# Response to Intervention: Progress Monitoring

# Progress Monitoring

***What is progress monitoring?***

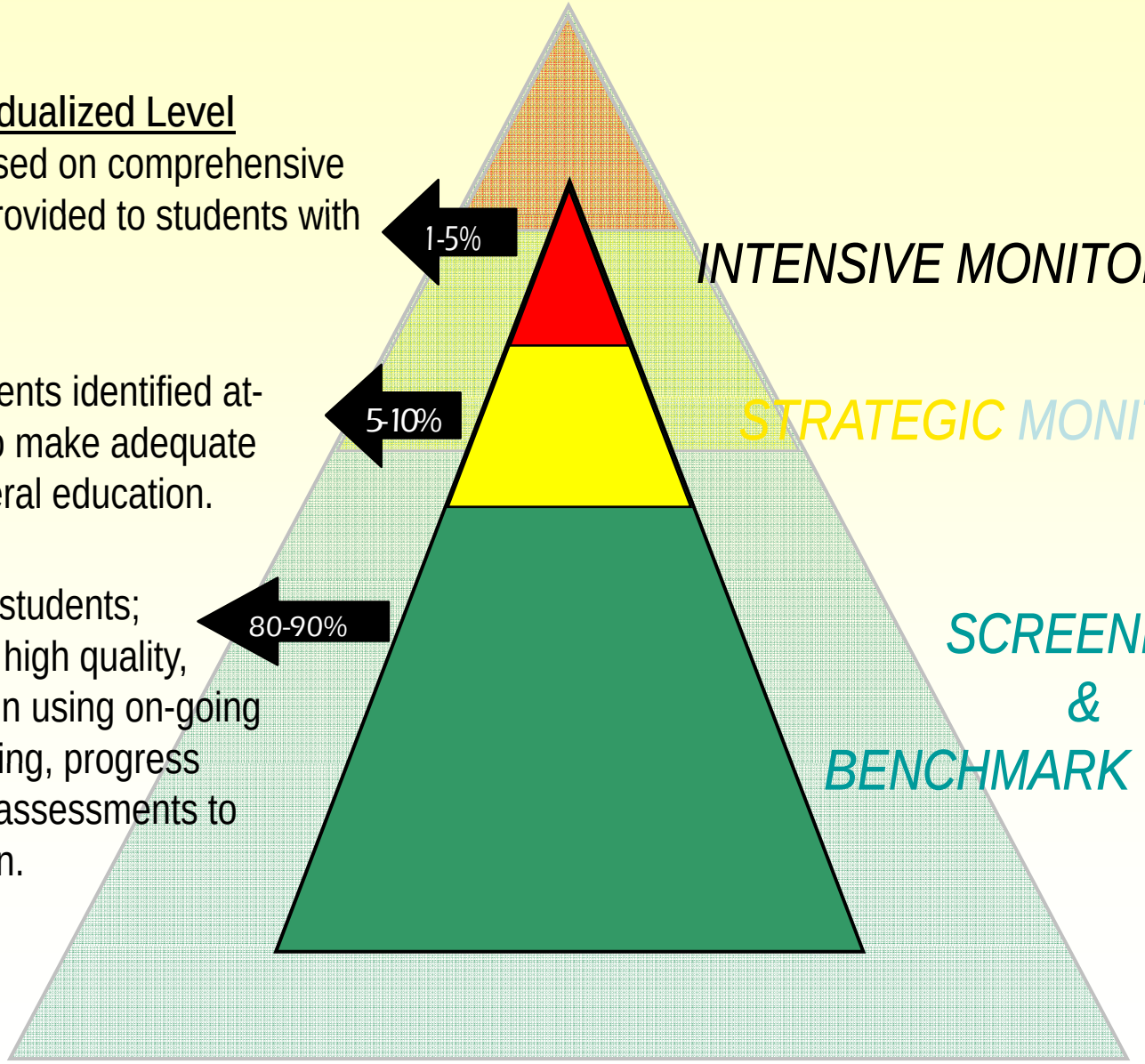
*Progress monitoring is a researched-based practice that regularly (weekly, biweekly, or monthly) measures students' academic or behavioral progress in order to evaluate the effectiveness of teaching practices and to make informed instructional decisions.*

# Progress Monitoring in RTI

**Intensive/Individualized Level**
Interventions based on comprehensive evaluation are provided to students with intensive needs

**Targeted Level**
Provided to students identified at-risk or who fail to make adequate progress in general education.

**Universal Level**
Provided to ALL students; research based, high quality, general education using on-going universal screening, progress monitoring, and assessments to design instruction.



# Education Applications of Progress Monitoring

## Intensive Monitoring

Goal: Evaluate progress of individual students by setting individualized goals and monitoring progress toward goals.

- Students are tested initially in successive levels of the curriculum to be learned regardless of grade until success is reached
- Appropriate instructional level material identified

## Advantages:

- Information can be used to formatively change and improve instruction
- Provides clear, documented student outcome

## Disadvantages:

- Logistically challenging
- Requires commitment of individualized education

# Education Applications of Progress Monitoring

**Strategic Monitoring**

Goal: Monitoring individual students by collecting ongoing information about basic skills.

- Progress of at-risk students is monitored more frequently
- Students who would benefit from strategic monitoring can be identified during initial benchmark testing
- Outcomes are summarized by examining changes in:
  - Rate of improvement for individual students
  - Change relative to other students at designated times

**Advantages:**

- Formatively use information to change and improve instruction
- Typically results in significant achievement gains

**Disadvantages:**

- Logistically challenging
- Commitment to individualized programming

# Education Applications of Progress Monitoring

## Benchmark Testing

Goal: Evaluation of students during designated periods (monthly or three times a year).

- Typical levels of curriculum to be learned for each grade are identified in the basic skill areas
- All students are tested

## Advantages:

- Logistically feasible
- Provides clear, easily understandable information for parents, teachers and administrators
- Documents learning and communicates change in group performance
- Allows for potential identification of academic problems

## Disadvantages:

- Does not provide information frequently enough to make individualized changes to programming
- Some students may be maintained in ineffective programs for long periods of time

# Education Applications of Progress Monitoring

**Screening**

Goal: To identify students at risk for academic failure.

- Determine what a groups of students need to for successful academic programming
- Establish a standard of "satisfactory achievement"

**Advantages:**

- Logistically feasible
- Documents learning and communicates group abilities
- Excellent discussion tool for general educators looking at large instructional issues

**Disadvantages:**

- Not specific enough for certain students that are performing way above or below grade level
- Needs to be connected to another progress monitoring instrument

# Importance of Progress Monitoring

- Evaluates student progress
- Monitors the effects of interventions
- Expected rates of progress are identified and compared to actual growth
- Communication tool between problem solving team, teachers, and parents
- Provides accountability for the RTI process

# Basic Progress Monitoring Steps

1. Decide on level of implementation
2. Decide on which measures to use
3. Collect screening or baseline data
4. Decide on short-term objective or end criteria
5. Set long range goal
6. Decide how often to monitor
7. Administer measures
8. Graph Data
9. Make instructional changes base on data
10. Continue monitoring

# What Skills Should be Assessed?

- Testing older students specifically on phonological awareness measures does not add power to the identification of reading and spelling difficulties (Hogan, Catts & Little, in press)
- Direct measures of academic skills will provide the most accurate data for planning instruction

# Nature and Development of CBM

- Main purpose –
  - To enable teacher to improve student performance.
- Using data from CBM can be useful in the problem-solving process.
- Not intended to be a substitute for other types of assessment.
- Has and can be an efficient tool for measuring student growth and signaling a need to change instructional strategies.

# CBM

- Dynamic:
  - Sensitive to change over time and differences among individuals with different skills
- Indicators:
  - "representative" of a skill, but does not measure all aspects or applications of the skill domain
- Basic skills:
  - Corresponds to the specific domains

# CBM Essentials

1. Tied to a problem solving model
2. Intrinsic content validity
3. Standardized measurement procedures
4. Short duration, fluency measures
5. Production type responses
6. Tasks of about equal difficulty
7. Established technical adequacy
8. Documentation of basic skills programs

# CBM as a tool in the classroom

1. Identify specific concerns for all students.
2. Make curriculum decisions for all students.
3. Identify and measure IEP goals.
4. Measure response to intervention.
5. Determine level of transfer students.
6. Flexible administration times.

# Overview of CBM Procedures and Scoring Units

| Area | Timing | Procedures | Scoring Unit |
|---|---|---|---|
| Early Literacy: | | | Correct… |
| Letter Naming Fluency | 1 minute | Individual | Letter Names |
| Letter Sound Fluency | 1 minute | Individual | Letter Sounds |
| Phoneme Segmentation | 1 minute | Individual | Phonemes |
| Nonsense Word Fluency | 1 minute | Individual | CVC Words |
| Reading: Oral Reading Fluency | 1 minute | Individual | Words Read Correctly (WRC)<br>Errors |
| Reading: Maze | 3 minutes | Group or Individual | Correct Answers<br>Errors |
| Spelling: Grades 1st & 2nd | 2 minutes (every 10 sec.) | Group or Individual | Correct Letter Sequences (CLS) |
| Spelling: Grades 3rd – 8th | (every 7 sec.) | Group or Individual | Correct Words |

# Overview of CBM Procedures and Scoring Units

| Area | Timing | Procedures | Scoring Unit |
|---|---|---|---|
| Written Expression: | 3 minutes | Group or Individual | Total Words Written<br>Words Spelled Correctly<br>Correct Writing Sequences |
| Early Numeracy:<br>Oral Counting<br>Number Identification<br>Quantity Discrimination<br>Missing Number | <br>1 minute<br>1 minute<br>1 minute<br>1 minute | <br>Individual<br>Individual<br>Individual<br>Individual | Correct…<br>Oral Counts<br>Numbers Identified<br>Quantities Discriminated<br>Missing Numbers |
| Math Calculation:<br>1st – 3rd grades<br>4th – 6th grades | <br>2 minutes<br>4 minutes | Group or Individual | <br>Correct digits<br>Correct digits |

- All manuals can be downloaded from AimsWeb.com

# Administering Oral Reading Fluency

-What you need before testing:

- Assessment Passage (Student & Examiner)
- Stop Watch
- Clipboard (Helps shield examiner copy)
- Pencil

- Arranging the environment
  - Reasonably quiet and away from distractions
  - Preferably including a small table
- To keep in mind
  - It's about testing, not teaching
  - Best versus fastest reading
  - Sit across from, not beside

# Scoring Oral Reading Fluency

- General Scoring Rules
- What is a word read correctly (WRC)?
  - Correctly pronounced words within context
  - Self-Corrected Incorrect Words within about 3 seconds
- What is an Error?
  - Mispronunciation of the word or substitutions
  - Omissions
  - 3-Second pauses or struggles
- What is not incorrect (Neither a WRC or Error)
  - Repetitions
  - Dialect Differences
  - Insertions

# Scoring Oral Reading Fluency

- Calculating and Reporting Scores
  - Record the total number o words read
  - Subtract the number or errors
  - Standard score reporting format
    - WRC/Errors
  - Example: Johnny read 115 total words with 3 errors = 112/3 (WRC/Errors)
- Qualitative Features to consider:
  - Reads fluently and efficiently
  - Effective strategies for unknown words
  - Errors preserve rather than distort meaning
  - Reads with expression
  - Self-corrects errors
  - Adjusts pace when complexity of text changes

# Research on CBM ORF

## Words Read Correct

| Grade of passage | Expected Growth (words per week) |
|---|---|
| 2nd | 1.5 to 2.0 |
| 3rd | 1.0 to 1.5 |
| 4th | .85 to 1.1 |
| 5th | .5 to .8 |
| 6th | .3 to .65 |

Marston, D., Diment, K., Allen, D., and Allen, L. (1992). Formative Evaluation of Academic Progress. Preventing School Failure, 36 (2).

# CBM for High School

- Florida Center for Reading Research
  - **Oral Reading Fluency**: measures consist of on-grade-level passages that students read aloud while being times for one minute. Two passages are administered at each assessment period and are averaged to get a score of words read correctly. The score reflects the student's accuracy and fluency. The score can then be compared to a risk level chart to serve as an indicator for level of instruction.

# Florida's Hummingbirds (Student #1)

Hummingbirds live only in the Americas. Of the 338 species 10

known, 16 are found in the United States and 3 occur in Florida. 23

*mispronunciation*

Black-chinned and rufous hummingbirds occasionally can be 31

seen in Florida during the winter, but the ruby-throated hummingbird 42

is by far the most common hummer in the state. This feathered jewel 55

*(only)*

is about 3 inches long and weighs as little as a penny. Its name 69

*mispronunciation* *omission*

describes the most brilliant part of the mature male's plumage. The 80

*mispronunciation*

throat feathers contain air bubbles that give off an iridescent red 91

tone in full light. Both sexes, young and mature birds, have metallic 103

green backs and white-tipped tail feathers. 110

*mispronunciations*

The ruby-throat's breeding range extends from central Kansas to 120

*omission* *3 second rule*

the east coast and from Saskatchewan to central Florida. Although 130

some birds may stay in south Florida year-round], most spend the 142

winter in Mexico and South America, where the weather is warmer. 153

139
- 8
131

# Administering Maze

What you need before testing:

- Assessment Passage for student
- Stop Watch
- Pencil

- Arranging the environment
  - Can be given in classroom-size groups or 1 to 1
  - Reasonably quiet and away from distractions
- To keep in mind
  - Make sure students are circling the answers rather than writing the answers
  - Can use short, simple prompts like “Keep doing the best work you can” or “Remember to circle the correct word”

# Scoring Maze

- Determine the Number of Words Correct (Errors are less important)
  - What is Correct?
    - Correct word circled
  - What is Incorrect?
    - An incorrect word circled
    - Omits word other than those unable to complete before the 3 minutes expired
- Calculating and reporting scores
  - Count total of items attempted
  - Subtract the number of incorrect answers from total attempted
  - Record total number of correct answers followed by the total number of errors (30/2)

# CBM for High School

- Florida Center for Reading Research

  **Mazes** are composed of a variety of passages with mixed genres and styles. The passages begin with a complete sentence. For every remaining sentence, the 7th word is replaces with a word choice. The word choice is composed of 3 words: one correct and 2 distracters. Students have 3 minutes to complete each passage. There are 2 passages administered at each of the assessment periods and an average score is obtained. A risk level chart is used to determine the level of instruction indicated by performance on the maze measure. Mazes measure fluency, comprehension and vocabulary and can be group administered.

**Cranes Train for Trip Led by Parent Plane**

If there's a movie version, all **scary / nine / tape** of the rare whooping crane colts **hard / bug / will** fly in perfect V-formation. They'll soar **over / hat / jump** the Midwestern marsh in golden fall **page / light / rate**. Their ultralight "parent" will lead them **he / in / bat** a victorious circle over an awestruck **runs / take / crowd**. The plane, the golden light and **the / at / I 'm** crowd were there, but in real **life / much / are**, nature wouldn't cooperate. At their long-**people / awaited / students** public debut, only one of five **this / young / asked** whoopers was able to break through **turbulent / consider / documents** air. He caught the plane's lift **school / wants / during** Saturday's demonstration flight. Four others flapped **them / far / how** behind, trying in vain to catch **up / of / per** with "mother."

The birds are still **say / or / in** training, but time is running out. **In / Him / Me** a few weeks they'll begin a 1,250-**about / mile / this** migratory journey to Florida. They'll follow **the / not / who** ultralight. The flight was briefer than **families / expected / dropped**. But Lyle Bradley didn't regret making **in / the / are** 200-mile trip from Andover to **out / see / then** it. "There aren't too many people **he / two / in** the United States who've seen whooping **cranes / young / losing** flying in formation."

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# Administering Spelling

- What you need before testing:
  - Lined and numbered paper for each student
  - List of words to assess
  - Stop Watch (DO NOT USE CLOCK ON THE WALL)
  - Pencils
- Arranging the environment
  - Can be given in classroom-size groups or 1 to 1
  - Reasonably quiet and away from distractions so students can hear each word easily
  - Make sure you can monitor
- To keep in mind
    - Only say the word twice
    - For homonyms give a sentence
    - Roam and monitor

# Scoring Spelling

- Score Words Spelled Correctly (WSC) and Correct Letter Sequence (CLS)
- WSC – Total dictated words spelled correctly
- What is a Correct Letter Sequence
  - CLS is a pair of letters correctly sequenced within a word
  - The spaces before and after a word are considered "letters" when counting CLS
    - (Example: CAT [_C_A_T_] _ = letter sequence – 4 total letter sequences in CAT)

# Administering Written Expression

- What you need before testing:
  - Story starter
  - Lined paper for student response
  - Stop Watch
  - Pencils
- Arranging the environment
  - Can be given in classroom-size groups or 1 to 1
  - Reasonably quiet and away from distractions
  - Make sure you can monitor
- To keep in mind
    - It's about testing, not teaching
    - Best versus fastest writing

# Scoring Written Expression

- What is scored:
  - Total Words Written (TWW)
    - Sum the number of words written
    - Any letter or group of letters by a space is defined as a word, even if the word is misspelled or is a nonsense word
    - Numbers that are not spelled out are not counted as words, except dates and currency

# Scoring Written Expression

- Words Spelled Correctly (WSC)
  - Circle all words that are spelled incorrectly
  - Sum the number of circled words and subtract the number from the number of TWW
  - Commonly used abbreviations are counted as words
  - Proper nouns must be capitalized to be counted as words; however, capitalization of the first word in a sentence is not required for the word to be spelled correctly.
  - Contractions have to have an apostrophe in the correct place to be counted as correct.

# Scoring Written Expression

- Correct Writing Sequence (CWS)
  - Two adjacent writing units (words and punctuation) that are correct within the context of what is written
  - Count spaces at the beginning and end of the sentence.
  - Pairs of words must be spelled correctly.
  - Words must be capitalized and punctuated correctly with the exception of commas.
    - Words must be syntactically correct.
    - Words must be semantically correct
    - Follow all CSW rules

# Scoring Written Expression

- After circling misspelled words, place a caret (^) between words that are mechanically, semantically, and syntactically correct. Sum the number of carets.
  - CWS requires more inferences about what the student intended such as whether a sentence "ended" when a period was omitted.
  - Best to have two scorers when using CWS.

# Administering Math

- What you need before testing:
  - Assessment Probe
  - Stop Watch
  - Pencil
- Arranging the environment
  - Can be given in classroom-size groups or 1 to 1
  - Reasonably quiet and away from distractions
- To keep in mind
  - It's about testing, not teaching
  - Careful monitoring to avoid excessive skipping or overusing the X-ing out of problems

# Scoring Math

- General Scoring Rules:
  - Number of Correct Digits that a student writes are scored and summed using one of two scoring methods
    - Grades 1 – 4 use answer only generally
    - Grades higher than 4 can use answer and critical processes of the answer
    - For Math Fact Probes only the number of digits in the answer are counted

# CBM Probes - AIMSWEB

- www.aimsweb.com
- Products available (6th – 8th grade):
  - Reading – CBM (Oral Reading Fluency)
  - Maze – CBM (Reading Comprehension)
  - Early Literacy Measures (Phonics and Phonological Awareness)
  - MIDE (Spanish Early Literacy Measures)
  - Early Numeracy – CBM (Missing Number, Quantity Discrimination, Number Identification)
  - Mathematics – CBM (Math Computation and Math Facts)
  - Spelling – CBM
  - Written Expression - CBM

# Progress Monitoring Tools Intervention Central

- www.interventioncentral.org
- All materials can be downloaded for free with some time commitment.
- Oral Reading Fluency Probes
- Behavior Charts
- Intervention Ideas
- Math Probes

## Commonly Used Assessments for Older Students

| Name of Test | Type of Test | Skills Assessed | Administration | Time to Administer | Publisher |
|---|---|---|---|---|---|
| Diagnostic Assessment of Reading (DAR) | Diagnostic | Decoding, Vocabulary, Comprehension | Individual | 10-30 minutes depending on number of subtests given | Riverside $185.00 |
| Gates MacGinitie Reading Test, 3rd ed. (GMRT) | Diagnostic, Outcome | Vocabulary and Comprehension | Group | 35 minutes per subtest (if both are given-70 min.) | Riverside $200.00 |
| Test of Silent Word Reading Fluency (TOSWRF) | Screening | Silent Word Fluency | Group | 10 minutes | Pro-Ed $115.00 |
| Test of Word Reading Efficiency (TOWRE) | Screening, Progress Monitoring | Decoding (Nonword Reading Efficiency) Word Recognition (Word Reading Efficiency) | Individual | 3-5 minutes | Pro-Ed $125.00 |
| Gray Oral Reading Test (GORT-IV) | Diagnostic | Oral Reading Fluency and Passage Comprehension | Individual | 10-15 minutes | Pro-Ed $200.00 |
| Spellography Spelling Inventory | Diagnostic, Progress Monitoring | Phoneme Identification and manipulation / phonics | Group | 10 minutes | Sopris West $316.00 |
| Test of Word Knowledge (TOWK) | Diagnostic | Vocabulary Knowledge | Individual | 30-60 minutes | Harcourt $185.00 |
| Peabody Picture Vocabulary (PPVT-III) | Diagnostic / Outcome | Expressive Vocabulary | Individual | 15 minutes | American Guidance Service |

# Creating CBM Probes

- "Fish bowl" Selection - most useful when items are discrete and arranged in a systematic order (e.g., spelling words, reading passages, etc.)
- Nth Item Selection – most useful for selecting items from a list that is arranged in an unsystematic order (cumulative lists)
- Computer-Generated Selection – most useful when items are short and discrete (word lists, math problems, etc.)