

Introduction to Data-Based Individualization (DBI): Considerations for Implementation in Academics and Behavior

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Introduction to the module

This is the first in a series of training modules developed by the National Center on Intensive Intervention (NCII) aimed at district or school teams involved in initial planning for using DBI as a framework for providing intensive intervention in academics and behavior. The audience for this module may include the behavior support team, interventionists, special educators, school psychologists, counselors, and administrators, as appropriate. Subsequent modules will provide additional information about specific components of the DBI process. More information about NCII's approach to intensive intervention can be found in the NCII concept paper *Data-Based Individualization: A Framework for Intensive Intervention*. The concept paper is available at http://www.intensiveintervention.org/sites/default/files/Data-based_Individualization_A_Framework.pdf.

Instructions for using the speaker notes

- Text formatted in standard font is intended to be read aloud or paraphrased by the facilitator.
- Text formatted in **bold** is excerpted directly from the presentation slides.
- Text formatted in *italics* is intended as directions or notes for the facilitator; italicized text is not meant to be read aloud.
- Text formatted in underline indicates an appropriate time to click to bring up the next stage of animation in an animated slide.

Speaker notes for Title Slide

Welcome participants to the training on Data-Based Individualization (DBI). Introduce yourself (or selves) as the facilitator(s) and briefly cite your professional experience with regard to intensive intervention and DBI

Please note that pen and paper will be required for the Think-Pair-Share activity (Slide 24).

The following handouts should be provided to participants:

"Handout 1: Instruction and Intervention Inventory" for Activity 1 (see Slide 34)

"Handout 2: Academic Intervention Progression" visual to accompany Academic Illustration (see Slide 36)

"Handout 3: Behavioral Progression" visual to accompany Behavior Illustration (see Slide 59)

While permission to reprint this publication is not necessary, the citation should be:

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Today's Presentation

- Overview
- Rationale for intensive intervention
- Introduction to Data-Based Individualization (DBI)
- Academic illustration
- Behavior illustration
- Wrap-up

Read slide.

The agenda may be changed to fit the time frame and focus of the training.

This module takes 2.5–3.5 hours to complete (including slide presentation and integrated activities). A good time to take a break is after Activity 1, before beginning the Academic Illustration (Slide 36). An alternative break time is after the Academic Illustration, before beginning the Behavior Illustration (Slide 59).

Learning Objectives:

By the end of today, participants will be able to...

1. Understand the rationale for intensive intervention.
2. Describe the progression of the DBI process.
3. Name two important features that distinguish secondary (e.g., Tier 2) from intensive intervention.
4. Provide examples of quantitative and qualitative intervention changes.

The learning objectives for this training are:

Read slide to participants.

What is intensive intervention?

Intensive intervention is designed to address *severe and persistent* learning or behavior difficulties. Intensive interventions should be:

- (a) Driven by data
- (b) Characterized by increased intensity (e.g., smaller group, expanded time) and individualization of academic instruction and/or behavioral supports

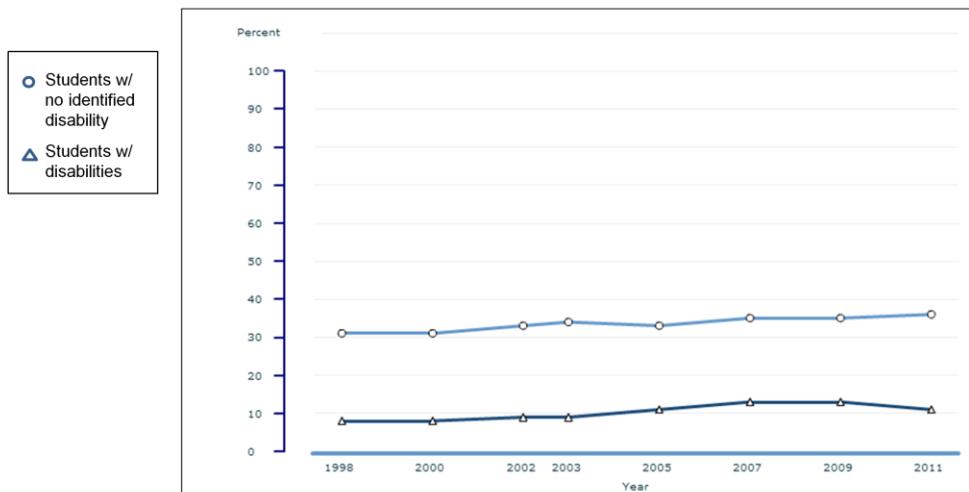
Read slide to highlight distinguishing characteristics of intensive intervention.

Rationale for Intensive Intervention

- Students with disabilities have a history of poor outcomes, compared to their peers without disabilities, in several areas:
 - Academic achievement
 - High school completion
 - Postsecondary education
 - Employment
 - Involvement with the criminal justice system

Read slide.

Rationale for Intensive Intervention: NAEP Reading, Percentage of Fourth-Grade Students at or Above “Proficient” (1998–2011)



(<http://nationsreportcard.gov/>)

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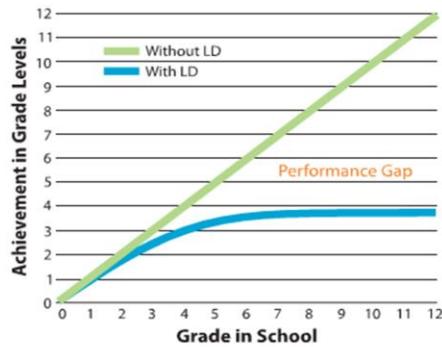
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This graph compares the performance across time of students with disabilities (bottom line) and without disabilities (top line) in fourth-grade reading on the National Assessment of Educational Progress (NAEP). Eleven percent of fourth-graders with disabilities performed at or above the “Proficient” level on the NAEP in 2011, compared to 36 percent of their non-disabled peers. This proficiency rate is down from 13 percent in 2009 ($p < .05$). Patterns are similar at eighth grade (8 percent Proficient) and for mathematics (17 percent at fourth grade and 9 percent at eighth grade).

(Downloaded from <http://nationsreportcard.gov/>).

Rationale for Intensive Intervention: Growing Achievement Gap

**Achievement gap between students
with LD and students without LD**



(Cortiella, 2011, p. 15)

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The achievement gap between students with and without a learning disability (LD) increases as students advance from one grade to the next. By the secondary level, students with an LD are, on average, three years behind in reading and mathematics.

Rationale for Intensive Intervention: Dropout Rates

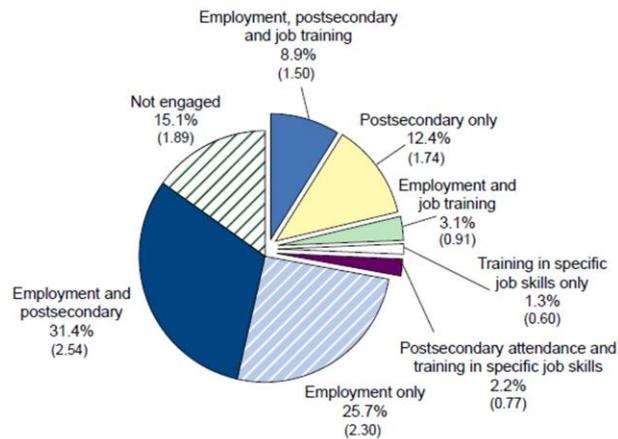
- All students (2010): 7.4 percent
- All students with disabilities (2006): 26.2 percent
 - Learning disabilities: 25.1 percent
 - Emotional disturbance: 44.9 percent
 - Intellectual Disability (formerly mental retardation): 22.3 percent
 - Other health impaired: 23.4 percent

(Aud et al., 2012; Planty et al., 2008)

Note: There are differences in how “dropout” was defined in these sources (The Condition of Education 2012 and 2006), and 2006 was the latest available data broken out for students with disabilities.

In general, students with disabilities have a much higher dropout rate. Students in the Emotional Disturbance category had the highest dropout rate of all disability categories, followed by Learning Disabilities.

Rationale for Intensive Intervention: Modes of Postsecondary Engagement Among Students With Disabilities



Note: Standard errors are in parentheses.

(Sanford et al., 2011, p. 33)

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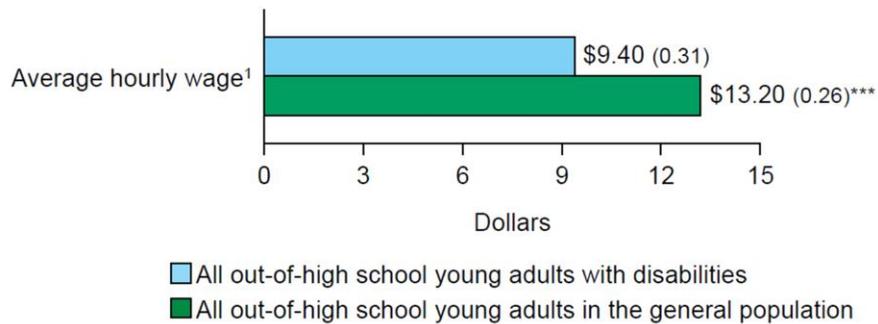
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These data come from the National Longitudinal Transition Study-2 (NLTS-2).

This pie chart shows how young adults with disabilities were engaged after high school. Overall, 15 percent had not engaged in paid employment, job training, or postsecondary education since leaving high school. This is significantly higher than the rate of 5 percent for young adults in the general population. Furthermore, 25.7 percent of students with disabilities were engaged in employment only, suggesting lower wages than those who gained employment following postsecondary education (see next slide).

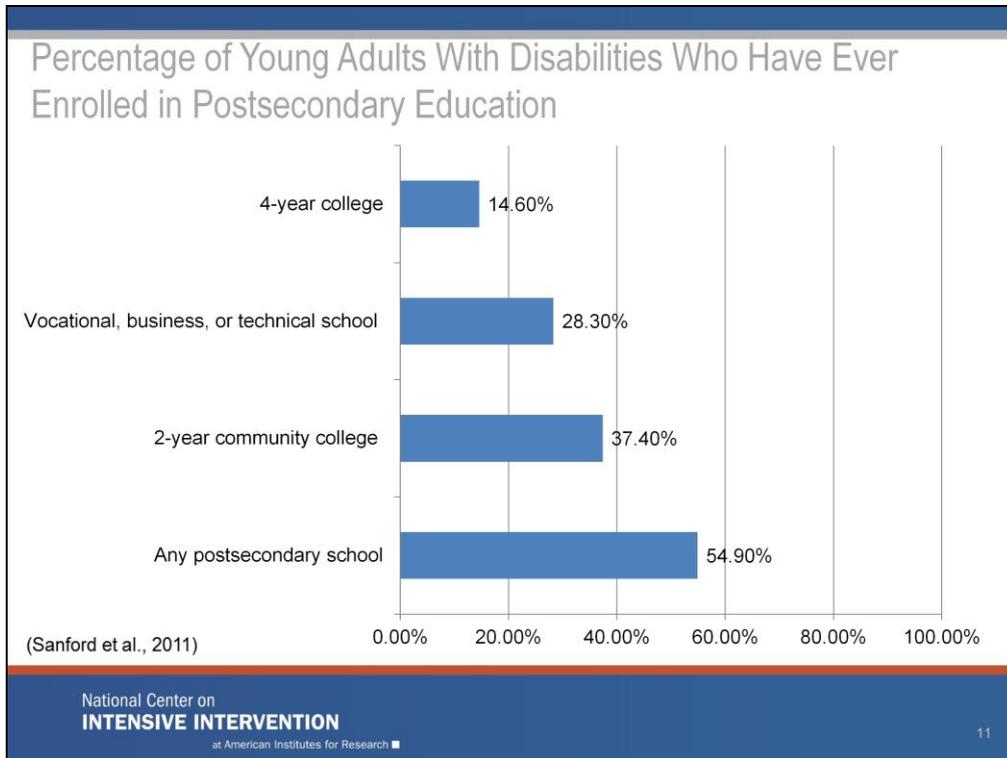
Need for Intensive Intervention: Wage Comparison by Disability Status



(** $p < .01$; Sanford et al., 2011, p. 27)

These data come from the National Longitudinal Transition Study-2 (NLTS2).

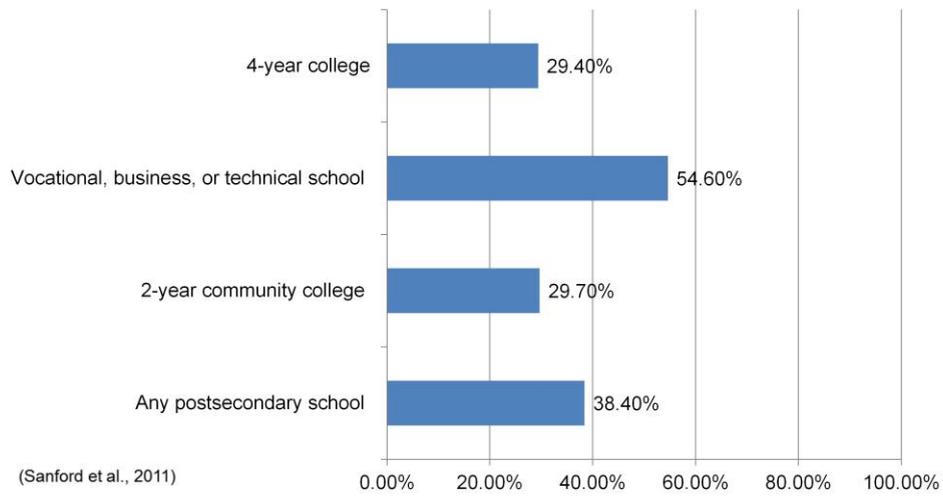
Students with disabilities earn lower wages than their peers without disabilities. When considered within the context of their low rate of participation in postsecondary education, this wage gap is likely to grow with time, as many students with disabilities will not develop the skills necessary to advance into higher paying jobs.



These data come from the National Longitudinal Transition Study-2 (NLTS2).

Only 54.9 percent of young adults with disabilities have ever enrolled in any postsecondary education, compared to 62.1 percent of young adults in the general population.

Need for Intensive Intervention: Percentage of Young Adults With Disabilities Completing Postsecondary School (Among Those Ever Enrolled)



These data come from the National Longitudinal Transition Study-2 (NLTS2).

Among young adults who ever enrolled in postsecondary college (54.9 percent of students with disabilities), completion rate is significantly lower among students with disabilities (38.4 percent) than young adults without disabilities (51.2 percent).

Need for Intensive Intervention: Interaction With Criminal Justice System

Criminal justice system involvement	Learning disability	Speech/language impairment	Mental retardation	Emotional disturbance	Hearing impairment	Visual impairment	Orthopedic impairment	Other health impairment	Autism	Traumatic brain injury	Multiple disabilities	Deaf-blindness
	Percent											
Arrested one or more times	22.3 (3.34)	16.5 (2.92)	12.5 (2.71)	49.4 (4.41)	10.3 (3.12)	7.9 (3.12)	7.5 (2.48)	22.4 (3.49)	6.2 (2.54)	23.2 (6.41)	8.1 (3.14)	10.5 (4.27)
Parole one or more times	11.8 (2.59)	6.3 (1.91)	5.2 (1.82)	34.0 (4.18)	3.0 (1.75)	2.9 (1.94)	3.6 (1.76)	12.4 (2.76)	2.2 (1.55)	19.2 (5.98)	5.0 (2.51)	1.1 (1.45)

Twenty-three percent of young adults with disabilities have been arrested at least once, approximately twice the rate for youth in the general population (12%; $p < .001$).

(Sanford et al., 2011)

Twenty-three percent of young adults with disabilities have been arrested at least once, almost twice the rate for youth in the general population (12 percent). Rates for arrest and parole are highest among students identified as having Emotional Disturbance (49.4 percent).

What do these data suggest?

- On average, students with disabilities continue to have low academic achievement.
- Despite improvements over the past two decades, students with disabilities continue to drop out of school at unacceptably high rates.
- Low postsecondary completion rates suggest many students with disabilities lack the skills and supports (social/emotional, financial, and academic) needed to graduate.
- The low rates of postsecondary engagement among young adults with disabilities puts them at risk for a lifetime of unstable employment and low-wage work and may also contribute to high incarceration rates.

Our current K–12 system may not adequately prepare students with disabilities for school, work, and life.

(Sanford et al., 2011)

Read slide.

What can we do?

Positive outcomes are possible!

- Reading intervention research
 - Intensive intervention is associated with improved reading across skills and grades
- High-performing sites
 - Students with disabilities in innovative districts are more likely to do well on state achievement tests

While students with disabilities still face poorer outcomes on average, these outcomes can be improved.

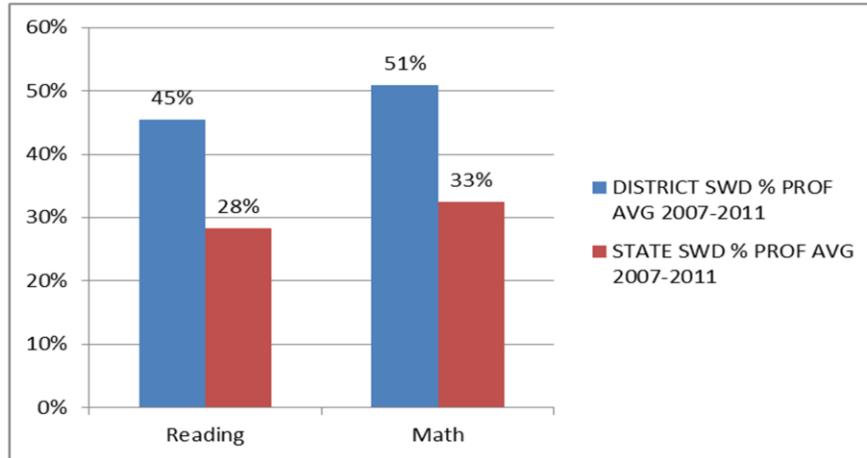
Mean Effect Sizes for Students With Reading Difficulties Provided Intensive Interventions

Student Outcome	Early Elementary K–3		Upper Grades 4–9	
	Mean ES	No. of Effects	Mean ES	No. of Effects
Comprehension	.46	25	.09	37
Reading Fluency	.34	11	.12	8
Word Reading	.56	53	.20	22
Spelling	.40	24	.20	5

Note: ES = effect size

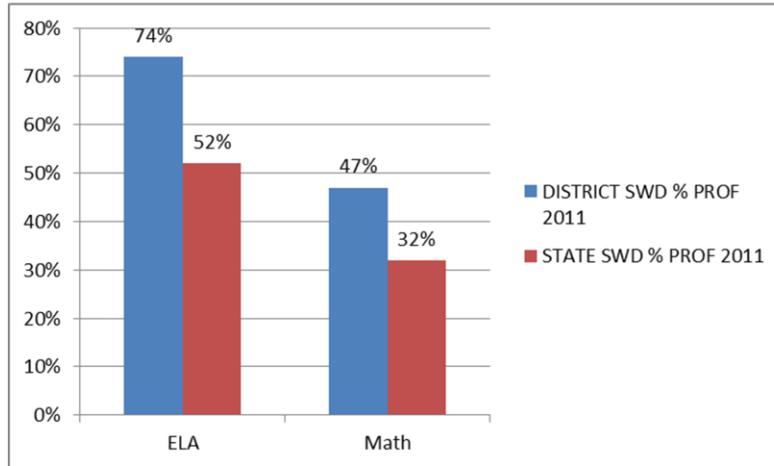
(Wanzek et al., 2013)

A meta-analysis of extensive interventions (75 or more sessions not part of the general curriculum) found positive results for students with learning disabilities or reading difficulties, with stronger effect sizes for early elementary.



Okaloosa, Florida: Average percentage of students with disabilities achieving proficiency on the state reading and mathematics tests, compared to the state average: 2007–2011

As part of its knowledge development activities, NCII identified high-performing districts. Okaloosa was the No. 1 ranked district in the state of Florida. The students with disabilities in this district were much likelier to achieve a proficient score on state tests compared to the state average.



Jenison, Michigan: Average percentage of students with disabilities achieving proficiency on the state reading and mathematics tests, compared to the state average: 2011

Jenison was nominated due to its involvement with MiBlisi, Michigan's Integrated Behavior and Learning Support Initiative. Jenison's students with disabilities outperformed the state average in both mathematics and English language arts (ELA), with almost three quarters achieving proficiency in ELA.

Patterns Observed in High-Performing Sites

- Intensive intervention is embedded within a multi-tiered system of support (MTSS) such as Response to Intervention (RTI) or positive behavioral interventions and supports (PBIS).
- Progress monitoring data collected to determine response to intervention.
- Challenges remain:
 - Unclear distinction between secondary (Tier 2) and intensive (tertiary/Tier 3) interventions
 - Intensity of intervention defined more often in “quantitative” ways than in “qualitative” ways
 - Use of progress monitoring data more clearly defined and well established in reading than in mathematics or behavior

Data-based individualization helps to address these challenges.

Introduction to Data-Based Individualization (DBI)

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Now that we have identified the challenges facing students with disabilities, and shown that positive outcomes are possible, we would like to introduce data-based individualization, NCII's approach to intensive intervention.

NCII's Approach to Intensive Intervention: Data-Based Individualization (DBI)

Data-Based Individualization (DBI) is a systematic method for using data to determine *when and how* to provide more intensive intervention:

- Origins in data-based program modification/experimental teaching were first developed at the University of Minnesota (Deno & Mirkin, 1977) and expanded upon by others (Capizzi & Fuchs, 2005; Fuchs, Deno, & Mirkin, 1984; Fuchs, Fuchs, & Hamlett, 1989).
- DBI is a process, not a single intervention program or strategy.
- Not a one-time fix—ongoing process comprising intervention and assessment adjusted over time.

Read slide.

Who needs intensive intervention?

- Students with disabilities who are not making adequate progress in their current instructional program
- Students who present with very low academic achievement and/or high-intensity or high-frequency behavior problems (typically those with disabilities)
- Students in a tiered intervention program who have not responded to secondary intervention programs delivered with fidelity

Note for second bullet:

The decision to move a student directly to an intensive intervention should be made on an individual and case-by-case basis. In most cases, data should be collected over time to help demonstrate that the student's low achievement/behavior challenges are both significant AND persistent.

Is DBI the same as RTI? Special education?

Many components of DBI are consistent with elements of special education and tiered service delivery systems.

Tiered Interventions (RTI, MTSS, PBIS)

- Universal, secondary, and tertiary interventions
- Progress monitoring
- Team-based decisions based on data

Special Education

- Individualized intervention
- Progress monitoring
- Team-based decisions based on data

When thinking of students with the most intense needs, it may be natural to think of students who qualify for special education services, or those students who require the most intensive services available in tiered intervention systems such as Response to Intervention (RTI), multi-tiered system of support (MTSS), or positive behavioral interventions and supports (PBIS).

Many components of DBI are consistent with elements of special education and tiered service delivery systems. The individualization aspect of DBI is aligned with the principles of serving students with diverse needs.

Progress monitoring and team-based decisions based on data are shared, key components of DBI, tiered interventions, and special education. Students who are likely to benefit from DBI may be, but are not necessarily, receiving special education.

DBI is often built upon tiered systems, with strong universal and secondary interventions serving as precursors to individualization.

Think-Pair-Share

In what ways are Tier 3/intensive interventions in your school different from special education services? In what ways are they the same?

Think about how intensive interventions and special education services in your school are different and similar.

Give participants approximately 20 seconds.

Pair and share with your neighbor/table and jot down your answer.

Give participants approximately two to three minutes.

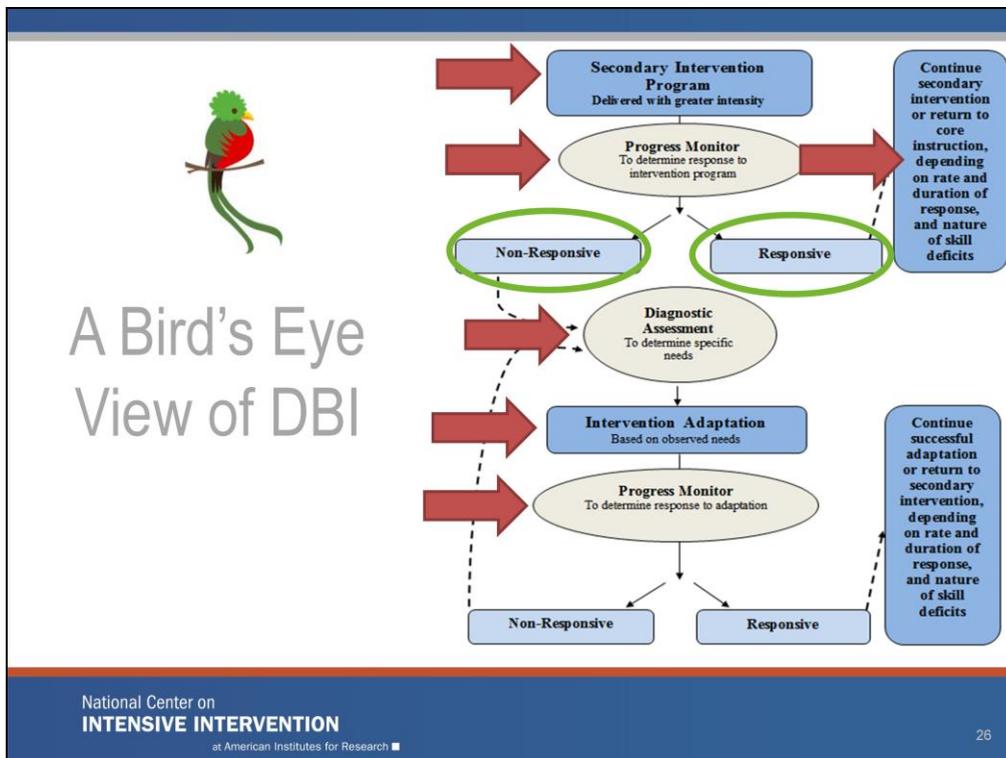
Allow two or three pairs/tables to orally share their answers.

Five DBI Steps

1. Secondary intervention program, delivered with greater intensity
2. Progress monitoring
3. Informal diagnostic assessment
4. Adaptation
5. Continued progress monitoring, with adaptations occurring whenever needed to ensure adequate progress

Throughout the DBI process, we use progress monitoring data to evaluate a student's response to intervention, moving to the next component as needed:

1. **Secondary intervention program, delivered with greater intensity.** We usually begin by intensifying the secondary intervention already being used.
2. **Progress monitoring** data are used to evaluate the student's response to the intensified intervention. If the student is still not showing enough progress, we collect and review additional data to determine specific skill deficits.
3. **Informal diagnostic assessment** data are used to identify skill deficits, which tell us how the intervention needs to be changed.
4. **Adaptation.** Based on data, we may choose to adapt the current intervention or try a new intervention.
5. **Continued progress monitoring, with adaptations occurring whenever needed to ensure adequate progress.**



Animated slide. Click at underlined text.

NCII uses this graphic to illustrate the progression of DBI. We begin with a secondary intervention program, delivered with greater intensity, and progress monitor to determine the student's response. If the student is responsive, we can continue the current intervention or consider reducing intensity as goals are met (depending on rate and duration of response and nature of skill deficits). If the student is not sufficiently responsive, we gather additional information through informal diagnostic assessment, which identifies student needs to guide intervention adaptations. We continue progress monitoring to make decisions about whether or not the student is responding to the adapted intervention.

Before we begin DBI...

- Start with a standardized secondary program (if available; e.g., Check-in/Check-out, Good Behavior Game, Number Rockets*).
- Progress monitor to evaluate the student's response to the secondary intervention.

*NCII does not endorse products. These are noted for illustrative purposes only.

In most cases, we want to give students the chance to respond to a secondary intervention appropriate to their needs before we determine that they need intensive, individualized interventions. After we go over the DBI steps, we will talk more about what we mean by secondary interventions.

What are secondary interventions?

- Standardized, evidence-based interventions designed for at-risk students
- Often referred to as...
 - Tier 2 or strategic intervention
 - Remedial curriculum
- Common examples
 - Leveled Literacy Intervention (LLI)
 - Wilson Just Words
 - Check-in/Check-out
 - Corrective Math

Secondary interventions are standardized, evidence-based interventions designed for at-risk students. They are sometimes scripted and involve detailed lesson components and a specific scope and sequence.

Thinking About Intervention Levels/Tiers

	Primary (T1)	Secondary (T2)	Intensive (T3)
Instruction/ Intervention Approach	Comprehensive research-based curriculum	Standardized, targeted small-group instruction	Individualized, based on student data
Group Size	Class-wide (with some small group instruction)	3–7 students	No more than 3 students
Monitor Progress	1x per term	At least 1x per month	Weekly
Population Served	All students	At-risk students	Significant and persistent learning needs

Review table. Highlight the differences between the tiers in terms of:

- *Increasingly focused/tailored approach*
- *Decreasing group size*
- *Increasing frequency of progress monitoring*
- *Increasing student need*

Key Questions About the Secondary Intervention

- Has the student been taught using an evidence-based secondary intervention program (if available) that is appropriate for his or her needs?
- Has the program been implemented with fidelity?
 - Content
 - Dosage/schedule
 - Group size
- Has the program been implemented for a sufficient amount of time to determine response?

In most cases, we would not determine that a student requires data-based individualization until we have evidence that she or he is not responding to secondary intervention. Key questions in reviewing this evidence include—

- **Has the student been taught using an evidence-based secondary intervention program (if available) that is appropriate for his or her needs?** The secondary intervention should match the student's identified needs.
- **Has the program been implemented with fidelity?** Fidelity addresses whether or not the intervention is being delivered as planned.
 - **Content.** Are all key components being delivered per instructions?
 - **Dosage/schedule.** Has the intervention been delivered as intended in terms of frequency and length of sessions?
 - **Group size.** Is the group the size recommended by the intervention developer? You might also want to consider the group composition—do these students have similar needs that match the intervention? Do any students have competing behavior issues?
- **Has the program been implemented for a sufficient amount of time to determine response?** Consider this question in terms of how long the intervention is intended to be implemented and also in terms of having enough data to detect a change in performance.

Why start with a standardized, evidence-based program?



- When properly aligned to students' needs, they tend to work—teachers don't need to “reinvent the wheel.”
- They are efficient—teachers can plan instruction for groups rather than individual students.
- Many require only a modest amount of training—often, paraeducators can help with delivery.
- Often inexpensive.

Read slide.

NCII's Intervention Tools Chart Provides Reviews of Secondary Intervention Programs

<http://www.intensiveintervention.org/resources/tools-charts>

Academic Intervention

The tools chart presents information about studies that have been conducted about academic intervention programs. The first tab, Study Quality, includes ratings from our TIC members on the technical rigor of the study design. The second tab, Effect Size, includes information about the results of the studies. The third tab, Intensity, provides information related to the implementation of the program as an intensive intervention. The fourth tab, Additional Research, provides information about other studies and reviews that have been conducted on the intervention.

Title	Study	Participants	Design	Fidelity of Implementation	Measures Targeted	Measures Broader
Academy of READING	Fiedorowicz & Trikes (1987)	●	●	●	●	●
AWARD Reading	Stork, & Mangen (Tech. Rep.)	●	●	●	●	●
Failure-Free Reading	Torgesen, Miers, Shtem, Stuart, Vanmanan, et al. (2006)	●	●	●	●	●
Fast Forward Language Stories	Slattery (2003)	●	●	●	●	●
FocusMATH Intensive Intervention	Syers & Baird-Wilkerson (2012)	●	●	●	●	●
Leveled Literacy Intervention System	Kanefford-Kalton, Flynn, Ross, Franceschini, Zolotorov, et al. (2010)	●	●	●	●	●
Lexia Reading	Macaruso & Rodman (2011)	●	●	●	●	●

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See the NCII website for training resources for using the tools charts. Tools charts are updated annually, so check the site for changes and new content.

Can I still implement DBI if I don't have a complete menu of standardized programs?



- Yes!
- Use them *when available* and consider augmenting current offerings if there are content areas where you have insufficient resources.
- Also consider—
 - Remediation materials that came with your core program
 - Expert recommendations (if evidence-based programs are not available) from Institute of Education Sciences (IES) practice guides, reputable professional organizations, etc.
 - Standards-aligned materials
- Collect data to determine whether *most* students are profiting.

Sources for recommendations include:

What Works Clearing house <http://ies.ed.gov/ncee/wwc/>, which includes IES practice guides

Handout 1: Instruction and Intervention Inventory (Optional)

- See “Instruction and Intervention Inventory” handout.
- As a team, take 10 minutes to discuss:
 - Core program offerings (do this quickly and then focus on interventions at Tiers 2 and 3).
 - Available *standardized intervention programs* in your school in reading, mathematics, and behavior (for Tier 2).
 - Supports provided at the intensive (Tier 3) level.
 - Areas in need of additional resources at either the Tier 2 or Tier 3 intervention levels.

Use Handout 1—Instruction and Intervention Inventory.

The purpose of this optional activity is to have teams:

1. *Consider current secondary practices and how they differ from current Tier 3/ intensive practices.*
2. *Begin to think about the role of standardized versus individualized intervention as critical features when planning secondary and intensive intervention groups.*
3. *Begin to identify current strengths and needs in their current intervention system.*

After teams have discussed the handout for ~10 minutes, bring the group together for a short conversation, if time allows.

Possible questions:

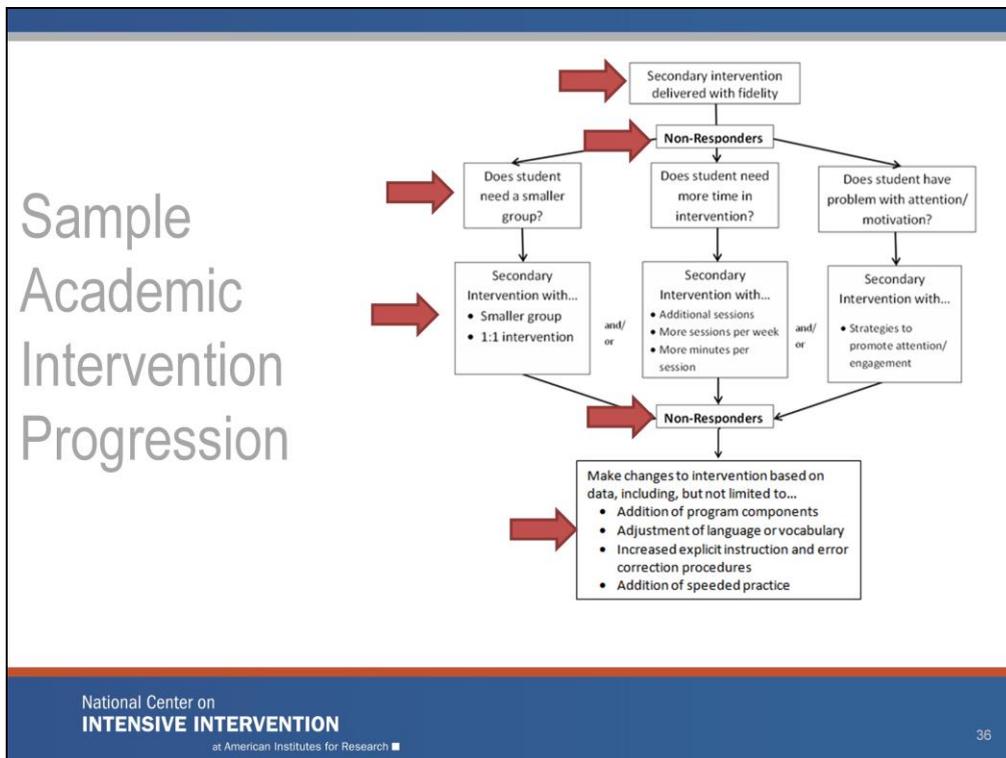
1. *Are you satisfied with current intervention offerings at your school?*
2. *What are some advantages/disadvantages of standardized programs?*
3. *Do you know if the interventions used at your school are being implemented as planned?*
 1. *Session length and frequency*
 2. *Group size*
 3. *Following standard instructions*
4. *What additional information do you need to gather?*

Academic Illustration of DBI

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We will now use an academic case example to illustrate the DBI process.



Animated slide. Click at underlined text to bring up next arrow.

See Handout 2—Academic Intervention Progression for a larger, printable version of this slide.

In this academic illustration, we will walk you through the DBI process for a student having reading difficulties. As in the previous DBI graphic, we begin with a secondary intervention delivered with fidelity. Progress monitoring data identify students who are not responding. Diagnostic assessment helps us determine the student’s needs, and these needs guide our adaptation to the intervention. We continue progress monitoring to determine if the student is responding to the adaptation. If not, we will make more data-based changes.

Secondary Intervention Program: Student Example—Kelsey

Background: Kelsey presented serious reading problems, reading at an early second-grade level at the beginning of fourth grade.

Intervention program: Kelsey’s teacher selected a research-validated program that addressed phonological awareness, word study, and fluency skills.

Read slide.

Secondary Intervention Program: Kelsey

Fidelity

- Group size: six students
- Session length: 20–40 minutes per session
- Frequency: three to four sessions per week
- Program duration: seven weeks
- Instructional content and delivery: explicit instruction covering all components laid out in the instruction manual
- Progress monitoring: Passage Reading Fluency (PRF)

Kelsey's teacher made sure to implement the program with fidelity by following key components (*review slide*).

Caveat: A small number of students may present with very significant academic or behavioral difficulties where a standardized secondary intervention is unlikely to be effective. Intervention teams may choose to bypass the secondary intervention program in favor of moving directly to intensive intervention in these instances. However, decisions to bypass a standardized secondary program should be made on an individual, case-by-case basis. Progress monitoring data should be reviewed regularly to determine if the student is making progress in his or her intervention program.

Progress Monitoring: Does Kelsey need DBI?

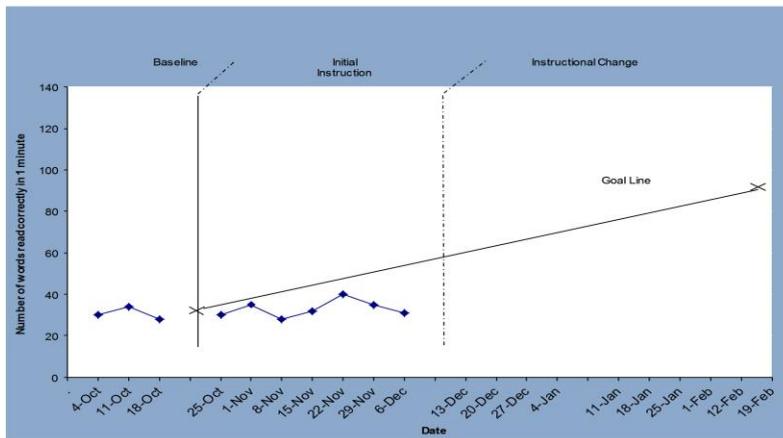
Reliable and valid tool: Kelsey's teacher implemented formal progress monitoring using PRF assessments that were a match for her reading skills.

Detect improvement: This progress monitoring tool is appropriate to her skill level, allowing her teacher to detect changes in Kelsey's reading.

Rate of progress: Based on Kelsey's progress monitoring graph, she was not progressing at the rate needed to meet her goal.

Read slide.

Progress Monitoring: Kelsey's Reading

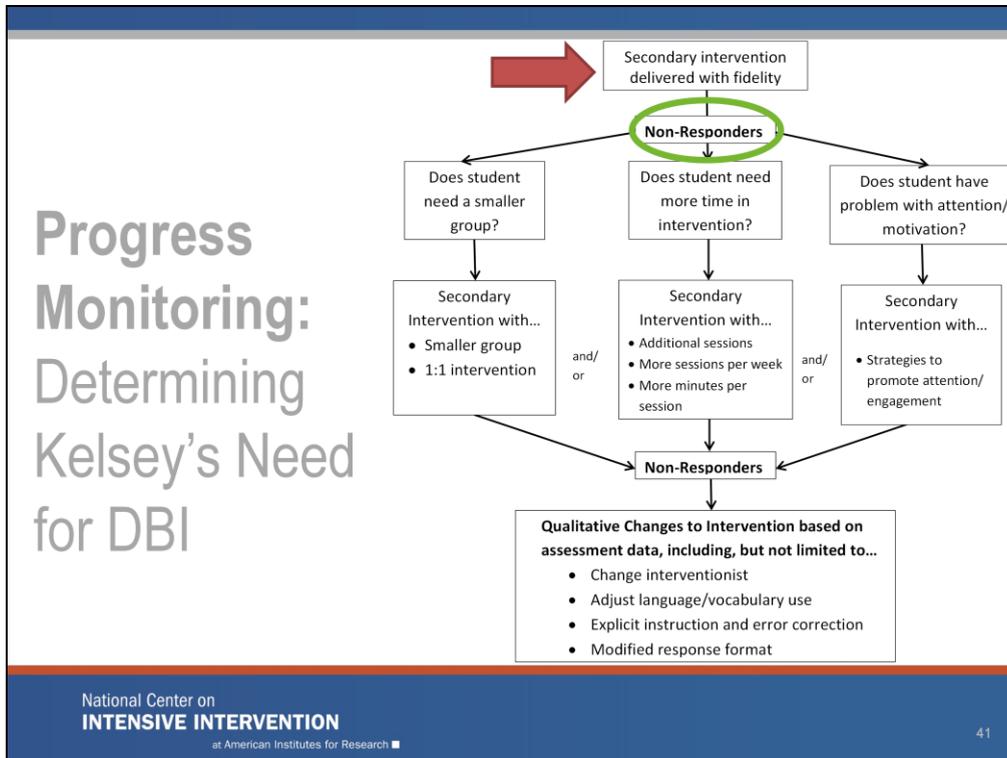


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This graph shows Kelsey's reading progress monitoring data using Passage Reading Fluency, with scores in correct words read per minute. The first three scores, before the first vertical line, show her baseline reading assessments. The X on this line shows her average baseline score. This score is connected with her target score, the X on the far right, to form the goal line. The second set of scores was collected during Kelsey's time in secondary intervention. You can see that all of these scores are below the goal line, suggesting that Kelsey is not responding to the secondary intervention and that she requires an instructional change (the dotted vertical line) to make progress.



Animated slide. Click at underlined text.

Kelsey's teacher has determined that the secondary reading intervention has been delivered with fidelity, but Kelsey's response is not sufficient. She needs more intensive supports, and her teacher will begin the DBI process.

Intervention Adaptation/Change

- When appropriate, use data to make adjustments/adaptations to the secondary intervention program to meet the unique needs of the individual.
- In some cases, however, data may indicate that the student requires a different intervention program or approach.

Consider two types of intervention change:

- Quantitative changes to setting or format
- Qualitative changes to delivery

Read slide.

Try quantitative change(s) first...

- **Increase** intervention frequency, length of sessions, or duration.
- **Decrease** group size.
- **Decrease** heterogeneity of the intervention group.

Note: In many cases, quantitative changes may be necessary, but not sufficient, to facilitate progress for students with intensive needs.

Intervention frequency = sessions per week

Length = minutes per session

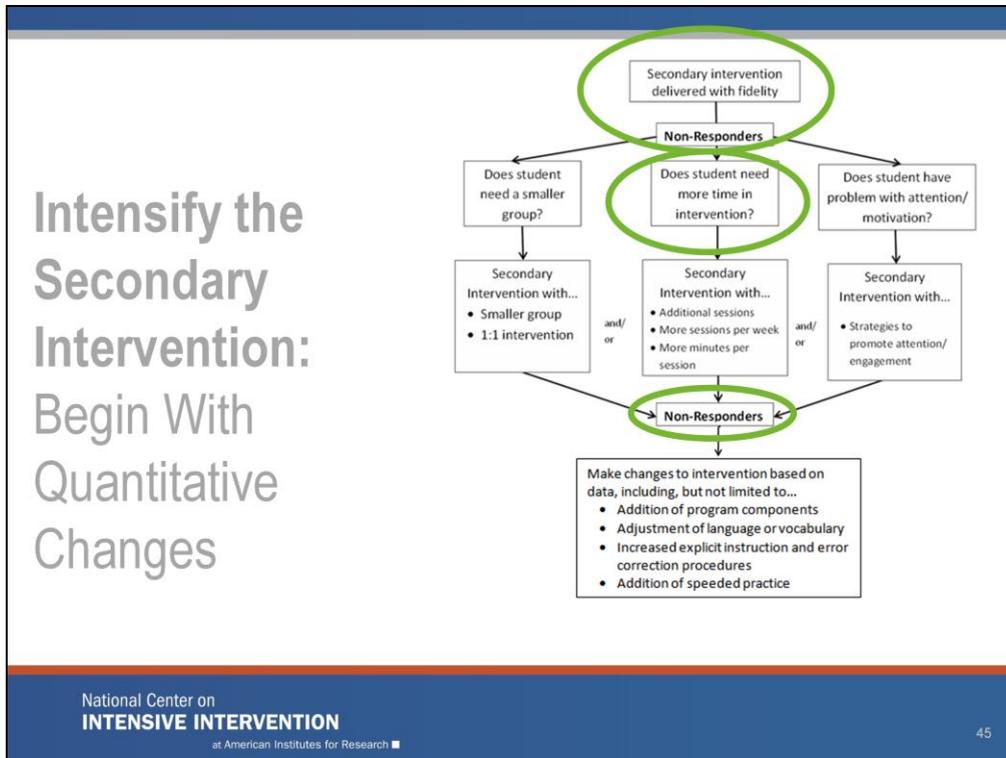
Duration = number of sessions/how long the student receives the intervention

Consider qualitative changes second...

Qualitative adaptations may be made to the intervention program that alter—

- Instruction based on learner characteristics (e.g., addressing working memory or attention problems)
- Skill level of interventionist
- Content delivery
- How students respond
- The amount of adult feedback and error correction students receive
- Frequency/specificity of checks for retention
- The materials, curriculum, or whole intervention (could be a complete change in program)

Read slide.



Animated slide. Click at underlined text.

Because Kelsey was not responding to the standardized secondary intervention, her teacher decided to intensify it. She believed that Kelsey might benefit from more time in intervention and increased the length of each session. She will continue progress monitoring to determine Kelsey's response to the intensified intervention.

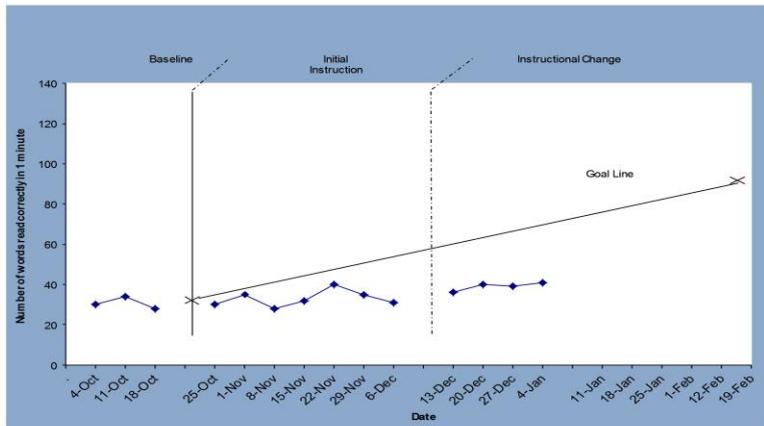
Note that while Kelsey's teacher has many possible changes she can make, she is starting with just one. Making too many changes at once is hard to implement and also makes it hard to know which specific adaptations, if any, are affecting a student's performance.

Quantitative Intervention Adaptation: Kelsey

Kelsey's teacher intensified her instruction by adding an additional 15 minutes of instruction per session. Despite this change in intervention length, Kelsey continued to make insufficient progress.

Kelsey's teacher began the DBI process by intensifying the secondary intervention with a quantitative change—increasing each intervention session by 15 minutes. She continued to collect progress monitoring data and found that this change was not yielding enough progress.

Kelsey's Progress Monitoring Graph



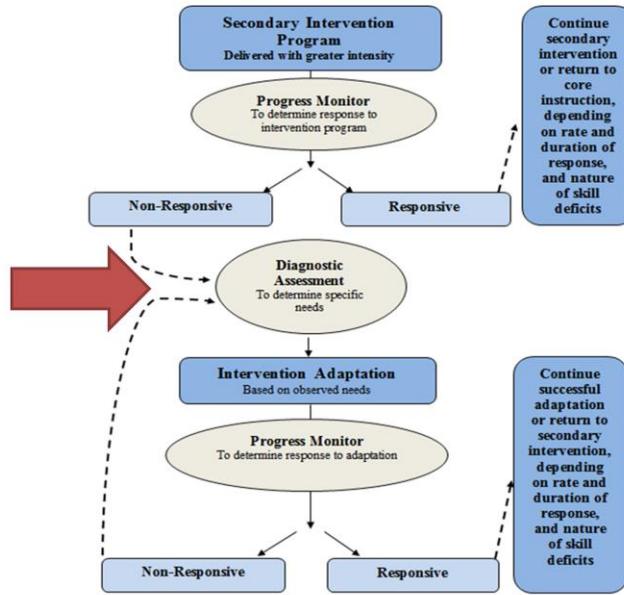
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The third section of the graph shows Kelsey's reading performance while receiving additional time in the secondary intervention. Her scores continued to fall below the goal line, suggesting another instructional change is needed. Her teacher decided additional instructional changes were needed.

Diagnostic Assessment: *What changes are needed to support Kelsey?*



Before making qualitative changes, Kelsey's teacher conducted informal diagnostic assessment to identify Kelsey's specific needs.

Informal Diagnostic Assessment

- Progress monitoring assessments help teams determine *when* an instructional change is needed.
- Informal diagnostic assessments allow teams to use available data (e.g., progress monitoring data, informal skill inventories, work samples) to help determine the *nature* of the intervention change needed.

Diagnostic assessment does not have to be exhaustive. It is meant to identify skill deficits to guide us toward appropriate intervention adaptations.

Informal Diagnostic Assessment

Potential data sources:

- Classroom-based assessments
- Error analysis of progress monitoring data
- Student work samples
- Standardized measures (if feasible)

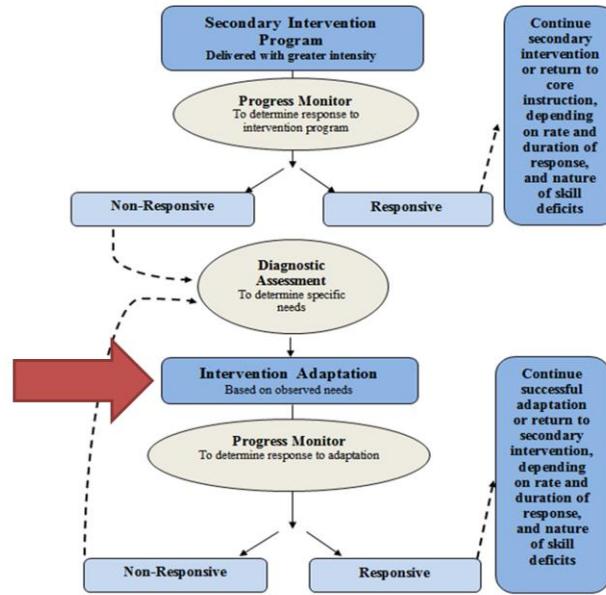
These are examples of data sources that might be used in diagnostic assessment. You might use one or more of these, or a different data source. *Read list.* In error analysis, we look at the errors students are making to see if we can identify a pattern that would suggest a skill to be targeted.

Informal Diagnostic Assessment: Kelsey

- To determine the nature of the instructional change needed, Kelsey's teacher conducted an error analysis of Kelsey's most recent PRF data.
- She also administered a phonics survey to determine Kelsey's decoding strengths and weaknesses.

Read slide.

Intervention Adaptation: Use Diagnostic Information to Adapt the Intervention



Once Kelsey's teacher has identified Kelsey's needs through diagnostic assessment, she will adapt the intervention using qualitative changes that address those needs.

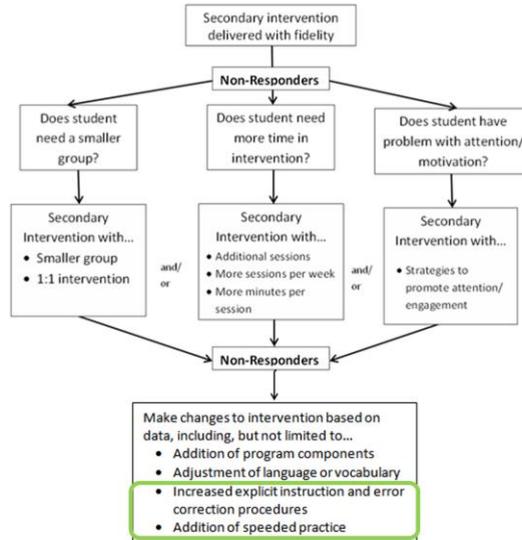
Intervention Adaptation: Kelsey

Diagnostic assessment showed that Kelsey had difficulty applying decoding strategies to vowel teams. Her teacher applied the following intensive intervention principles to intensify her decoding instruction:

- Incorporated fluency practice of newly taught teams, with specified mastery criteria
- Provided explicit instruction and error correction
- Frequently checked for retention with reteaching as needed

Read slide.

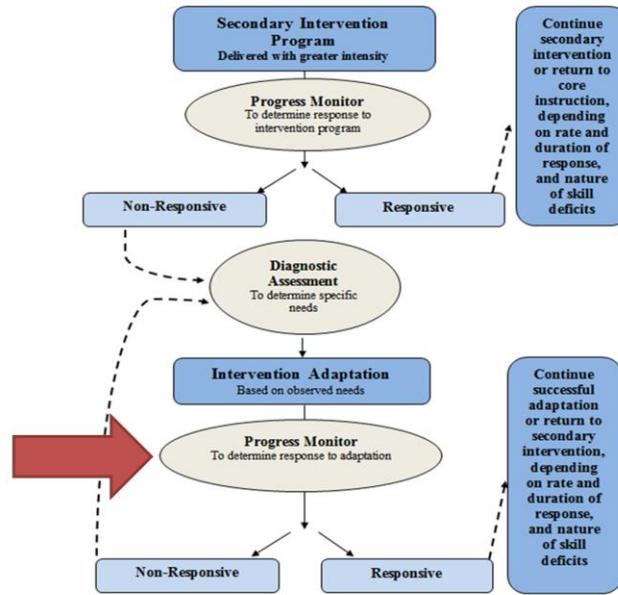
Kelsey's Intervention Adaptation



While this graphic shows several of many possible qualitative changes, Kelsey's teacher selected only a few that directly tied to the decoding concerns identified using diagnostic assessment.

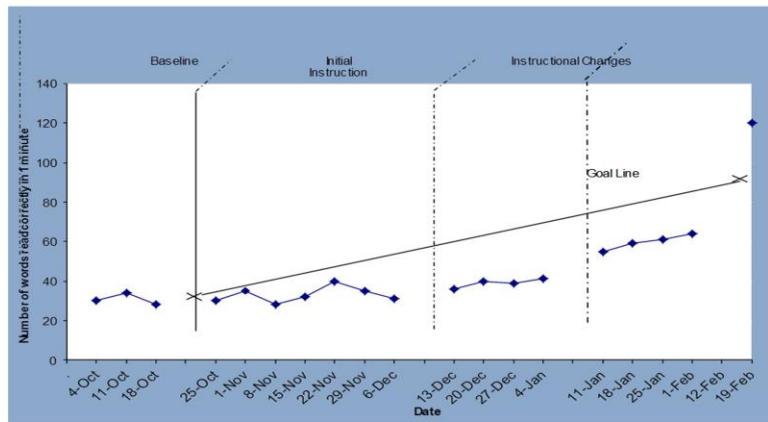
Ongoing Progress Monitoring

- Is Kelsey responding to the adapted instruction?
- Is her response sufficient?



Kelsey's teacher will continue progress monitoring to determine Kelsey's response to the adapted intervention.

Progress Monitoring: Kelsey's Reading



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The final section of this graph corresponds to Kelsey's reading performance while receiving the adapted intervention that incorporated qualitative changes. While she is improving with the program, she is not improving fast enough to meet her goal. Her four most recent progress monitoring scores were all below the goal line.

Evaluation of Kelsey's Progress

- Kelsey's reading is improving but not fast enough to achieve her goal. Another instructional change is needed.
- Kelsey's teacher may collect additional diagnostic data if needed to make an informed instructional change.
- Kelsey's teacher will continue to collect progress monitoring data and meet with the intervention team to evaluate progress and modify the plan as needed.

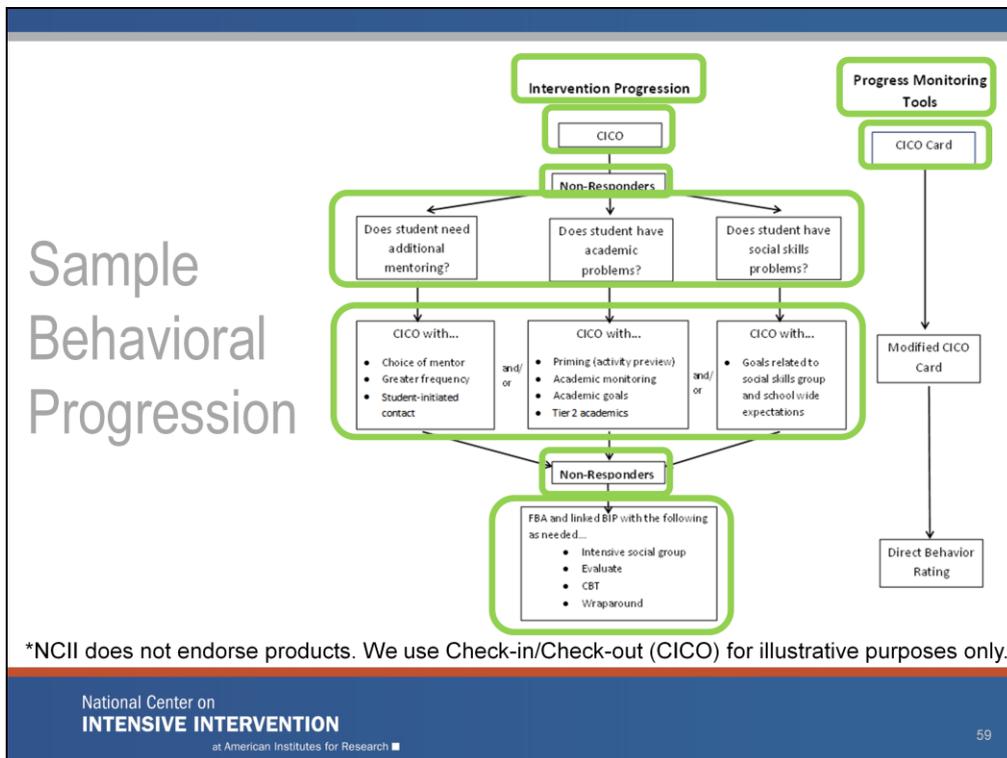
Read slide.

Behavior Illustration of DBI

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We now will use a behavior example to illustrate the DBI process.



Animated slide. Click at underlined text.

See Handout 3—Behavior Progression for a larger, printable version of this slide.

Our behavioral illustration occurs in a school that uses Check-in/Check-out (CICO) as a secondary intervention for behavior. The CICO card also provides progress monitoring data. The left side of the graphic depicts the intervention progression. The right shows how progress monitoring tools may change as the intervention changes.

When a student is not responsive to the standard CICO intervention, the team will ask why the student is not responding and adapt the intervention. If this is not sufficient, the team may conduct a functional behavior assessment and use it to develop an individualized behavior intervention plan.

Secondary Intervention: Student Example—Ryan

Background: Ryan was identified as having externalizing behavior problems in January of his fourth-grade year due to an excessive number of office disciplinary referrals (ODRs) and frequently instigated fights with other students.

Intervention program: Because of Ryan's excessive ODRs, a Check-in/Check-out (CICO) system was implemented.

For more information on CICO, see these and other resources from the OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports (PBIS), <http://www.pbis.org/>.

School-Wide Tier II Interventions: Check-In Check-Out Getting Started Workbook.

http://www.pbis.org/common/pbisresources/presentations/8APBS_Tier2_GettingStartedWorkbook.pdf

Presentations on CICO

- *Check In Check Out: A Targeted Intervention (PBIS in Costa Mesa, CA), http://www.pbis.org/pbis_resource_detail_page.aspx?Type=1&PBIS_ResourceID=183*
- *The Behavior Education Program (BEP): Advanced Training on a Check In/Check Out Intervention for Students at Risk (Chicago Forum-07), http://www.pbis.org/pbis_resource_detail_page.aspx?Type=1&PBIS_ResourceID=688*
- *The Behavior Education Program (BEP): Basic Steps of Check In/Check Out (Chicago Forum-07), http://www.pbis.org/pbis_resource_detail_page.aspx?Type=1&PBIS_ResourceID=669*
- *Check In Check Out: A Targeted Intervention (PBIS in Costa Mesa, CA), http://www.pbis.org/pbis_resource_detail_page.aspx?Type=1&PBIS_ResourceID=183*

Secondary Intervention: Ryan

Check-in/Check-out Procedures

- Dedicated staff person “checks in” with the student to get ready for the day
- Teachers provide feedback on student goals (aligned to school-wide expectations) throughout the day
- Dedicated staff person “checks out” with the student to reflect on the day
- Student accumulates points that can be traded at predetermined times for activities, prizes, or free time
- Staff collect data daily and review student progress weekly

Read slide.

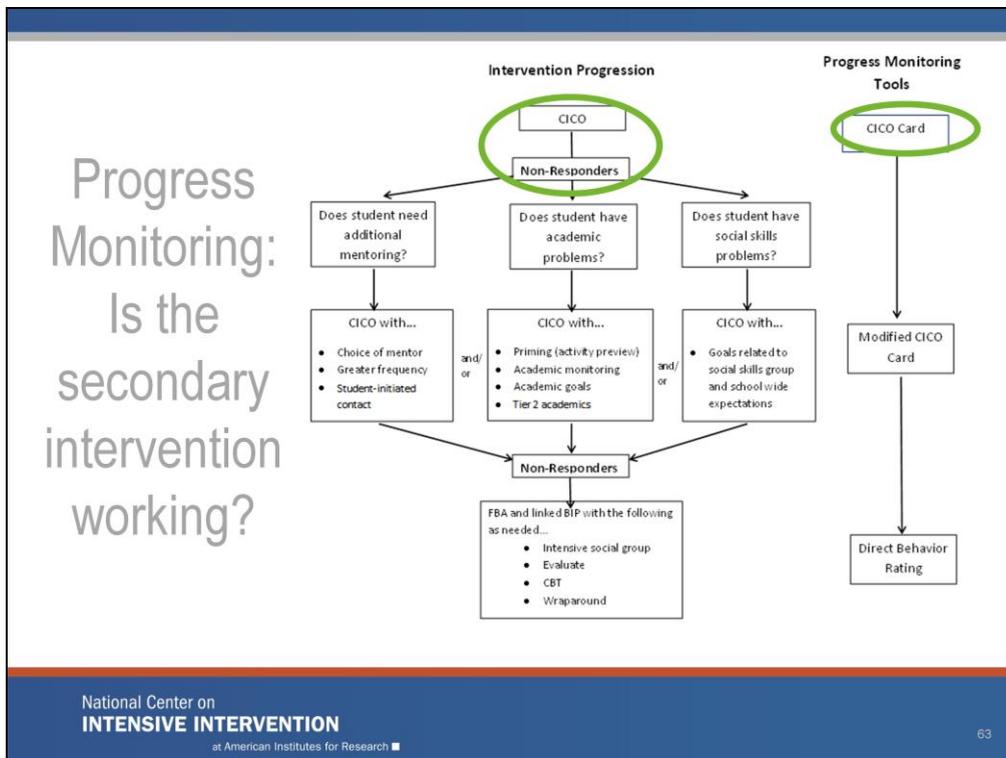
Ryan's Check-in/Check-out Card

GOALS	Period 1	Period 2	Period 3	Lunch	Recess	Period 4	Period 5
Be Safe	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
Be Respectful	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
Work Hard	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
TOTAL							

0 = Goal not met
 1 = Goal partially met
 2 = Goal fully met

While Ryan is receiving CICO as a standardized secondary intervention, his progress is being monitored with the school's standard CICO card. It has not been customized at this point.

For each period of the school day, the appropriate teacher will rate how well, on a scale of 0–2, Ryan met the three school-wide expectations.



Animated slide. Click at underlined text.

The team will collect progress monitoring and fidelity data to determine if CICO is working for Ryan. If he is not responding sufficiently to meet his goal, the team will intensify the secondary intervention.

Progress Monitoring: Ryan

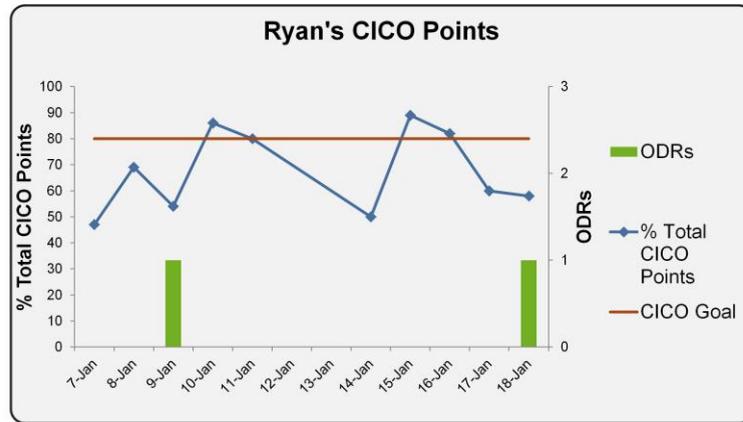
Progress monitoring tool: Check-in/Check-out point card, collected at regular intervals throughout the day

Measure(s):

1. Percentage of daily Check-in/Check-out points
2. ODRs: collected on all students
3. Fidelity checks to ensure that components of Ryan's intervention are executed in accordance with the team's plan

Two measures of Ryan's behavior are collected—the points earned on his CICO card and his office discipline referrals (ODRs). His teacher uses a brief, self-assessment checklist to verify that the intervention is implemented according to recommended procedures.

Progress Monitoring: Is CICO working for Ryan?

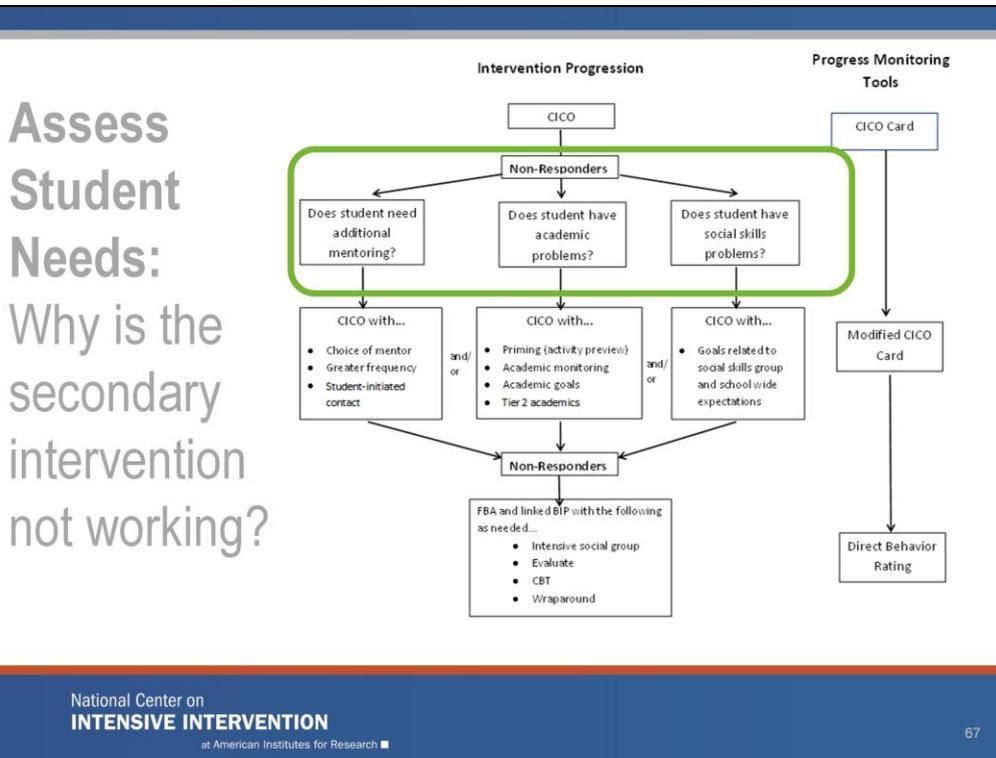


Although some progress was evident, Ryan continued to have an unacceptable number of ODRs based on school cut points, and he met his daily report card goal of earning 80 percent of his CICO points only 40 percent of the time.

Next Steps: Ryan

- Despite secondary interventions delivered with fidelity, Ryan continued to make insufficient progress.
- The intervention team decided that more intensive supports were needed.
- The team needs to meet to review data and use it to hypothesize what modifications may be effective.

Read slide.



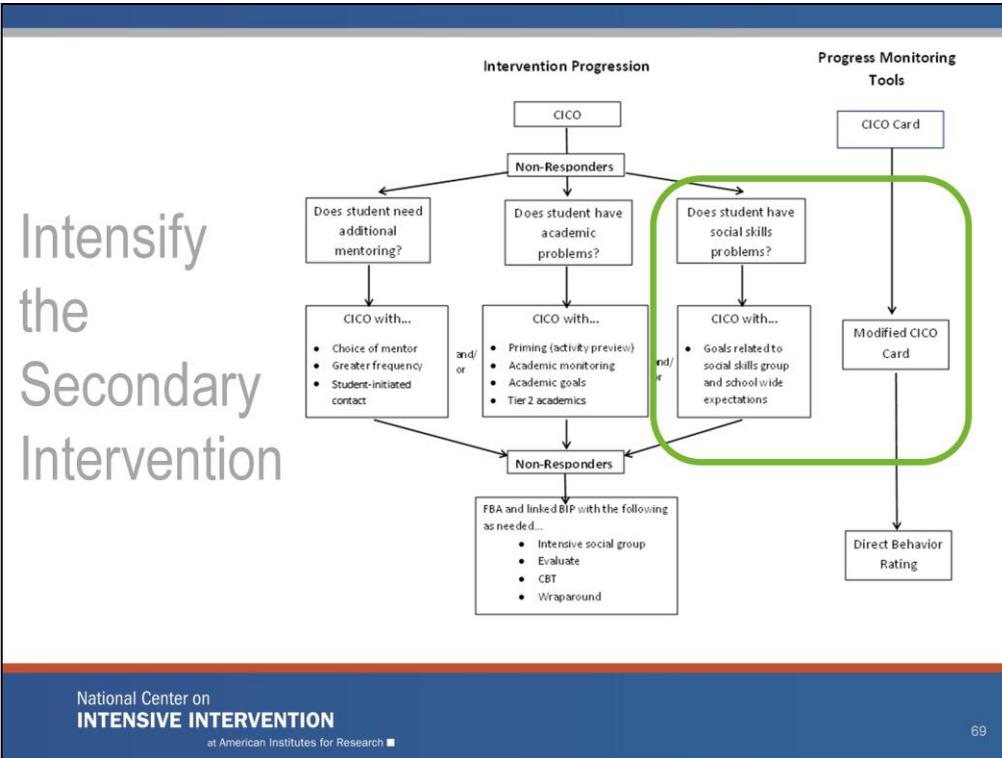
Because Ryan was not responding to CICO, the intervention needed to be adapted. The team thought that merely intensifying the CICO intervention with quantitative changes would not be enough and decided to collect more data about his skill deficits.

Team Problem Solving:

What could be intensified to make the intervention more effective for Ryan?

- The team met to analyze Ryan's progress.
- **Review student data:**
 - Ryan's CICO cards showed that he had difficulty earning points for "Be Respectful."
- **Define the problem:**
 - Ryan's teachers noted that Ryan often disrupts class with both verbal (yelling out) and physical (throwing pencils, touching peers) outbursts.
- **Hypothesis:**
 - Ryan will benefit from social skills instruction surrounding appropriate ways to get attention from others, as well as instruction and monitoring in goals specific to his needs.

Read slide.



The team hypothesized that Ryan has social skills deficits, so they decided to add social skills group instruction to CICO. His progress will be monitored with a modified CICO card that reflects the intervention adaptation.

Intensify the Intervention: Ryan

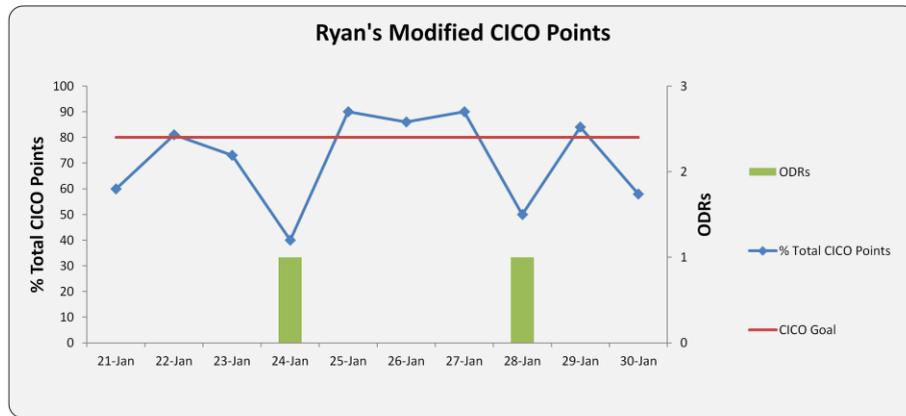
- **Social skills group:** Ryan will join a social skills group working on showing respect with language and physical interaction.
- **Social goals:** Ryan will work toward specific goals related to his social skills curriculum and school-wide expectations.

Ryan's Modified CICO Card

GOALS		Period 1	Period 2	Period 3	Lunch	Recess	Period 4	Period 5
Be Safe	Keep hands and feet to yourself.	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
	Use strategies to cool down.	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
Be Respectful	Use kind words.	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
	Give others space.	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
Work Hard	Ask for help when you need it.	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
	Follow directions the first time.	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2
TOTAL								

The CICO card is modified, but overall goals still reflect school-wide expectations. The specific skills associated with each goal are being taught in Ryan's social skills group.

Progress Monitoring: Ryan

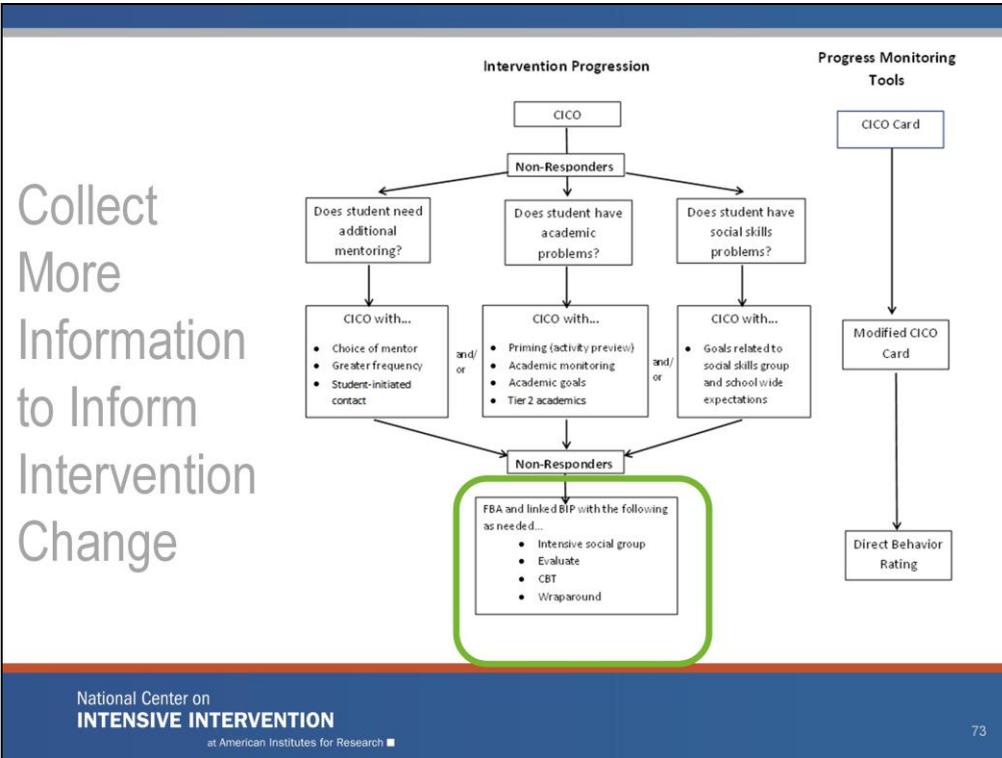


This graph shows that Ryan met his CICO points goal on 5 of 10 days. He received two ODRs during that time.

Next Steps: Ryan

- Ryan is making some progress and is now meeting his CICO goal 50 percent of the time.
- However, the team determined that the rate of Ryan's progress is insufficient, and he continues to receive ODRs almost weekly.
- After one or two more attempts to modify Ryan's secondary (i.e., Tier 2) intervention, the team should move to a more intensive (i.e., Tier 3) intervention.
 - The team may also need to determine if a referral to special education is warranted.

Read slide.



Because Ryan did not respond to adapted CICO, the team decided to conduct an FBA to guide the development of a Behavior Intervention Plan (BIP).

Functional Behavior Assessment (FBA): Ryan

Behavior	Function
<ul style="list-style-type: none">• Pushing peers while in line• Pulling peers' hair during lessons• Yelling out	Gain attention from peers
<ul style="list-style-type: none">• Hiding under desk• Running out of class	Avoid difficult tasks/gain attention from peers

After clearly defining Ryan's problem behavior and gathering more information (teacher and parent reports, observations of student behavior, review of existing data), the team began to analyze the function of Ryan's behavior.

In determining the function of Ryan's behavior, the team will be better equipped to address Ryan's problem behaviors by encouraging replacement behaviors that serve the same function.

Review table.

Developing a Behavior Intervention Plan for Ryan

- The next step is to develop a behavior plan based on the FBA.
- The plan should be clearly linked to the hypothesized function(s) of behavior.
- The plan should be ambitious but feasible, targeting prioritized behaviors and setting achievable goals.
- The plan will draw from principles of intensive intervention.

Read slide.

Ryan's Behavior Intervention Plan

- Explicitly teach positive replacement behaviors.
 - Initiating contact with peers.
 - Appropriately making requests.
 - Instruction includes examples, a rationale for why the behaviors are important, modeling, and practice.
- Continue check-ins with modified goals.
 - Increased opportunity for practice and prompting.
 - Reinforcement for appropriate behavior.

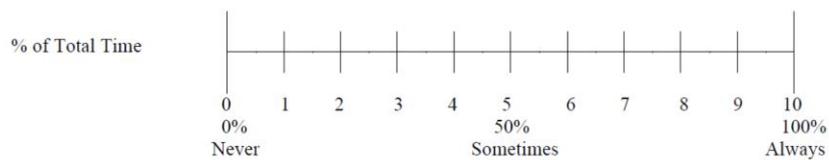
Ryan's Behavior Intervention Plan addresses the functions noted in the FBA:

- Gain attention from peers.
- Avoid difficult tasks.

Read slide.

Monitoring Progress for Intensive Intervention: Direct Behavior Rating (DBR)

- The team defined two behaviors to track using DBR:
 - Disruptive behavior
 - Academic engagement
- Teachers also kept a tally of appropriate requests for assistance.



DBR uses ratings of a general outcome behavior following a specified observation period (e.g., lunch, class period).

Evaluation of Ryan's Progress

Review of Ryan's DBR and ODR data after six weeks indicated that his behavior plan was working.

- DBR data reached typical class levels (80 percent for academic engagement, 10 percent for disruptive behavior).
- ODRs decreased.
- Reached his goals on his daily report card 90 percent of the time.

Read slide.

Ryan's behavior has markedly improved and the team thinks the plan is working. However, this is not to say that his behavior is perfect. Teams should remember that we are not expecting students like Ryan to become the best behaved student in the class but to behave in a manner more similar to their peers.

Evaluation of Ryan's Progress

- Ryan's teachers reported that he was making progress in his social interactions. A tally kept by Ryan's teacher indicated that he appropriately asked for help with a task when he did not understand 70 percent of the time.
- The team determined that Ryan continued to need this level of support to be successful, so they decided to continue to implement the plan, as well as collect and regularly evaluate progress data.

Read slide.

In most cases, students who need DBI will require ongoing support, not a temporary intervention. It is important to continue monitoring progress and adjusting the intervention if data indicate that changes are needed.

In Summary

- DBI is an ongoing process that comprises ongoing assessment, intervention, evaluation, and adjustment to maximize student outcomes.
- Intensive interventions will not look the same for all students. They are individualized based on unique needs.
- Students requiring intensive intervention are likely to need it for a significant time.

Read slide.

Things to Remember

- DBI is intense—relatively few students should need it (3 percent to 5 percent of the school population).
- Academic and behavior supports do not exist in isolation.
- Don't make too many intervention adaptations at the same time.

- **DBI is intense—relatively few students should need it.**
 - If more than 3 to 5 percent of students in a school appear to require DBI, consider evaluating core instruction, school-wide behavior supports, and secondary intervention programs.
- **Academic and behavior supports do not exist in isolation.**
 - They are often most successful when combined to meet students' individual needs.
- **Don't make too many intervention adaptations at the same time.**
 - It may be tempting to try everything at once because you want to help a student as soon as possible, but if you make all possible changes at the same time, you won't know which ones the student needs (any improvement in performance could be the result of one or more adaptations). Fewer changes may also make implementation more sustainable.

Keep in mind...

- Every student presents unique needs. While our examples provide an illustration of the DBI process, it will vary based on individual needs. Some DBI processes will be much more involved than others.
- Areas of need may vary by domain. For example, a student may require intensive intervention in reading but not in mathematics. Data should drive these determinations.

Read slide.

Quick Quiz

1. Name the five components of the DBI process.
2. What are two features that distinguish secondary (Tier 2) and intensive (Tier 3) interventions?
3. What is the difference between a quantitative and qualitative change to instruction/intervention? Give an example of each type of change.

1. Five components:
 1. Secondary intervention program, delivered with greater intensity
 2. Progress monitoring
 3. Diagnostic assessment
 4. Adaptation
 5. Continued progress monitoring, with adaptations occurring whenever needed to ensure adequate progress
2. Intensive interventions have increased in intensity and are individualized, whereas secondary interventions are standardized. Increased intensity may reflect group size, length and frequency of intervention sessions, and frequency of progress monitoring. Implications for cost and efficiency.
3. Quantitative—changes in amounts/numbers (e.g., group size, frequency of intervention, duration of intervention);
Qualitative—changes in content/format (e.g., materials, interventionist, delivery method, student response format)

Disclaimer

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The views expressed herein do not necessarily represent the positions or policies of the U.S. Department of Education. No official endorsement by the U.S. Department of Education of any product, commodity, service or enterprise mentioned in this website is intended or should be inferred.

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