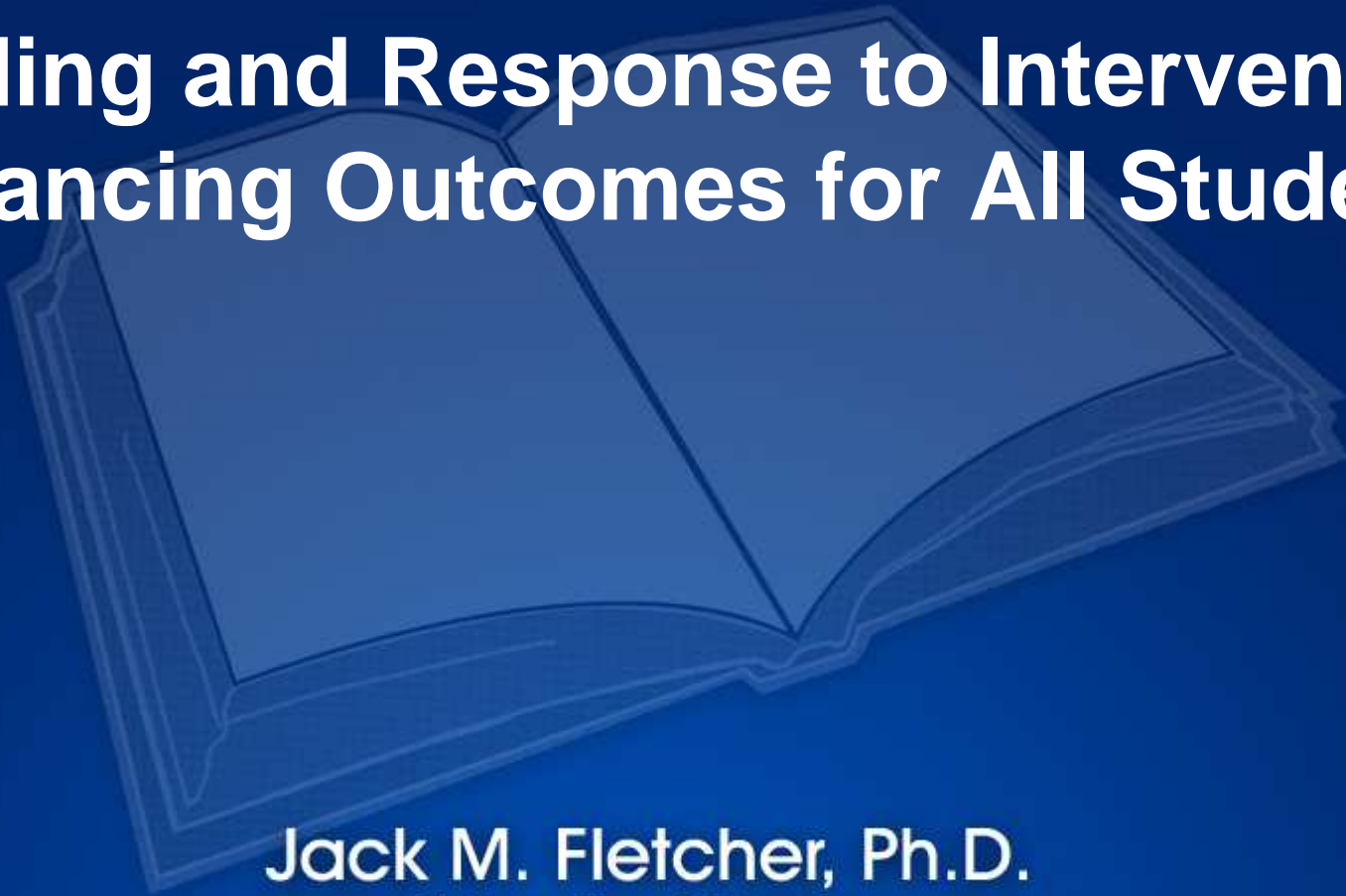


Reading and Response to Intervention: Enhancing Outcomes for All Students



Jack M. Fletcher, Ph.D.

University of Houston
Department of Psychology

What is Response to Intervention?

RTI is not:

- Just a special education initiative
- Only for students with disabilities
- Only for beginning reading
- Only for non-Title I and non-ESL students
- A way of reducing costs or eliminating special education or the LD category
- This year's summer reform or a short-term implementation based on "RTI in a Box"
- A way to fix schools with weak core instruction

Response to Intervention is:

- A set of processes for coordinating high quality service delivery in schools
- A multi-tiered, layered instructional approach that prevents problems first, and then brings increasingly intense interventions to students who don't respond
- Making instructional decisions based on data
- Integrating entitlement programs with general education
- **Primary goal: Improving academic and behavioral outcomes for all students by eliminating discrepancies between actual and expected performance**

Components of RTI

- Universal, population- based screening and progress monitoring; decision-making based on data to modify instruction
- Implementation of evidence- based interventions in general education, and for targeted supplemental and intensive intervention
- A coordinated, seamless system of service-delivery connecting prevention and remediation
- Data that provides information relevant to eligibility for special education
- Parent involvement and team-based decision-making

Key Concepts

- Problem Solving vs. Standard Protocols
- Multi-tiered instructional delivery system
- Early intervention: no “wait to fail”
- Risk vs. Deficit
- Reduction of identification biases
- Continuous progress monitoring
- Focus on student outcomes and the elimination of instructional casualties
- Parental involvement at early stages of intervention

The Context for RTI

- Reading scores are flat
- Ethnic achievement gap large and persistent- associated with poverty: 37% of fourth graders read below “basic” level with a high incidence of black and Hispanic students at this performance level
- Large Federal investment in education and research, especially beginning reading
- Limited evidence that Federal initiatives are effective

Is Compensatory Education Effective?

- Insufficient accountability *for results* in Title 1 programs: overall effect size of .11 (very small: Borman & D'Agostino, 2006)
- When effective, limited to school reform models, whole school curriculum reform, and small group tutorials
- NCLB now requires specific forms of accountability for results and introduces Reading First as an effort to **prevent** reading problems

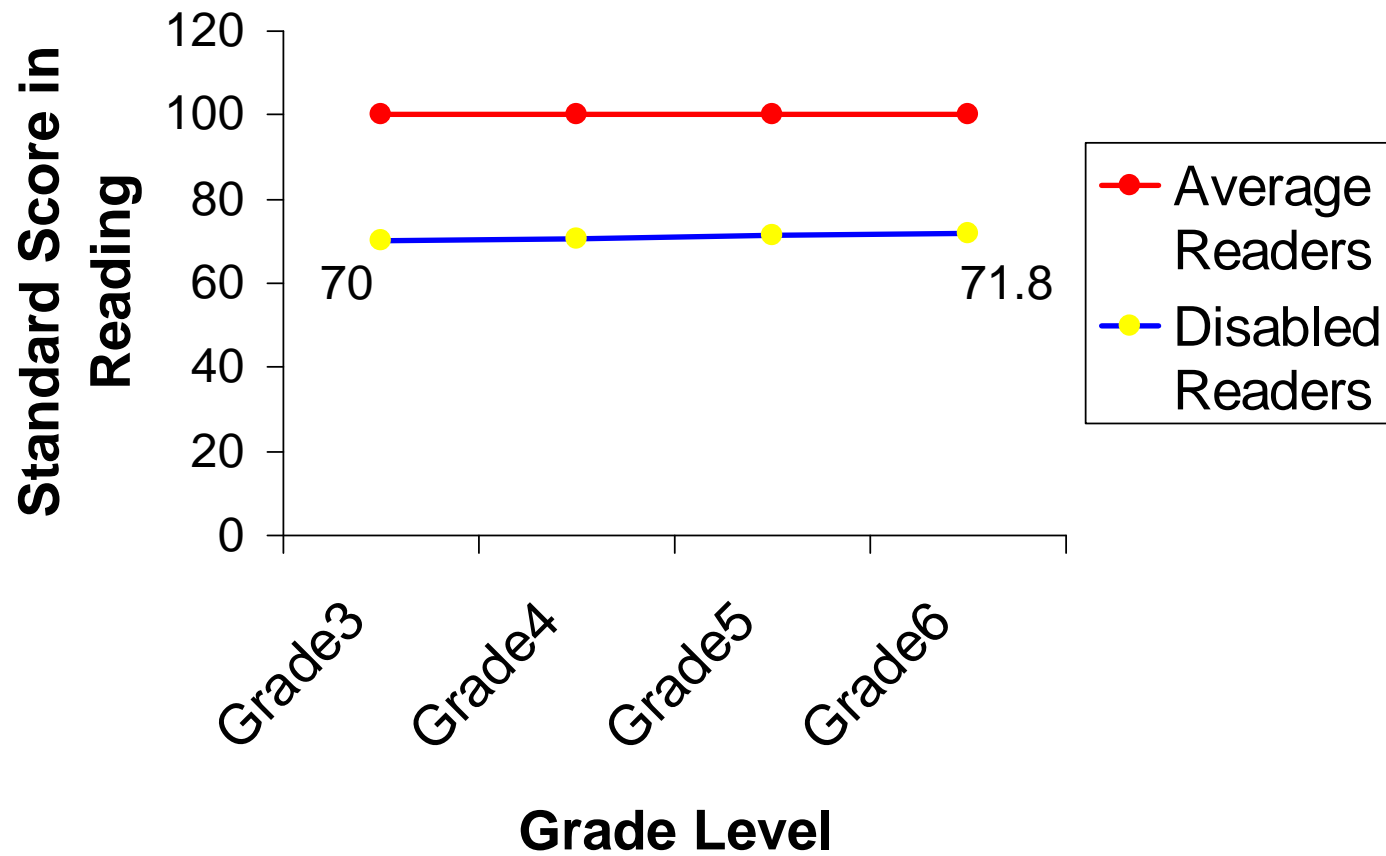
Why prevent? Special education alone can't fix reading problems

- Number of children identified as LD in special education has increased dramatically since 1975
- Half of the 6.2M children identified for special education- 6% of all children in schools
- 80- 90% identified for reading disabilities (up to 40% of all in special ed)

IDEA 2004 moves toward NCLB with its focus on EIS, RTI, and “lack of appropriate education in reading or math”

- General education and special education (and other programs) must work in concert

**Change in Reading Skill for Children with
Reading Disabilities in Special Ed : .04
Standard Deviations a Year**



Early Intervention is Possible

- Risk characteristics present in Kindergarten and G1
- Assess all children, monitor progress, and INTERVENE- first in the classroom and then through supplemental instruction
- Screening measures for reading, math, and behavior

Early Intervention is Effective

- **Prevention studies in reading (and behavior) show that 70- 90% of at risk children (bottom 20%) in K- 2 can learn to read (or behave) in average range (Fletcher et al., 2007)**



Courtesy Carolyn Denton

Early Intervention Doesn't Work for Every Student


- Even the very best prevention programs leave behind 2-10% of the school population
- Need to reduce the numbers in order to effectively implement remedial programs

- **How do we connect prevention and remediation?**

Link general education and special education through multi-tiered instruction and RTI

Linking Prevention and Remediation: A General Education Perspective

If progress is inadequate, move to next level.



Tier 1: Primary Intervention

Enhanced general education classroom instruction **for all students**.

Tier 2: Secondary Intervention

Targeted intervention in general education, usually in small groups.

Tier 3: Tertiary Intervention

Intervention increases in intensity and duration. Child may be considered for special education

<http://www.texasreading.org/3tier/>

Tier 1: Enhanced core reading instruction

- Primary model: begins in the classroom with professional development, assessment, and better materials
- Goal is differentiated instruction and monitoring response to instruction through comprehensive content and classroom management
- Implemented by classroom teacher with a 90' core and multiple grouping format

Content: 1998 NRC Report 2000 NRP Report

- Consensus documents
- Instruction can prevent reading difficulties
- Emphasized integration of:
 - Explicit alphabetic instruction: *word recognition*
 - Reading for meaning: *comprehension*
 - Active engagement: *fluency*

In an integrated, comprehensive approach
to reading instruction

Reading Instruction Must be Integrated from K- G12

- If a critical component is missing, students who are at- risk will not develop the component
- Success and failure in reading are opposite sides of the same coin- it's the same theory, not two theories, one for success and another for failure
- Instruction is the key

(see Simmons and Kame'enui Consumer's Guide to Evaluating Core Reading Program:
http://reading.uoregon.edu/appendices/con_guide_3.1.03.doc)

Tier 2: Targeted Intervention

- Typically homogeneous small group instruction, but can be additional dose in the classroom by a person other than the classroom teacher
- Adds to instructional time (typically 20- 40') and supports classroom instruction
- Progress monitoring essential to gauge level of intensity and adjust instructional emphasis- if child is progressing, why put a time limit?
- Many approaches may work

Converging Evidence

- Small-group intervention is just as effective as 1:1 intervention (Elbaum et al., 2000)
- In reading, Tier 2 content is the same as for effective classroom intervention: explicit instruction in the alphabetic principle, reading for meaning and opportunities to learn- emphasis shifts, but you get what you teach

www.fcrr.org

Tier 3: Intensive Intervention

- Can be delivered by interventionist with most expertise; funding source should not be determining factor
- Goal is to dramatically increase intensity and differentiation through more individualization
- Content may be significantly different from first two levels as it is even more targeted
- More individualization and more time required

Secondary Schools

Principles are the same, especially for behavior

- Screening and progress monitoring must be in place
- Team- based decision making

Literacy is a central focus

- Primary: Focus on comprehension and vocabulary instruction across content areas
- Secondary and Tertiary represent alternatives depending on the type and severity of reading difficulties

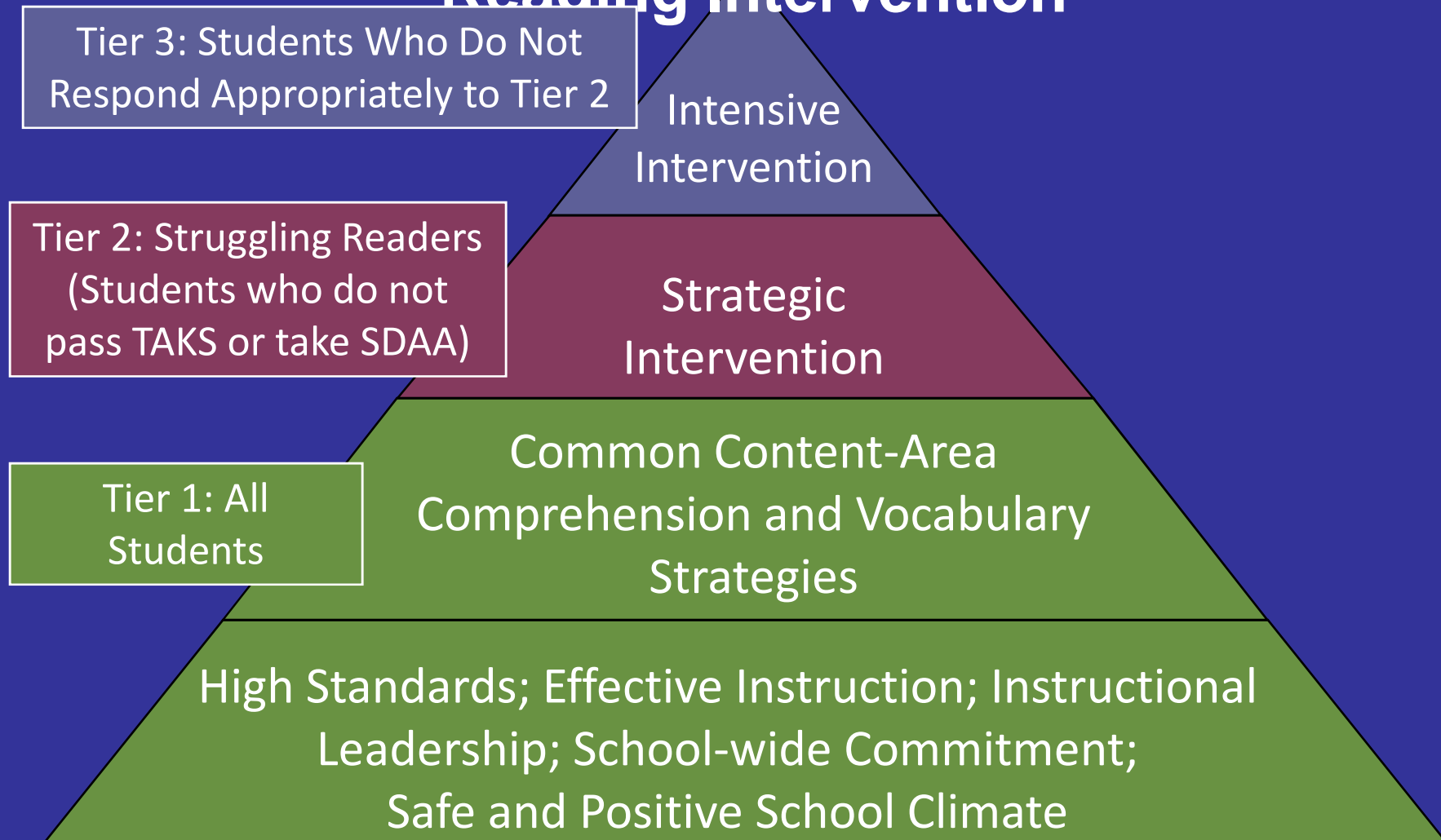
Its Not Just Comprehension

- Need to know who is “at- risk”
- What domain is the initial focus of intervention?
- How much progress is the student making?

Screening and Progress Monitoring

- Can history on state high stakes test be used as a screening tool? Its not just about passing...
- Further evaluate of those who don't achieve a critical level- passing may not be adequate
- Since rate of growth in reading is slower, do PM probes need to be done as frequently?
- Individual vs. group administrations

One Example of a Tiered Middle School Reading Intervention



http://www.texasreading.org/utcrla/materials/middle_school_instruction.asp

Tier 1

- Support and involve content teachers in a common set of procedures and strategies for explicitly teaching vocabulary and comprehension
- Help content teachers work with academically diverse students who range in reading level
- Focus on how to comprehend texts used in content areas and on how to think like content experts

<http://www.all4ed.org/publications/ReadingNext/index.html>

Tier II Intervention

- Read above grade 3 level
- Approximately 50 minutes daily as a reading class
- Class size 1:10 (?)
- Could involve decoding, fluency, and/or comprehension

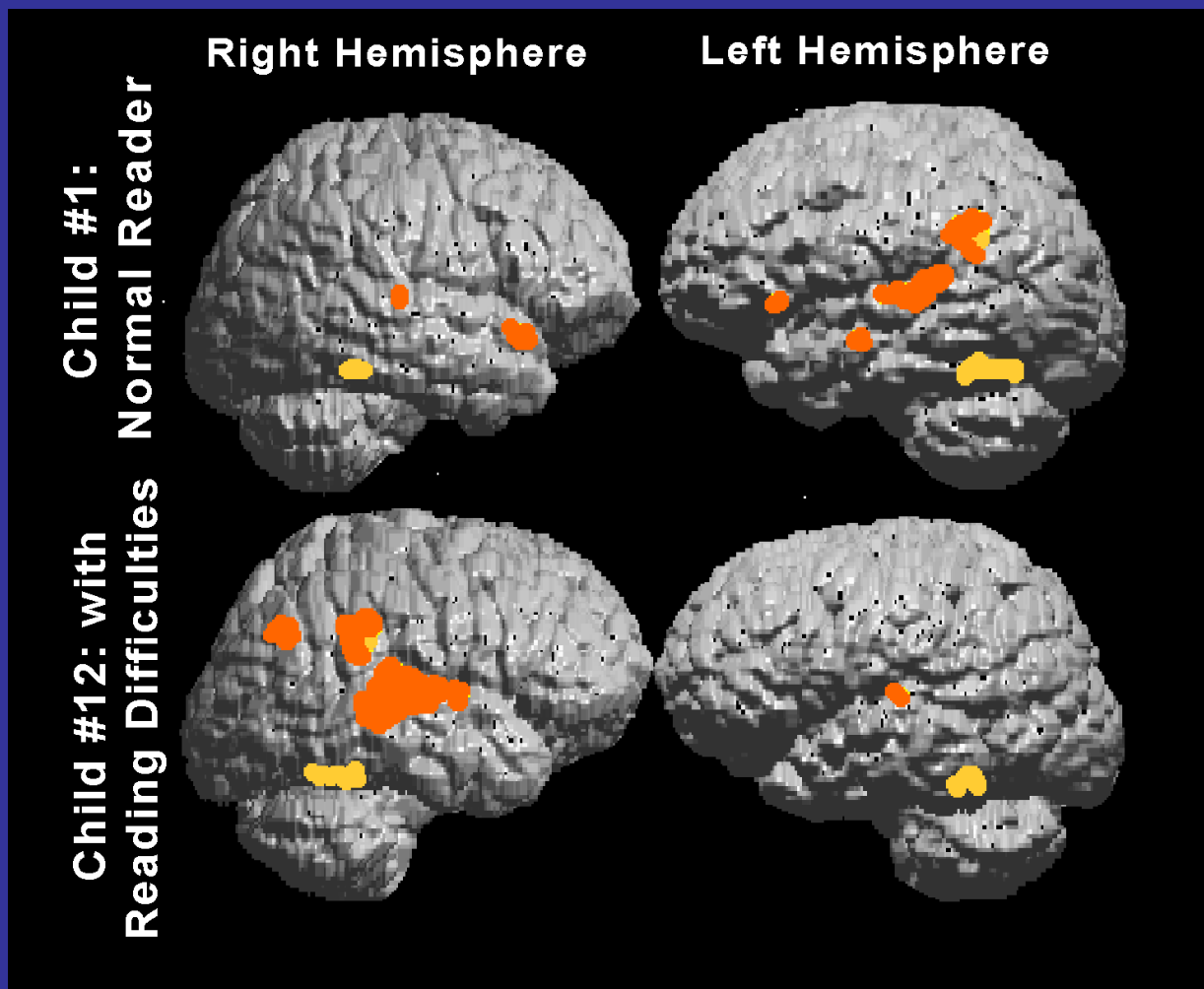
Tier III Intervention

- For Inadequate responders to Tier II or students reading below grade 3 level
 - Standardized protocol: highly specified procedures and practices for implementing intervention
 - Individualized protocol: instructional procedures and practices implemented with adaptations and accommodations to respond to individual student needs
 - Could involve decoding, fluency, and/or comprehension
- 1:5, 50 minutes daily

Reading Neural Systems Respond to Instruction



Neural Signature of Reading Disability (Papanicolaou)



Neural Response to Intervention

Does the pattern of brain activation change in response to intervention?

8 children with severe dyslexia

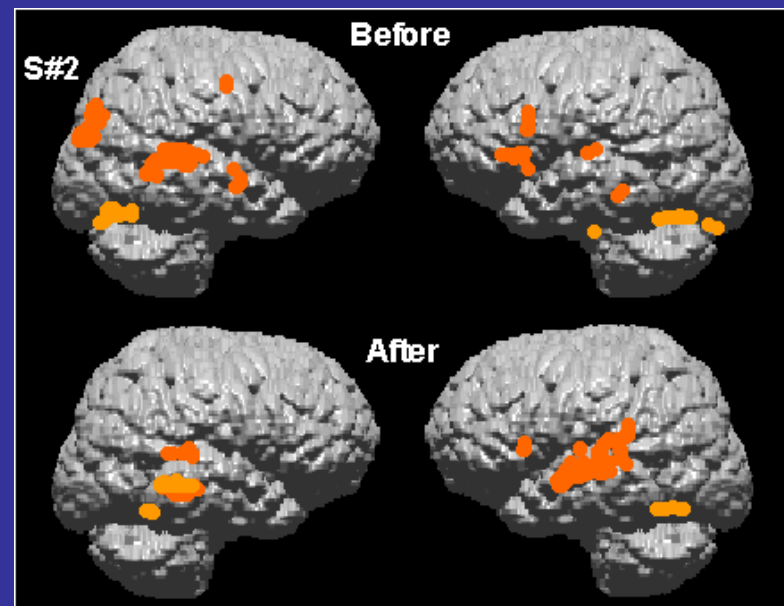
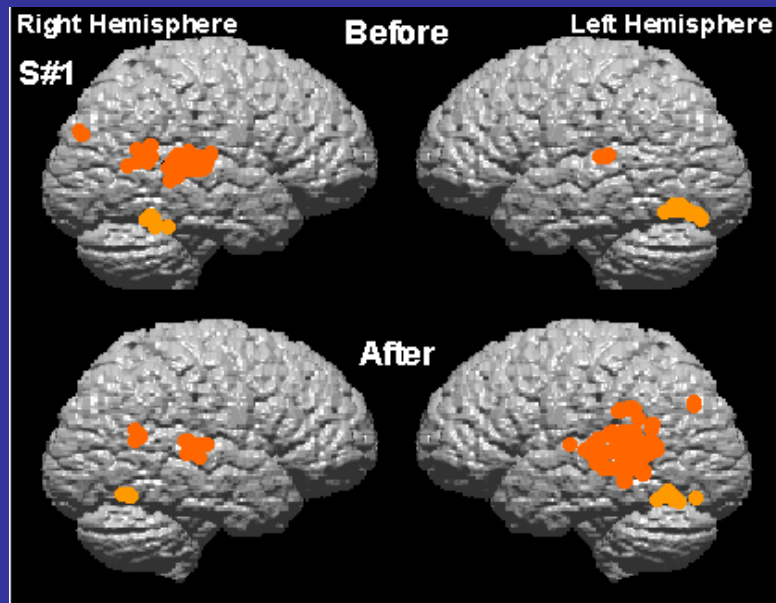
8 week intense phonologically- based intervention
(2 hours a day= up to 80 hours of instruction)\

Simos et al., *Neurology*, 2002

Demographic Information

Child	Gender	Age (years/mo)	WJ-III pre (%)	WJ-III post (%)	IQ	Medication
1	M	15	13	55	103	Adderal
2	M	10	2	59	95	Ritalin
3	M	10	2	38	110	Ritalin
4	F	8	3	55	105	Ritalin
5	F	7	2	50	110	Ritalin
6	M	7	18	60	101	—
7	M	11	1	38	98	Ritalin
8	M	17	1	45	102	—

Intervention Normalizes Brain Function (Simos et al., 2002)



Early Development of Reading Skills: A Cognitive Neuroscience Approach

(Jack M. Fletcher – PI)

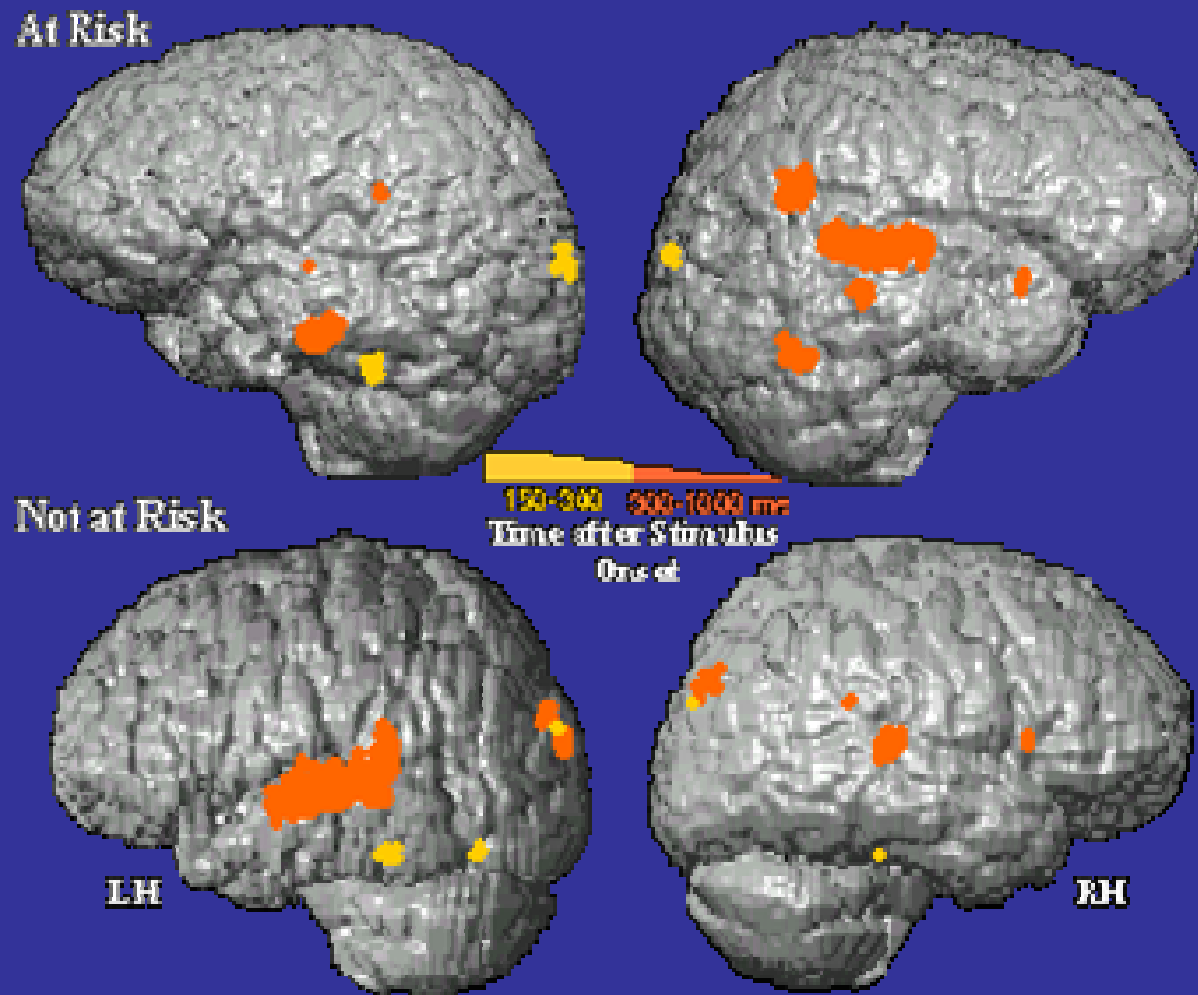
**Early Reading Intervention:
Mathes, Denton (Mathes et al., RRQ,
2005)***

**Brain Activation Patterns:
Papanicolaou (Simos et al.,
Neuropsychology, 2005; JLD, 2007)**

***Albert J. Harris award, IRA, 2006**



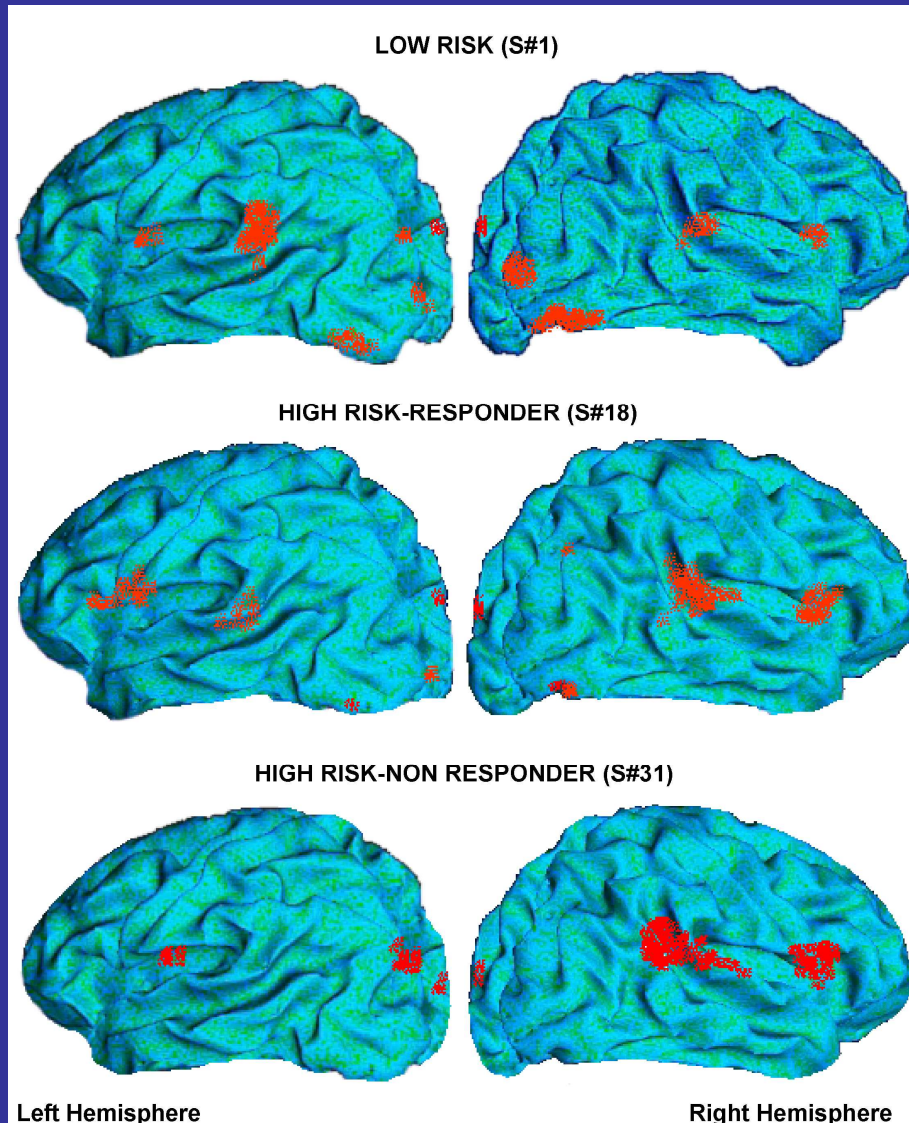
Early Detection of Aberrant Brain Activation Profiles for Reading (end K)



N= 45 children 6 yrs old

Simos et al., J Child Neural, 2002

Grade 1 Intervention



Simos et al
(Neuropsychology, 2006)- after
Grade 1
intervention in
Mathes et al.
(RRQ, 2005)

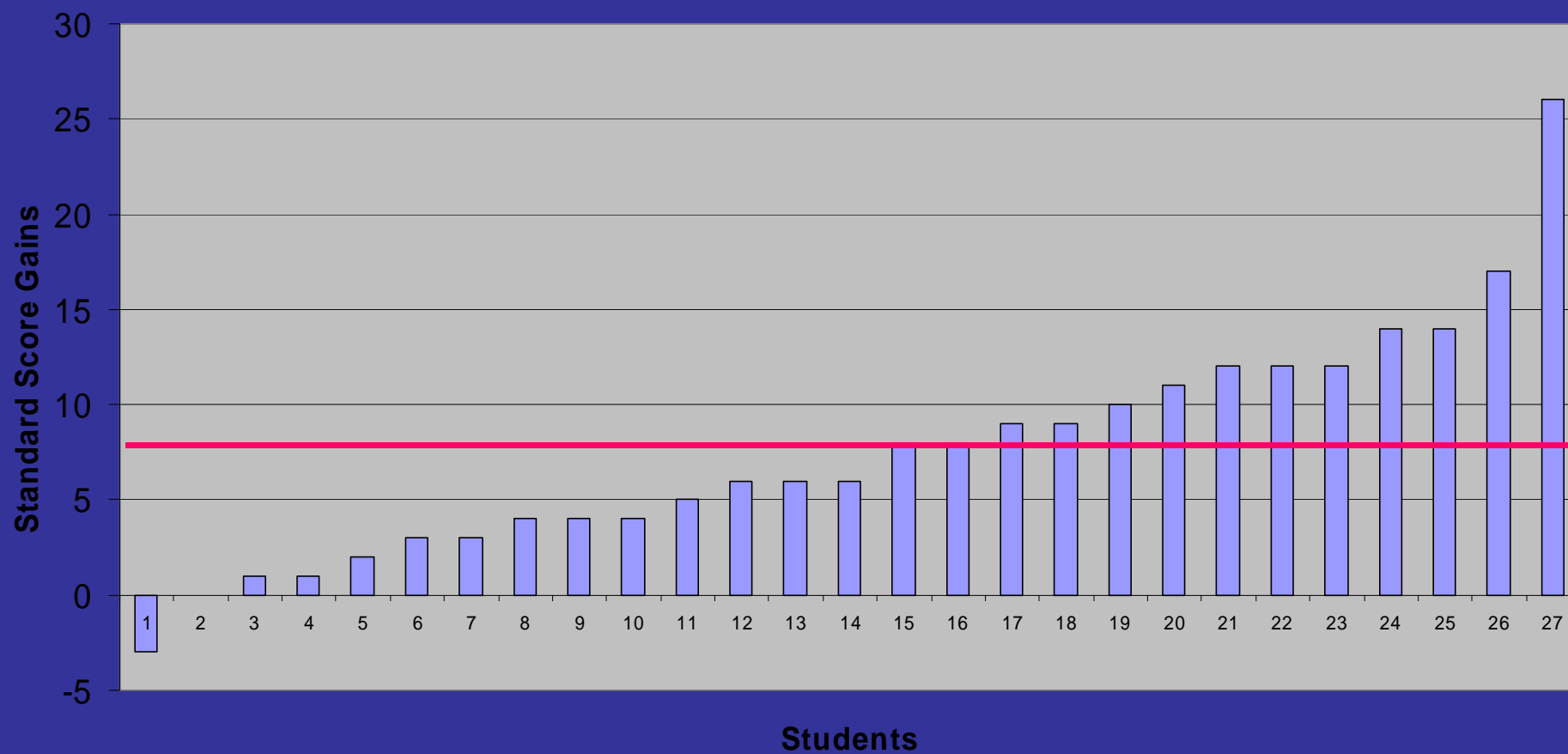
What percentage of children don't respond adequately to quality intervention?

Tier 1 only: $15/92 = 16\%$ (3.2% of school population)

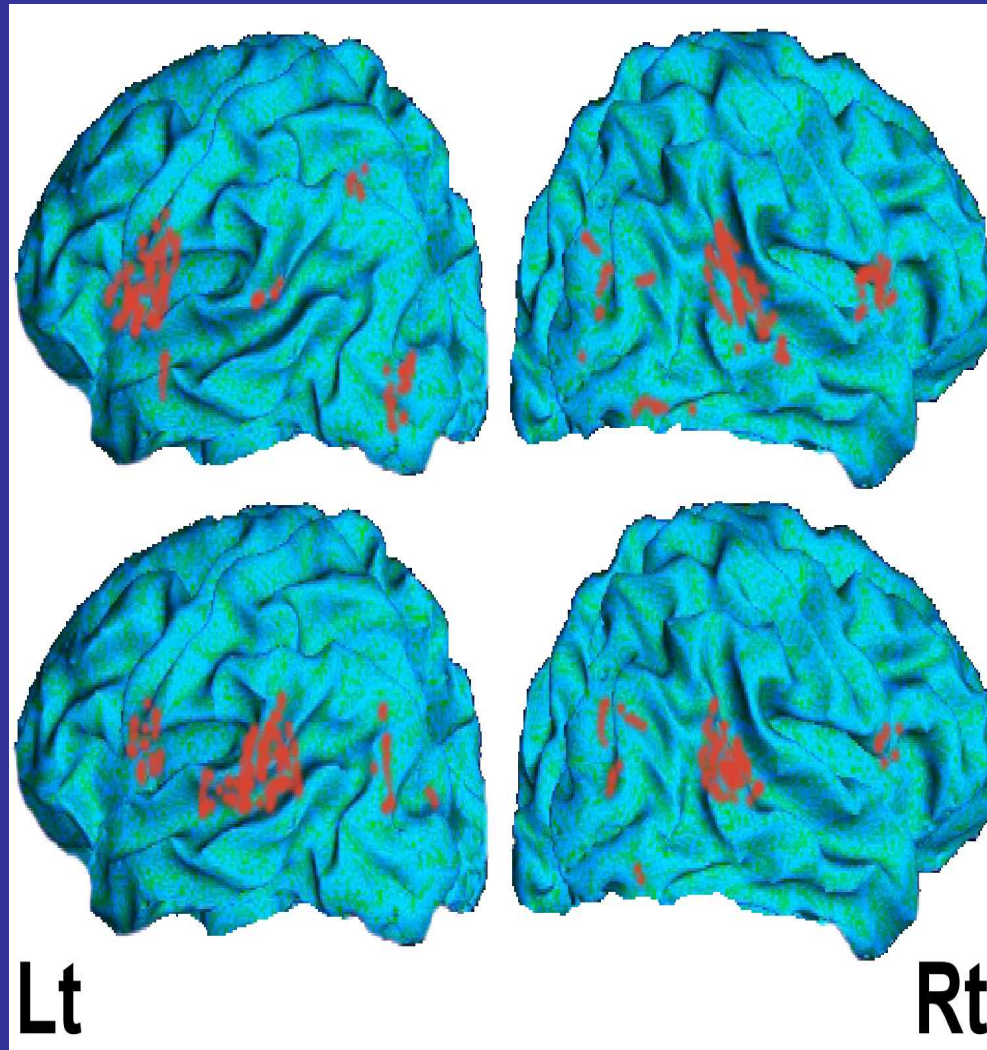
Tier 1 and 2: $7/163 = 4\%$ (<1% of school population)

**(Woodcock Basic Reading < 30th percentile);
fluency benchmarks add 5 students**

Gains in Basic Skills Standard Score Points During 16-Week Intervention



Response to Tertiary Instruction



Decisions for RTI

- Leadership
- Professional development
- Role of parents
- Universal screening and progress monitoring
- Criteria for inadequate response
- Standard protocol vs. problem solving model
- Role of special education and assessment professionals
- Comprehensive evaluations and identification

www.studentprogress.org

www.centeroninstruction.org

Why RTI?

1. Focus shifts from who is eligible to concerns about providing effective instruction: breaks down the silos
2. Identification is not dependent on teacher referral
3. Allows placement of student in intervention immediately rather than after time-consuming and often delayed expensive assessments.

Why RTI?

4. Student's referral includes data indicating how the student has responded to various interventions
5. "Appropriateness" of instruction measured, not surmised
6. Promotes unity of special ed and general ed- a seamless system: **Lines up NCLB and IDEA 2004**

We Have the Tools! We don't apply the tools
in schools!

There is a wealth of evidence- based
programs and strategies for students
poorly prepared for learning to read and
with or at-risk for LD (Swanson et al.,
Handbook of LD, Guilford, 2003; Fletcher
et al., Guilford, 2007).

jackfletcher@uh.edu

www.texasldcenter.org