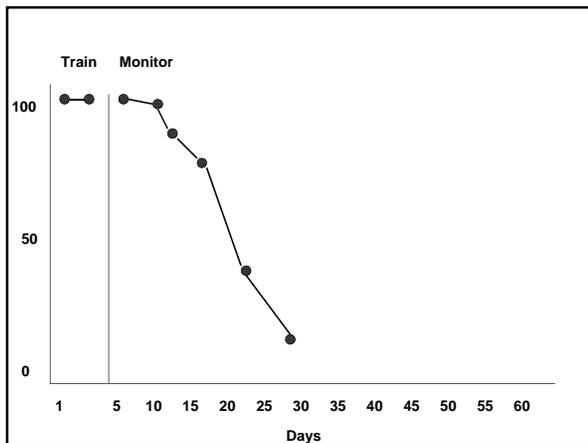
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## Other Studies

- Ysseldyke et al “Teachers did not implement the program at all for 1046 of the 2645 (39.5%) students in the experimental group”
  - Easy to use computer intervention
- Studies that measure fidelity indicate fidelity problems in “real world” settings

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## The Fidelity Issue is Not New

- 50% of SLD students studied did not meet discrepancy criteria for LD (Gresham, et al)
- 80% of SLD students in urban schools did not meet state LD criteria (Gottlieb, et al)
- Explanation: "Professionals in teams chose to ignore classification criteria" (Reschly & Gresham)
- RTI: More decisions, more options, more discretion.

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## What Works for Improving Fidelity

- Most of the experimental studies defined fidelity as an outcome or dependent variable.
- Two major categories of variables for improving fidelity have been studied:
  - Antecedent strategies: training, prompting, gaining a commitment beforehand.
  - Consequences: monitoring, feedback.

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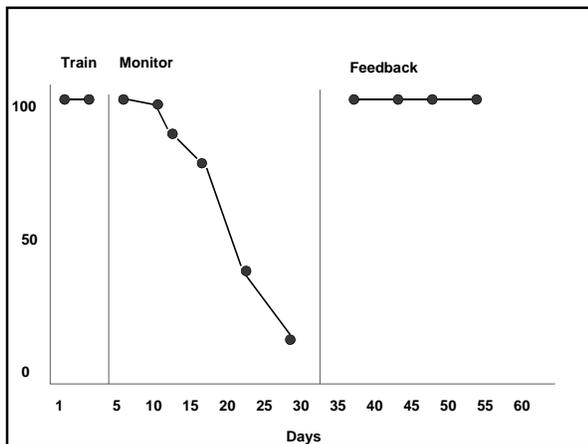
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## Research Outcomes

- Antecedent strategies
  - Training, necessary but not sufficient
  - Helps some: Well specified plans help
  - Helps some: Fewer steps, interventions and things to do
- Consequence strategies
  - Very effective: Performance feedback
  - Very effective: Graphing performance
    - Similar results from a long line of research in business. Feedback works.
    - Not popular with giver or receiver

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## Randomized Clinical Field Trial

- Compared 3 strategies
  - Performance Feedback
  - Social Influence
  - Control
- Perf Feedback was effective
  - Social influence also promising
- Social influences may be more acceptable

Noell, Witt et al (2005)

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## What Causes Fidelity Problems

- In some studies we asked why people don't do the interventions...
- Bottom Line—Because they don't have to.
  - No one checks or seems to care or check
- Reasons
  - Had a meeting Tuesday
  - Assembly on Friday
- These are normal issues
  - Schools must have a Plan B
  - Are we asking too much of teachers and others?

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### Summary and Interpretation of the Research

- Why do we have fidelity problems—it is a human problem. We all have competing demands.
- Monitoring and feedback improve fidelity.
  - Given that I have too much to do, what am I am going to get done today: That which someone cares about and get monitored.
- To be able to monitor, a specific plan is needed. If there is not some specific things that need done, then you can't have a fidelity problem.

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### Relevance of fidelity in the context of RTI

- What problems are we trying to solve with RTI
  - Achievement gap
  - Improve outcomes for all
  - No child left behind
  - Insure that for students who are placed in special education that low achievement is not due to lack of instruction

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### What Were the Major Causes of Intervention Failure Before RTI?

1. Interventions were not being used with fidelity.
2. Interventions were not matched to student need.
3. Ineffective interventions were being used.

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### RTI Tools: How do They Correct the Problems with Intervention

- What is new about RTI.
  - Screening (new)
  - Problem-solving (not new)
  - Intervention (not new)
  - Progress monitoring (not new but emphasized more)
  - Using response to intervention data (new)
  - Data Management (new)

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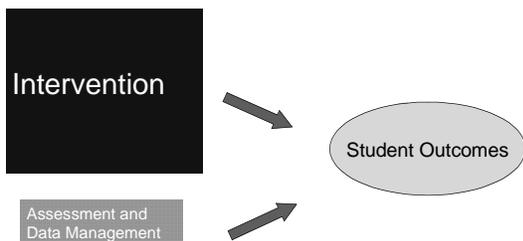
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What contributes most to outcome?

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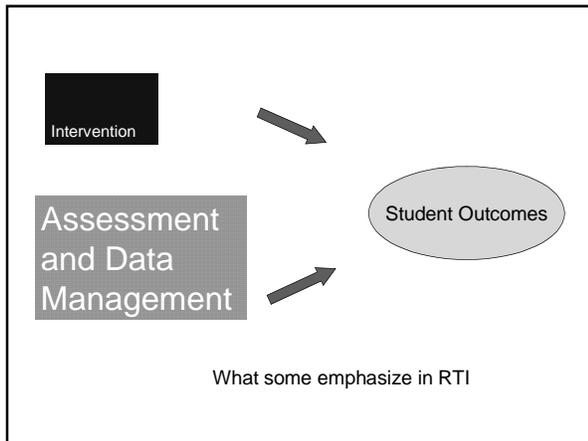
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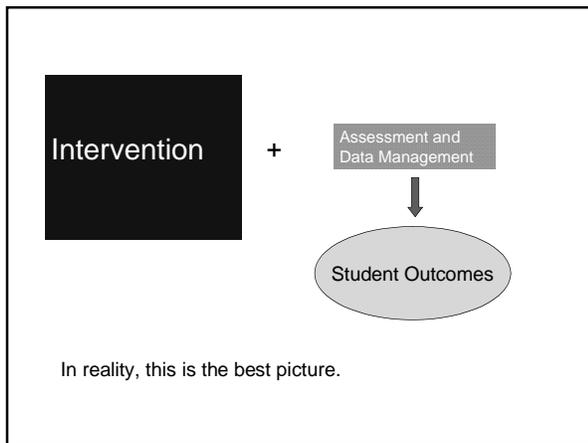
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### The Paradox

- How did we get into RTI in the first place?
  - Poor results with Instruction and Intervention
- We had seen a 200%+ increase in special education referrals. Most had ABT not LD
  - Presidents Commission: 80% of Interventions Failed!
  - Core instruction was not working for many challenging students.
- Most enhancements in RTI don't address critical intervention problems.

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### Standard Protocols and Implementation

- How do we enhance the people parts of RTI.
  - Decision Making
  - Implementation with fidelity
- Standard protocols offer
  - Step by step guidance for each step of RTI process (screening, choosing an intervention, intervention implementation, progress monitoring, moving students between tiers.)

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### In RTI Many are Using Protocols Already in Screening

- With Screening we have a question
  - Which students need intervention?
- Research based standards for answering the question
  - Students with scores less than X should be considered for intervention.
- From that we can create a standard protocol

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### Protocol

- Second grade students will be screened
- If student score is below 70, follow-up for possible Tier 2 intervention
- If students score above 70, continue in Tier 1.

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**Targeted for Tier 2 Intervention**

**Which Students are OK and Who Need Assistance?**  
**Second Grade Benchmark 70**

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**Fidelity Checklist**

	Yes	No	N/A
1. Benchmark screening was completed 3 times per year.			
2. Benchmark screening was completed during the designated benchmarking period.			
3. Three probes were used for each screening			
4. Median scores were entered into data system.			
5. Tier 1 problems were correctly identified			
6. List of students to be considered for Tier 2 intervention were generated correctly.			
Total			
Integrity Score: # of the "yes" divided by the total possible "yes" multiply by 100	Integrity Score:		

**Integrity Checklist Screening**

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**Screening is Working Well**

- People like structure
  - They know how to do the assessment—they got training
  - Enter the data
  - Interpret the results
- It is done with high accuracy
  - Missing scores are known and monitored
- People generally like screening.

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## Is Intervention Decision Making Too Complicated to be in a Protocol

- “In the beginner’s mind there are many possibilities, in the experts mind there are few”.
- Shunryu Suzuki

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- Standard protocols for intervention selection
  - Use research-based practices guide decisions about students with particular problems
  - By matching problems to solutions that work for those problems, chances of success are high (Fuchs & Fuchs, 2005; Kamps & Greenwood, 2005; Torgesen, Alexander, Wagner, Rashotte, Voeller, & Conway, 2001; Vellutino, Scanlon, & Tanzman, 1998).

- Example
  - All 4<sup>th</sup> students whose CBM reading fluency score is between 60 and 100 will participate in a specific program that includes scientifically-based practices to develop reading fluency.

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## Protocols Create a Structure

- People know what they are suppose to do.
  - Manuals, Training, practice, coaching, etc.
- Depersonalizes issues such as fidelity and choosing interventions.
- Monitoring is built into the process.
  - Checklists provided ahead of time
  - Monitoring may be initially self monitoring
- Everyone from state to teacher on the same page

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### Issues with Intervention Standard Protocols

- Protocols for selecting intervention rub some people the wrong way
- No one thing works for all students—true
  - Broad interventions make match easier
- Research by Fuchs
  - No evidence that problem solving improved achievement and it increased referrals
  - Protocols were effective

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### Implications for States

- Level of Specificity
  - Best Practices “Buffet”
    - Less directive.
  - Standard Protocol
    - Prescriptive
- Type of Training
  - Workshop for all
  - Hands on practice with coaching
- Expected outcomes
  - Improve RTI practice
  - Conduct RTI in a particular way

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### State Data

- Technical Assistance requests
  - Standard protocol
    - High during first 3 months
    - Very low thereafter
  - Problem solving
    - Moderate over a 3 year period
- Outcomes
  - 9 point jump increase 4<sup>th</sup> grade state test scores
  - Decreased numbers of at risk students.

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### Ingredients Needed to Solve the Fidelity Problem

- Begin with a specific, research proven, process for what to do.
- Train teachers and provide ongoing support— RTI Lead, Coach, etc
- Supportive but firm administration.
  - Expectations and assessment of fidelity and outcomes.
- Support and Leadership from State DOE
- Stay the course
  - Monitor outcomes and tweak

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### Areas Where Research is Needed

- How will interventions be selected?
- What level of intervention implementation is sufficient?
- What is the optimum level of effectiveness and “user friendliness”?
  - Example: differentiated instruction with 3 groups. Effective but is it doable?

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### Thank you!

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