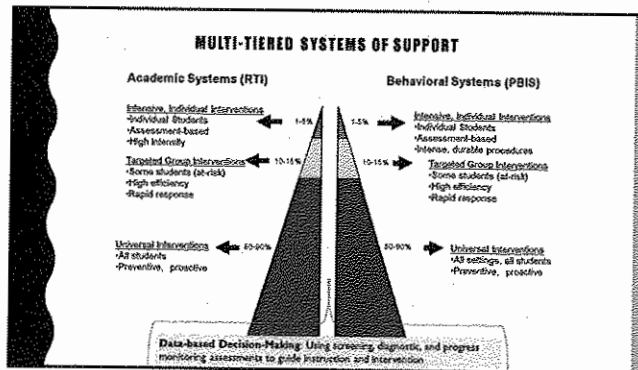


TIER 2 PROGRESS MONITORING: USING DATA FOR DECISION MAKING

DR. ALLISON BRUHN, UNIVERSITY OF IOWA

**Key Words: assessment, behavior, tier II



CORE COMPONENTS

- Teach all students what is expected in all settings of the building
- Reinforce the behaviors we want to see
- Use data to drive instruction and intervention decisions

Day	Value
Mon	100
Tue	30
Wed	20
Thu	80
Fri	100

IMPORTANCE OF DATA COLLECTION

(ALBERTO & TROUTMAN, 2013)

- Data collection serves to:
 - Determine the effects of an intervention on behavior
 - Provide formative and summative evaluation
 - Make decision about the allocation of school-based services
 - Promote communication between stakeholders

DATA ARE IMPORTANT, BUT...

- Every Student Succeeds Act (ESSA)
 - Accountability requires data
 - When data are available, we can make data-based decisions
- Behavior specialists have unmanageable caseloads
 - Expectations of classroom teachers do not align with job description
- Clinical settings and university support not an option for everyone

WHAT HAPPENS IN STUDENT SUPPORT TEAM MEETINGS?

GASTROINTESTINAL DATA

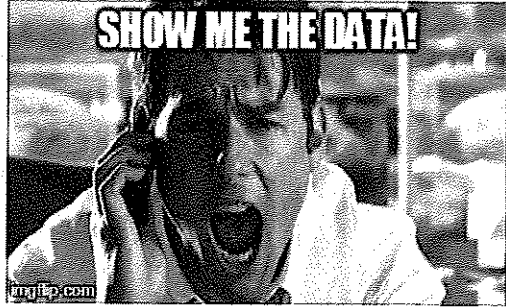
CARDIOVASCULAR DATA

Thomas Mayes, 2014

WHAT HAPPENS IN STUDENT SUPPORT TEAM MEETINGS?



SHOW ME THE DATA!




DATA ARE IMPORTANT, SO...

"IN GOD WE TRUST;
ALL OTHERS MUST
BRING DATA."
- W. EDWARDS DEMING

BECAUSE...

Without data
you're just
another person
with an opinion.
- W. Edwards Deming

HOWEVER, WE NEED TO KEEP IN MIND...

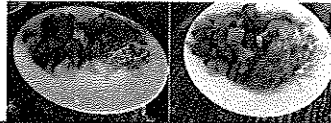


Data is like garbage. You'd better know what you are going to do with it before you collect it.
- Mark Twain

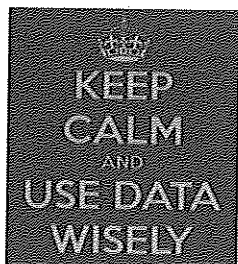
AZ090115

BUT LET'S NOT GET OVERWHELMED...

Data are not about adding more to your plate. Data are about making sure you have the right things on your plate.



SO TODAY, LET'S...



TODAY'S OBJECTIVES

- Gain an understanding about 3 ways to measure student progress within Tier 2 (DBR, direct observation, & intervention-based measures) through direct practice
- Learn how to select an appropriate method of measurement and how to apply it within an intervention
- Learn about real-world examples of Tier 2 intervention and evaluation done within the context of research

LET'S DISCUSS!

- What tier 2 interventions are you currently implementing in your building?

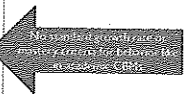
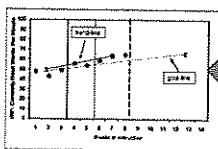


TIER 2 PROGRESS MONITORING: FORMATIVE EVALUATION

- Tier 2 requires accurate and frequent measures of progress
- Purpose of progress monitoring:
 - Measure student growth
 - Make judgments about intervention effectiveness
 - Determine how and when to continue, adapt, or discontinue intervention

PROGRESS MONITORING TOOLS

- Should be:
 - Sensitive to behavioral growth (Scott, Alvar, Rosenberg, & Borgmeier, 2016)
 - Reliable and valid (Chafetz, 2011)



STEP 1: SELECT APPROPRIATE METHOD OF MEASUREMENT

- Options:
 - Direct Behavior Ratings
 - Direct Observation
 - Intervention-Based Measures



DIRECT BEHAVIOR RATING

DIRECT BEHAVIOR RATING (DBR)

- Involves teachers rating a student's behavior on 0-10 scale
 - Direct**
 - Ratings recorded immediately at end of observation session
 - Behavior**
 - Behavior is specific and operationally defined
 - Rating**
 - Ratings are conducted repeatedly and follow a 0-10 scale

WWW.DIRECTBEHAVIORRATINGS.ORG

DIRECT BEHAVIOR RATING

Direct Behavior Rating (DBR) Form: 3 Standard Behaviors

DBR Form	Student Name	Teacher Name
Behavior 1: Academically Engaged Academically engaged is when a student is actively participating in the classroom. For example, raising hand, answering questions, asking questions, looking at the teacher, reading, or looking at classroom materials.	<input type="radio"/> Simple <input type="radio"/> Inexpensive <input type="radio"/> Efficient	Behavior 2: Responsible Responsible is when a student follows classroom rules and procedures. For example, following directions, staying on task, and following classroom rules.
Behavior 3: Academically Engaged Academically engaged is when a student is actively participating in the classroom. For example, raising hand, answering questions, asking questions, looking at the teacher, reading, or looking at classroom materials.	Behavior 4: Academically Engaged Academically engaged is when a student is actively participating in the classroom. For example, raising hand, answering questions, asking questions, looking at the teacher, reading, or looking at classroom materials.	Behavior 5: Academically Engaged Academically engaged is when a student is actively participating in the classroom. For example, raising hand, answering questions, asking questions, looking at the teacher, reading, or looking at classroom materials.

Other names: home school note, behavior report card, daily progress report, good behavior note

DIRECT BEHAVIOR RATINGS

Place a mark along the line that best reflects the percentage of total time the student was academically engaged during math today.

Circle the number that best represents the student's behavior:

DIRECT BEHAVIOR RATING: STANDARD FORM

- Each behavior has operational definition with examples and nonexamples
- Other option: Fill in with your own target behaviors

www.directbehaviorratings.org

DIRECT BEHAVIOR RATING

- Steps for implementation:
 - Identify the behaviors you want to monitor.
 - Define the behaviors with examples and nonexamples
 - Identify the time period or instructional activity for observation
 - Immediately following observation period, complete the rating
 - Graph the rating daily

DBR EMPIRICAL SUPPORT

- Evidence of reliability and validity
- Moderately to highly correlated with direct observation
- Consistency across raters (e.g., external observers and teachers)

(Briesch, Kiga, Chafetz, Riley-Tilman, & Christ, 2013; Chafetz, 2011; Chafetz, Kiga, & Hernandez, 2009; Riley-Tilman, Chafetz, Briesch, & Eckert, 2008; Riley-Tilman, Chafetz, Suro, Charwe, & Glazer, 2008)

DIRECT OBSERVATION

DIRECT OBSERVATION

- Direct measure of student behavior in real time (i.e., recording behavior as it occurs in the setting of concern)
 - Generally regarded as the gold standard for behavioral assessment measures
 - Teacher Options: Frequency, Momentary Time Sampling

FREQUENCY COUNTS: RECORDING THE NUMBER OF TIMES A BEHAVIOR OCCURS

Time Interval	Frequency	Session Length	Rate
Monday	xxxxxxx (7)	45 min	7/45 = .16 per min
Tuesday	xxxxxxxxxxxx (12)	48 min	12/48 = .25 per min
Wednesday	xxxxxxxxxxxxxx (13)	50 min	13/50 = .26 per min
Thursday	xxxxxx (6)	42 min	6/42 = .14 per min
Friday	xxx (3)	30 min	3/30 = .10 per min

Discrete behaviors: raising hand, blurting out, swearing, throwing things

FREQUENCY COUNTS IN PRACTICE

- Ideas for application:
 - Marks on an index card
 - Paper clips from one pocket to another
 - Counters
 - Tally marks on paper
 - Tally marks on mailing label on pants

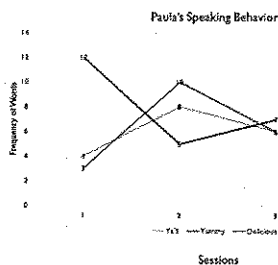
Larry	HHH I
Bobby	HHH
Tony	HHH II
Linda	IIII

GET YOUR RECORDING FORM: LET'S PRACTICE

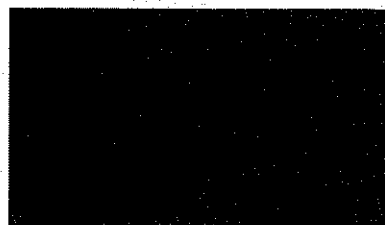


- Behavior: Number of times "Paula" says
 - Ya'll
 - Yummy
 - Delicious

GRAPH YOUR DATA

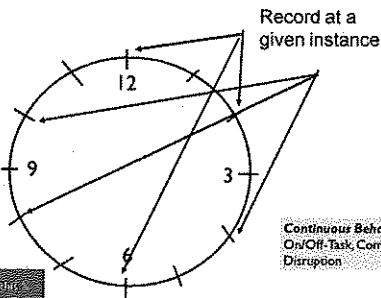


FREQUENCY COUNT: HASHTAG



MOMENTARY TIME SAMPLING

Interval	Occur	Did not Occur
1	X	
2		X
3	X	
4		X
5	X	
6		X
7	X	
8		X
9	X	
10	X	
$\frac{6}{10} =$	60%	



GET YOUR RECORDING FORM: LET'S PRACTICE



Time	Yes	No
:10		
:20		
:30		
:40		
:50		
1:00		
1:10		
1:20		
1:30		
1:40		
TOTAL		



DIRECT OBSERVATION

ADVANTAGES

- Most direct, accurate measure of student behavior

DISADVANTAGES

- May be viewed as labor intensive and distracting to instructional delivery
 - Epstein (2010): Teachers may be resistant to direct observation because they believe they cannot teach and collect data simultaneously
 - Few teachers have training in direct observational recording

DIRECT OBSERVATION

Implementation Steps:

1. Identify the behavior you want to measure
2. Define behavior with examples and non-examples
3. Determine the method of measurement:
 - a. Is it a low-frequency, discrete behavior? → Frequency Count
 - b. Is it a high-frequency, discrete behavior? → Time Sampling
 - c. Is it a continuous behavior? → Time Sampling
4. Create observation form and determine session length
5. Collect data
6. Calculate (e.g., convert frequency to rate, or determine % of intervals behavior occurred)
7. Graph data

EXAMPLE

SETTING


- K-12 self-contained, alternative school for students with challenging behavior
- Adapted PBIS framework for alternative setting (Jobvrette, McDaniel, Sprague, Swain-Bradway, & Ennis, 2012)
- Class size = 6-8 students with two adults

PARTICIPANTS

- 2nd-, 3rd grade classrooms, all participants had IEP goals related to behavior; nominated based on persistent social-behavioral problems
- Classroom 1:
 - Sid: white male; ADHD
 - Bill: black male, ADHD, ODD, Parent-Child Relational Problems
 - Matt: black male, ADHD, ODD
- Classroom 2:
 - Sam: white male, ADHD, ODD
 - Hal: black male, no mental health diagnosis


INTERVENTION

- Each class received 5 social skills lessons across 12 sessions, delivered by classroom teachers
- 30 min sessions 3x/wk and 1 hr session 1x/wk
- Skills taught: listening, using nice talk, accepting consequences, ignoring others, following directions
- Treatment Integrity = 98%



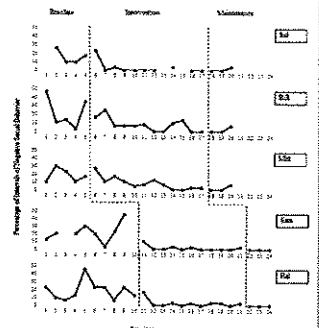
INTERVENTION

- 5-step process for each lesson:
 1. Stop and think
 2. Identify good and bad choices
 3. Identify steps to performing the good choice
 4. Implement the steps
 5. Reflect on the good choice you made



RESULTS


- DV = negative social behavior
- In practice, teacher could record skills targeted during intervention:
 - Frequency: using nice talk (or negative)
 - Time Sampling: listening, following directions



INTERVENTION-BASED MEASURES

INTERVENTION-BASED MEASURES

- Intervention-Based Measures: data that are collected within the intervention



Sample GICO Card



	Safe	Responsible	Respectful
Morning Work	1	2	3
Reading	2	3	1
Lead Lines	1	2	3
Math	1	2	3
PE Block/Block	1	2	3
End of Day	Only a valid score		

EXAMPLE

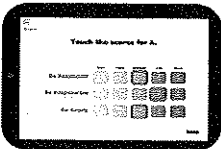
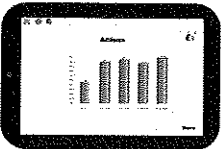
SELF-MONITORING INTERVENTION APP

11/4/14

Who are you?

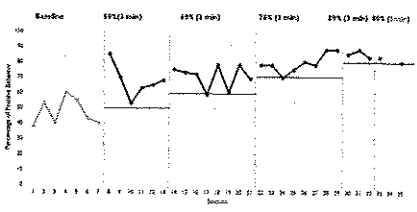
ABDE

Day	Level	Length	Location	Frequency	Response & Support

Control the environment
 Intend Goal - My response will be
 more positive than the
 baseline.
 Look for my response to be
 more positive than the
 baseline.

INDIVIDUAL OUTCOMES



- Behaviors Monitored: Be On-Task, Be Productive
- Feedback at the end of each session
 - "I think my friend was the most fun. It was the perfect intervention for her that soon at conference mentioned that her daughter began to show she would always check in on how much time was left before meeting to start. She mentioned how her daughter mentioned she would keep it track the iPad and make the she needed to get back on task. So I thought it to be a student that her teacher would remember having the iPad on her desk give her ownership in monitoring her time on task."

Practice in your classroom, on your kids, on your spouse...you may even have fun while collecting some valuable data!

STEP 1: SELECT APPROPRIATE METHOD OF MEASUREMENT

- What method you select depends on:
 - Intervention being used
 - Behavior being measured

STEP 2: COLLECT BASELINE DATA

- What are baseline data?
 - Data collected prior to intervention being in place
- Why collect baseline data?
 - Comparison to intervention data—is intervention working?
- When and how long do I collect baseline data?
 - No rules, 3-5 days recommended

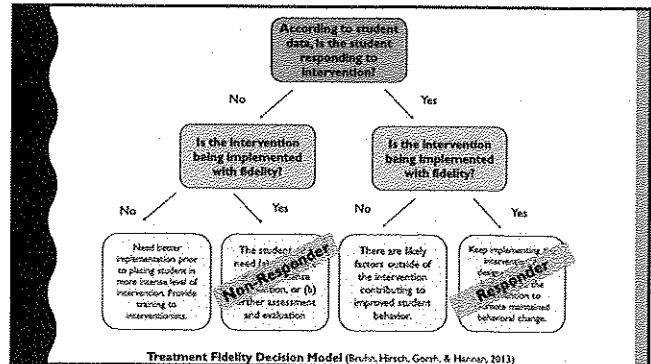
STEP 3: IMPLEMENT INTERVENTION WITH FIDELITY AND CONTINUE DATA COLLECTION

- Students do not have an opportunity to benefit from an intervention they did not experience



TREATMENT FIDELITY

- Treatment fidelity is necessary for drawing accurate conclusions about intervention effectiveness
 - Central to discussion in tiered prevention models (Schulte, Easton, & Parker, 2009)
 - Failure to respond to instruction or intervention provides the basis for more intense supports, and the possibility for special education placement

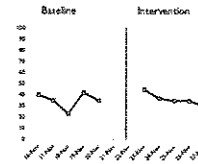


STEP 4: MODIFY TIER 2 INTERVENTION BASED ON RESPONSIVENESS

- Responders
 - Program for maintenance and reduce intensity until decision rules indicate student should exit Tier 2
 - Encourage generalization
- Non-responders
 - Move to more intense level of intervention
 - Refer for further assessment and evaluation

PROGRESS MONITORING DATA

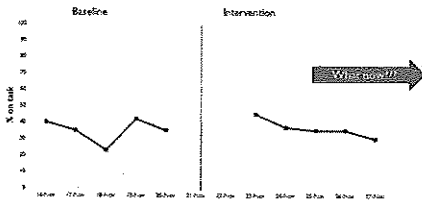
- Do data indicate the student is responding to intervention?
 - Graph data and observe graph to determine:
 - How does the behavior compare to baseline?
 - Is the behavior better or worse?
 - Is the behavior stable?



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PROGRESS MONITORING DATA

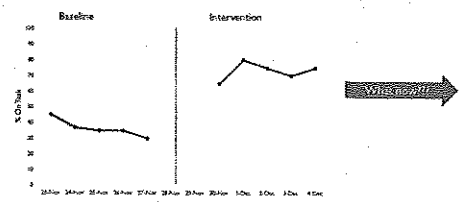
- Do data indicate the student is responding to intervention?
 - No = nonresponder
 - Yes = responder



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PROGRESS MONITORING DATA

- Do data indicate the student is responding to intervention?
 - No = nonresponder
 - Yes = responder



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STEP 4: MODIFY BASED ON RESPONSIVENESS

NONRESPONDERS

- Goal
 - Lower the goal
- Frequency
 - Increase the frequency of intervention
- Feedback
 - Increase the frequency of feedback
- Reinforcement
 - Add a reward for meeting the daily goal
 - Provide reward choice
- Add Components
 - Self-graphing
 - Prompt/incidental teaching
 - Check-ins

RESPONDERS

- Goal
 - Raise the goal
- Frequency
 - Decrease the frequency of intervention
- Feedback
 - Provide less frequent feedback
- Reinforcement
 - Increase the contingencies (e.g., must meet goal 3 days in a row to receive reward)
 - Change the reward, provide choice
 - Fade to praise only
- Remove Components

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EXAMPLE OF RESPONDER

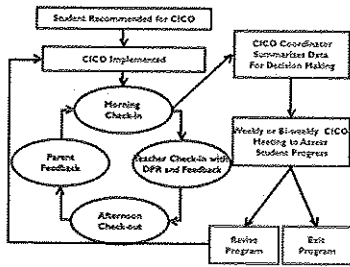
SETTING AND PARTICIPANTS

- Large middle school (grades 6-8)
 - Tier 1 PBIS partially in place (54% SET score)
 - Serves majority minority, high poverty students
- Female in 7th grade
 - Nominated by 7th grade teachers and administrator
 - 2 or more ODRs in one year
 - "abnormal" conduct subscale on SDQ

TINA

- 13-year old African American
- No special education eligibility
- Average of .5 ODRs per month
- 4 days out-of-school suspension
- Target behaviors- poor social skills, disruption, impulsivity, physical aggression
- SDQ results:
 - Total Score= abnormal range
 - Conduct Subscale= abnormal range

CICO



Check-in/Check-out (CICO) Student Form

DATE: _____ CLASS: _____ PERIOD: _____

Teacher: _____ (If the student has not been assigned a teacher, please write the teacher's name in the space below.)

BEHAVIOR GOALS	1st period	2nd period	3rd period	4th period	5th period	TOTAL POINTS
Punctual	2 3 0	2 3 0	2 3 0	2 3 0	2 3 0	
Respectful	2 3 0	2 3 0	2 3 0	2 3 0	2 3 0	
Organized	2 3 0	2 3 0	2 3 0	2 3 0	2 3 0	
Working attitude	2 3 0	2 3 0	2 3 0	2 3 0	2 3 0	
Learning	2 3 0	2 3 0	2 3 0	2 3 0	2 3 0	
TOTAL POINTS						

TOTAL POINTS: _____

100% = 10 points

80% = 8 points

60% = 6 points

40% = 4 points

20% = 2 points

0% = 0 points

100% = 10 points

80% = 8 points

60% = 6 points

40% = 4 points

20% = 2 points

0% = 0 points

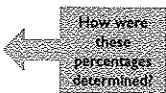
STUDENT SIGNATURE: _____

TEACHER SIGNATURE: _____

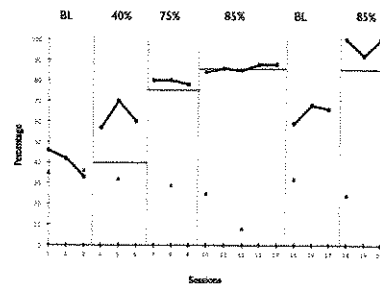
From CICO Manual

CONDITIONS

- Baseline- no CICO
- Intervention- Traditional CICO with modified goal percentages on DPR
 - 40%
 - 75%
 - 80%
 - 85%
- Return to baseline- no CICO
- Return to CICO with 85% goal



TINA'S BEHAVIOR



WHAT IF I MAKE ADAPTATIONS AND MY STUDENT IS STILL NOT RESPONDING?

- Considerations
 - Is there something else going on in the student's life, the classroom, etc.?
 - Academic skill deficits
 - Intervention match?
 - Next steps: academic assessment, emotional/behavioral diagnostic assessment, functional behavior assessment

REVIEW AND TIME FOR QUESTIONS

- Step 1: Select appropriate method of measurement
- Step 2: Set decision rules
- Step 3: Consider treatment integrity
- Step 4: Modify Tier 2 intervention based on responsiveness

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