

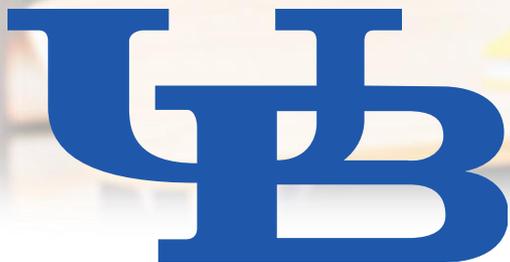
# Daily Report Cards in Schools

Robert J. Volpe, Ph.D.

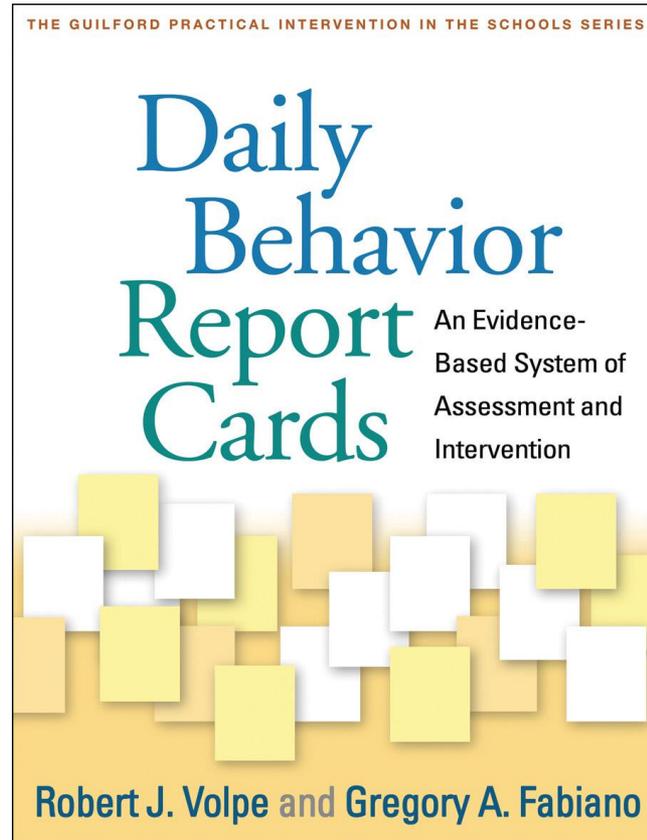
Northeastern University

Gregory A. Fabiano, Ph.D.

University at Buffalo, SUNY



# Conflict of Interest Statement

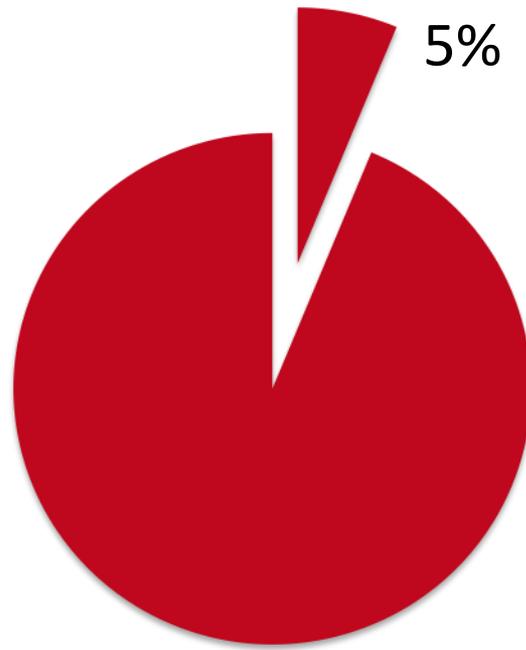


Volpe & Fabiano, 2013

# Importance

- The majority (70%-84%) of youth who exhibit warning signs for severe emotional or behavioral problems do not receive treatment either through the health care or educational system (Jensen et al., 2011)
- Studies have repeatedly documented a strong relationship between behavioral problems and poor academic performance (e.g., Blackman, Ostrander, & Herman, 2005; Kern, Choutka, & Sokol, 2002; Suldo, Gormley, DuPaul, & Anderson-Butcher, 2014)

# Social-Emotional/Behavioral Screening in U.S. Schools



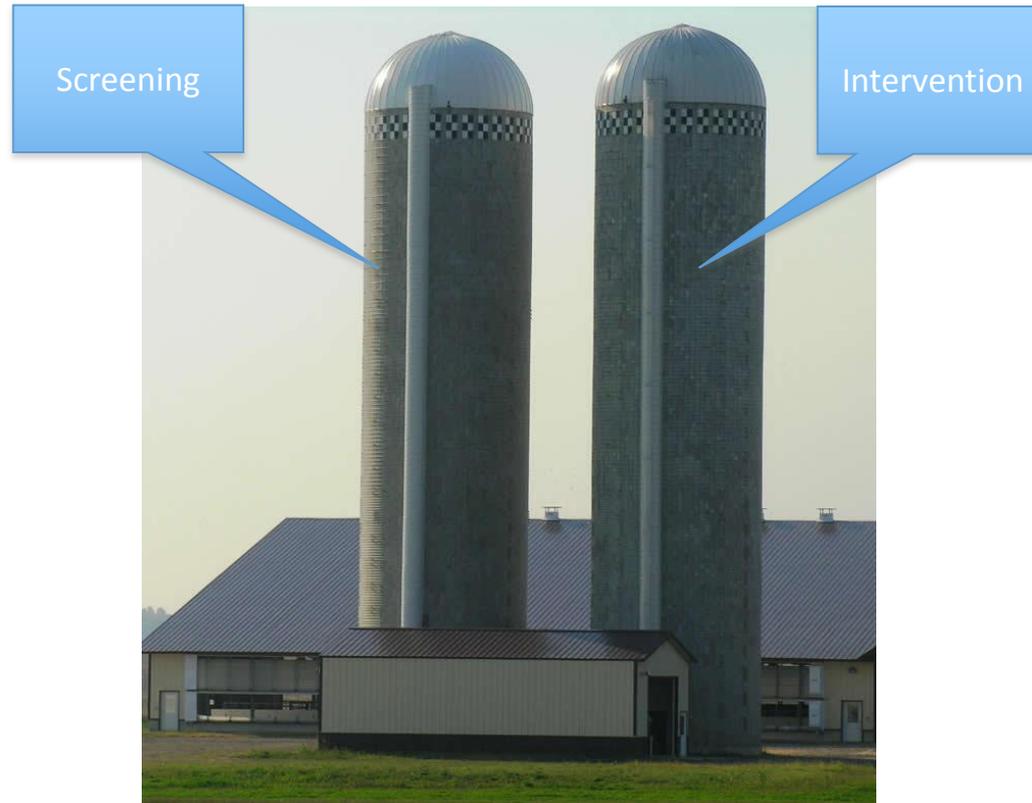
(Romer & McIntosh, 2005)

# Barriers to Screening

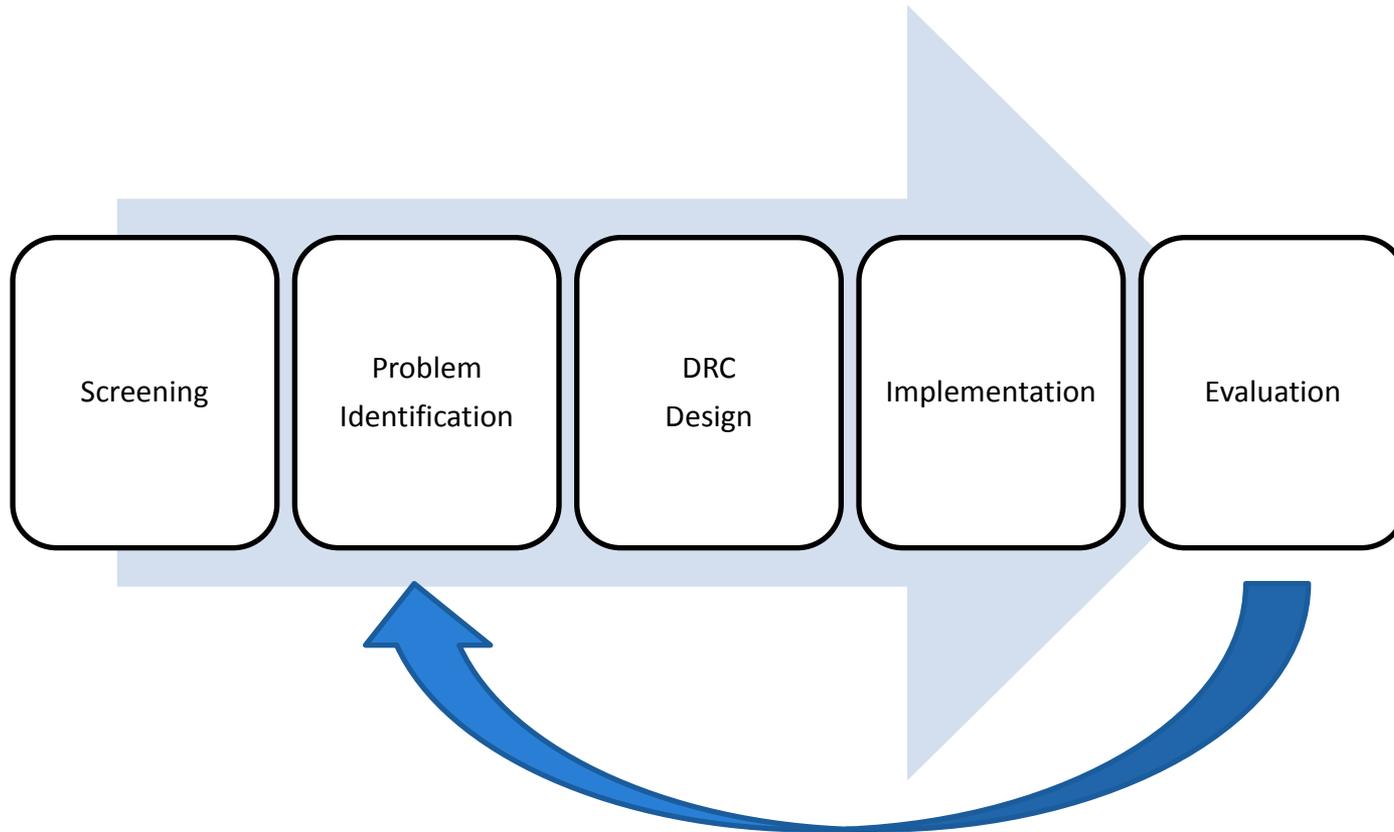
- Concerns regarding:
  1. Increased workload
  2. Premature stigmatization of students
  3. Lack of available follow-up services for identified students

(Kauffman, 1999; National Research Council and Institute of Medicine, 2009)

# The “Silo Problem”



# Integrated Model



(Volpe & Fabiano, 2013)

# Screening

**APPENDIX A**

**ISIS Teacher Rating Form**

Teacher: \_\_\_\_\_ School: \_\_\_\_\_  
 Date: \_\_\_\_\_ Grade: \_\_\_\_\_

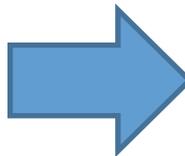
**Directions:** This form can be used to rate students' behavior that interferes with their learning or the learning of others. In the long columns on the right, please list the names of the five students in your classroom whose behavior is of greatest concern to you in this regard.

For each item below, indicate your level of concern regarding each student using the following scale:

- 1 = Slight concern
- 2 = Moderate concern
- 3 = Strong concern

Leave the space blank if the student does not exhibit the behavior or if the behavior is not a concern for that student.

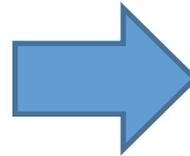
	Student Name				
1. Does not complete classwork on time					
2. Inaccurate or incomplete classwork					
3. Does not start assignments independently					
4. Writes illegibly					
5. Missing or incomplete homework					
6. Does not turn in class assignments					
7. Does not correct own work					
8. Fails to pack needed materials for home					



Rank	Total Rating	Student	Fit	Priority
1	44	Sky	√	1
2	29	Brian	FP	2
3	24	Max	√	3
4	24	Jim	√	3
5	11	Giorgio	√	N/A

# Screening Linked to Intervention

Rank	Problem Behaviors	DRC Item
1	Disrupts others	Makes X or fewer inappropriate noises Fewer than X instances of talking when not appropriate
2	Does not start assignments independently	Starts work with fewer than X reminders
3	Does not complete class-work on time	Completes assignments within the allotted time
4	Argues with teacher	Talks back fewer than X times
5	Missing or incomplete homework	Completed X% of assigned homework



Date: <u>2/29/2012</u>				
	Reading	Writing	Math	Science
Fewer than eight instances of inappropriate noises.	Y N	Y N	N/A	N/A
Starts work with fewer than two reminders.	Y N	Y N	Y N	Y N
Completes assignments within allotted time.	Y N	Y N	Y N	Y N
Talks back fewer than two times.	Y N	Y N	Y N	Y N
Completed ____% of assigned homework.	Number of Yeses ____		Number of Nos ____	
Mr. Barlet's Comments: _____				
_____				
Home Rewards and Comments: _____				
_____				
Mr. Barlet's Initials: _____			Parent's Initials: _____	

FIGURE 1.1. Example of a DRC for Sky.

# Teacher Rating Form

- 43 items derived from target behaviors frequently used in DRC interventions (Fabiano et al., 2010)
- Exploratory factor analysis indicated a two-factor structure (Daniels, Volpe, Briesch, & Fabiano, 2014)
  1. Oppositional/Disruptive (25 items)
  2. Academic Productivity/Disorganization (16 items)

# Participants and Setting

- Five elementary schools in the Northeastern U.S.
- 39 teachers (grades K-6)
- Ratings for 390 students (240 male; 150 female)
  - 85.3% White
  - 5.4% Asian
  - 4.1% African American
  - 2.6% Latino
  - 2.6% Multi-Race/Other

# Method

- Factor Structure
- Reliability
- Receiver Operating Characteristic (ROC) Curve Analyses
  1. Brief Problem Monitor-Teacher (BPM-T; Achenbach, McConaughy, Ivanova, & Rescorla, 2011)
- Teacher Acceptability
  - Assessment Rating Profile-Revised (ARP-R; Eckert, Hintze, & Shapiro, 1999)

# Structure

*Pattern and Structure Matrices*

	Pattern coefficients		Structure coefficients	
	Factor 1	Factor 2	Factor 1	Factor 2
Argues with peers <sup>a</sup>	.84		.76	.34
Argues with teacher <sup>a</sup>	.79		.79	.46
Disrespectful to adults <sup>a</sup>	.77		.80	.50
Calls out <sup>a</sup>	.76		.71	.35
Bossy <sup>a</sup>	.76		.61	
Has conflicts with peers <sup>a</sup>	.74		.74	.43
Loses temper <sup>a</sup>	.74		.75	.44
Bumps, hits or kicks others <sup>a</sup>	.72		.73	.42
Tattles on other children <sup>a</sup>	.72		.68	.34
Uses inappropriate language <sup>a</sup>	.69		.71	.43
Noncompliant <sup>a</sup>	.69		.75	.51
Teases <sup>a</sup>	.69		.66	.35
Does not respect others' personal space <sup>a</sup>	.68		.75	.51
Does not work well with others <sup>a</sup>	.65		.74	.52
Nosey <sup>a</sup>	.64		.60	
Uses materials inappropriately <sup>a</sup>	.64		.75	.56
Disrupts others <sup>a</sup>	.63		.72	.51
Makes irrelevant comments <sup>a</sup>	.60		.67	.47
Destroys property <sup>a</sup>	.59		.66	.47
Moves around the room <sup>a</sup>	.57		.65	.48
Cries, complains, whines <sup>a</sup>	.52		.61	.45
Distracted by others' negative behaviors <sup>a</sup>	.51		.61	.47
Leaves room without permission <sup>a</sup>	.51		.60	.44
Asks to leave classroom frequently <sup>a</sup>	.47		.62	.53
Makes self-deprecating comments <sup>a</sup>	.45		.56	.45
Does not turn in class assignments <sup>b</sup>		.89	.41	.83
Unorganized <sup>b</sup>		.82	.40	.78
Missing or incomplete homework <sup>b</sup>		.80	.37	.75
Does not complete classwork on time <sup>b</sup>		.80	.39	.75
Comes to class unprepared <sup>b</sup>		.77	.38	.73
Fails to pack needed materials for home <sup>b</sup>		.75	.43	.75
Inaccurate or incomplete classwork <sup>b</sup>		.72	.46	.75
Does not start assignments independently <sup>b</sup>		.71	.48	.75
Does not correct own work <sup>b</sup>		.59	.49	.68
Does not put away belongings <sup>b</sup>		.58	.48	.67
Does not participate in class <sup>b</sup>		.57	.42	.62
Does not ask for help/asks for help inappropriately <sup>b</sup>		.52	.54	.67
Does not follow directions <sup>b</sup>		.50	.59	.68
Writes illegibly <sup>b</sup>		.50	.43	.58
Does not participate in group activities <sup>b</sup>		.43	.45	.54
Mumbles or speaks incoherently <sup>b</sup>		.40	.45	.52
Transitions poorly between activities	.43	.33	.62	.58
Takes too long when using bathroom or water fountain	.37	.34	.57	.56

Oppositional/Disruptive

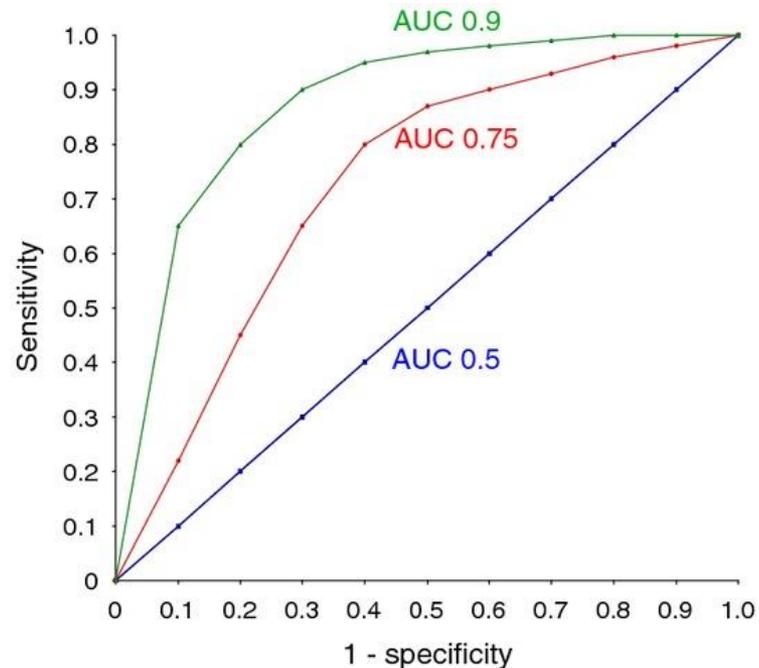
Academic Productivity/  
Disorganization

# Reliability

Scale	IC	Stability
Oppositional/Disruptive	.95, .96	.78
Academic Productivity/Disorganization	.94, .95	.88
Total	.97, .97	.84

# ROC Curves

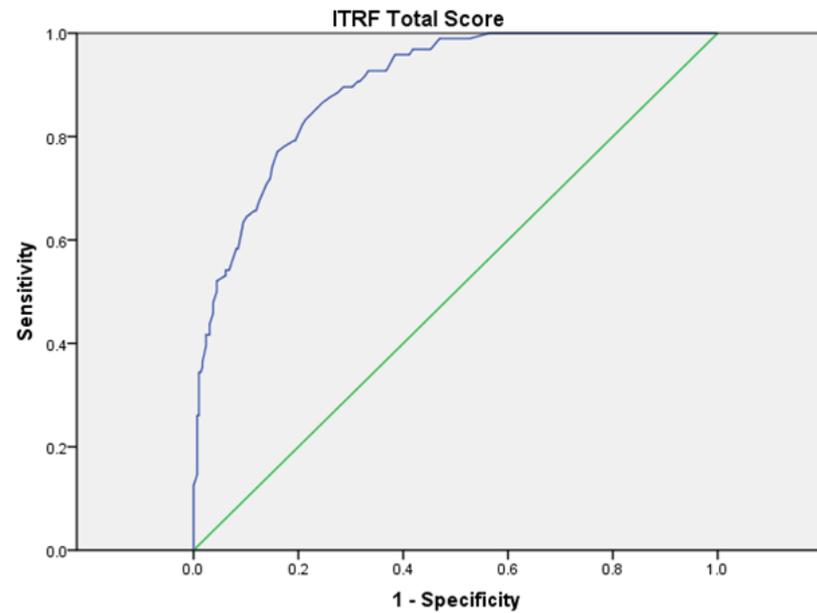
- Area Under the Curve (AUC; Hosmer & Lemenshow, 1989; Swets, 1996)
  - “Acceptable”  $> .70$
  - “Good” =  $.80 - .90$
  - “Excellent”  $> .90$



# ITRF Total Score

BPM-T Total Problems

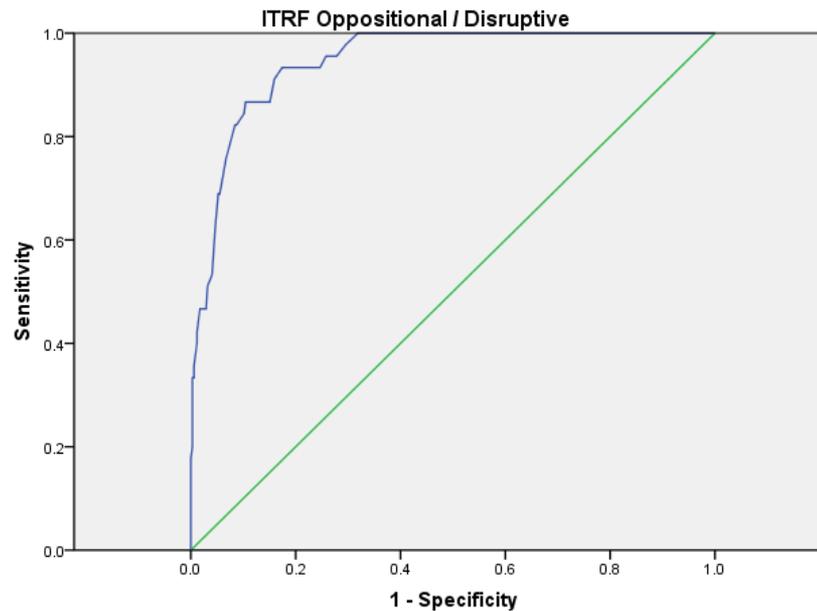
AUC = .897



# Oppositional/Disruptive

**BPM-T Externalizing**

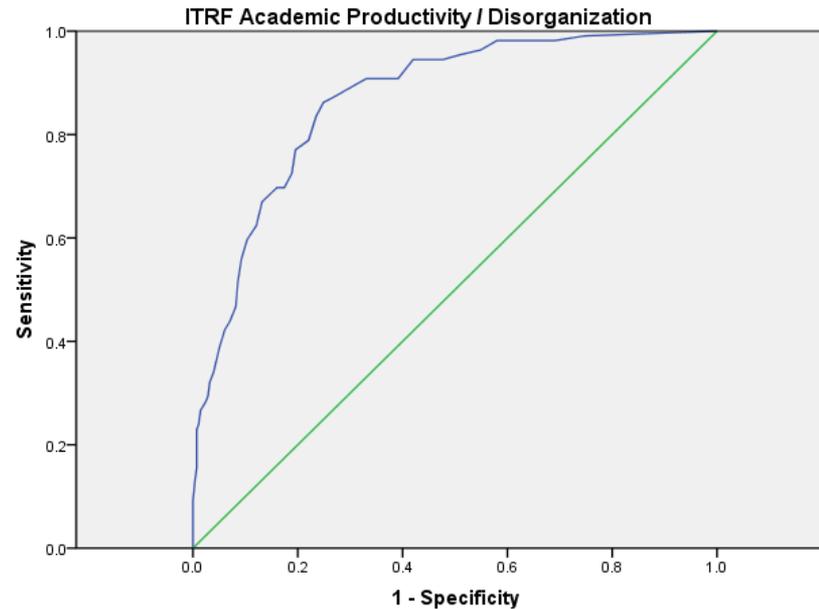
**AUC = .946**



# Academic Productivity/Disorganization

BPM-T Attention

AUC = .868



# Most Frequently Endorsed Items

	Percentage of Students		
	Moderate Concern	Strong Concern	Total
Inaccurate or incomplete classwork <sup>b</sup>	21.0%	21.3%	42.3%
Does not complete classwork on time <sup>b</sup>	17.2%	22.1%	39.2%
Does not follow directions <sup>b</sup>	15.6%	22.1%	37.7%
Unorganized <sup>b</sup>	20.3%	16.7%	36.9%
Does not correct own work <sup>b</sup>	18.5%	16.7%	35.1%
Disrupts others <sup>a</sup>	16.4%	17.9%	34.4%
Does not start assignments independently <sup>b</sup>	20.3%	13.8%	34.1%
Writes illegibly <sup>b</sup>	13.8%	15.4%	29.2%
Distracted by others' negative behaviors <sup>a</sup>	11.3%	16.7%	27.9%
Calls out <sup>a</sup>	12.8%	14.1%	26.9%

<sup>a</sup> Oppositional/Disruptive <sup>b</sup> Academic Productivity/Disorganization

# Assessment Rating Profile-Revised

Items	M	SD	Range
1. This was an acceptable assessment strategy for identifying children whose problems interfere with their learning or the learning of others.	5.18	.61	4.00-6.00
2. The ISIS Teacher Rating Form was effective in identifying the children in the greatest need of intervention.	4.89	1.05	1.00-6.00
3. The ISIS Teacher Rating Form was effective in identifying the most concerning problems exhibited by each child.	5.15	.72	4.00-6.00
4. The ISIS Teacher Rating Form would be appropriate for a variety of children.	5.11	.79	3.00-6.00
5. The ISIS Teacher Rating Form was a fair way to identify children whose behaviors interfere with their learning or the learning of others.	5.25	.52	4.00-6.00
6. Information obtained from the ISIS Teacher Rating Form is likely to be helpful in the development of intervention strategies.	5.18	.67	4.00-6.00
7. I would suggest the use of the ISIS Teacher Rating Form to other teachers.	5.07	.66	4.00-6.00
8. I would be willing to receive assessment results similar to those provided by the ISIS Teacher Rating Form with a student transferring into my school.	5.29	.66	4.00-6.00
9. The time required to complete the ISIS Teacher Rating Form was reasonable.	5.11	.79	4.00-6.00
10. I liked the assessment procedures used as part of the ISIS Teacher Rating Form.	5.00	.57	4.00-6.00
11. Overall, using the ISIS Teacher Rating Form would be beneficial for children who exhibit behaviors that interfere with their learning.	5.25	.59	4.00-6.00

# Discussion

- Good to excellent classification accuracy
  - ITRF total score
  - Oppositional/Disruptive subscale
  - Academic Productivity/Disorganization subscale
- Acceptable to teachers as a screening tool
  - Feasible
  - Efficient
  - Effective

# Daily Behavior Report Card

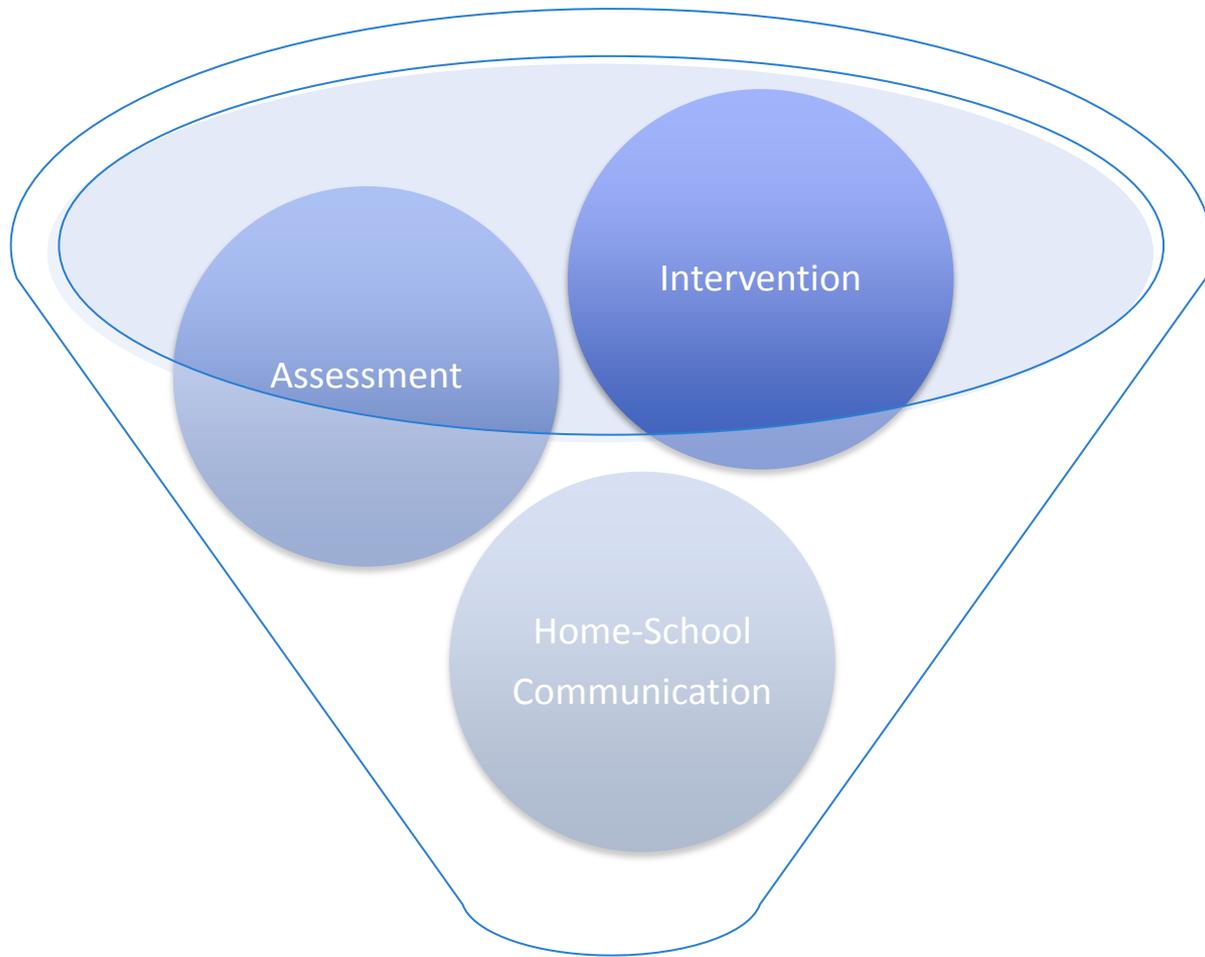
- A Daily Behavior Report Card (DRC) is an operationalized list of a child's target behaviors
  - Includes specific criteria (i.e., goals)
  - Provides immediate feedback to the child
  - Communicates a child's behavior or performance to his parents
  - Linked to home-based contingencies for meeting DRC goals

# Why Use a DRC?

- **Evidence-based** (DuPaul & Eckert, 1997; DuPaul & Stoner, 2004; Evans & Youngstrom, 2006; Volpe & Fabiano, 2013; Pelham & Fabiano, 2008; Pelham, Wheeler, & Chronis, 1998; U.S. DOE, 2004)
- **Efficient:** Can be completed quickly and feedback is received in real-time.
- **Flexible:** Can be used to target a wide array of social and academic behaviors
- **Embedded:** students receive feedback at the point of performance
- **Positive:** Practically guarantees parents and teachers will be providing *positive* feedback throughout and across days!

# Why Use a DRC?

- **Provides daily communication**
  - Interventions should facilitate communication (Pisecco, et. al, 1999)
  - May support amenable parent-teacher relationships (Dussault, 1996).
  - May enhance relationships between teacher, parent and child (e.g., Pianta, 1996)
- **Dual use tool (intervention and measurement)**  
(e.g., Chafouleas, Riley-Tillman, & McDougal, 2002; Cheney, Flower, & Templeton, 2008; DuPaul & Stoner, 2003; Evans et al., 1995; Pelham, Fabiano, & Massetti, 2005; Riley-Tillman, Chafouleas, & Breisch, 2007)



**Daily Report Cards**

# Daily Report Card

Date: 2/29/2012

	Reading	Writing	Math	Science
Fewer than eight instances of inappropriate noises.	Y N	Y N	N/A	N/A
Starts work with fewer than two reminders.	Y N	Y N	Y N	Y N
Completes assignments within allotted time.	Y N	Y N	Y N	Y N
Talks back fewer than two times.	Y N	Y N	Y N	Y N

Completed \_\_\_\_\_% of assigned homework.      Number of Yeses \_\_\_\_\_      Number of Nos \_\_\_\_\_

Mr. Barlet's Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Home Rewards and Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Mr. Barlet's Initials: \_\_\_\_\_

Parent's Initials: \_\_\_\_\_

**FIGURE 1.1.** Example of a DRC for Sky.



Dave Carpenter

"My teacher said I don't pay enough attention in class.  
At least, that's what I think she said."

# Evidence for DRC Efficacy – Single Subject Designs

Single Subject Studies	Design	N	Meets WWC Standards?	Results/Effect sizes
Atkins, Pelham, & White (1989)	ABCDAEF	1	No	Most effective when combined with other interventions (school rewards, seat change, response cost)
Fabiano, & Pelham (2003)	MBD	1	No	Child demonstrated improved behavior when the DRC was implemented
Jurbergs, Palcic, & Kelley (2007)	ABAB	6	Yes, with Reservations (At least one phase for all cases has only four datapoints)	DRCs with and without response cost improved student behavior
Kelley, & McCain (1995)	ABAB	5	1/5 Cases	Majority of students behaved best with response cost component in DRC
McCain, & Kelley (1993)	ABAB	1	Yes, with Reservations (Reversal phase has only four datapoints)	Improved behavior demonstrated with the DRC
McCain, & Kelley (1994)	MBD	3	Yes, Reservations (One baseline phase has only four datapoints)	School home notes with response cost component were most effective
Miller, & Kelley (1994)	ABAB and MBD	4	No for ABAB design; Yes, with reservations for MBD	2/4 subjects evinced clear reversal once DRC removed
Pelham, & Fabiano (2001)	AB	1	No	Child demonstrated improved behavior when contingent rewards implemented

# Evidence for DRC Efficacy – Between Group Designs

Between Group Studies	Design	N	Meets WWC Standards?	Results/Effect sizes
Fabiano, et al. (2010)	Between Group	63	Yes	Children in special education who had a DRC based on IEP goals/objectives exhibited better behavior and received improved teacher ratings of academic productivity relative to a business as usual control
Jurbergs, Palcic, & Kelley (2010); Palcic, Jurbergs, & Kelley (2009)	Between Group	43	Yes	Children who received classroom or home-based rewards for DRCs exhibited more on-task behavior and completed more seatwork correctly than a control group; Parent consequences more effective than no parent consequences
Murray, Rabiner, Schulte, & Newitt (2008)	Between Group	24	No (Non-equivalence of groups at baseline)	Children who received the DRC rated as improved on teacher ratings
O'Leary, Pelham, Rosenbaum, & Price (1976)	Between Group	17	Yes	Children who received the DRC rated as improved on classroom observations

Note: Many studies of children with ADHD included the DRC as part of a multi-component intervention. For the purposes of this table, only stand-alone studies are included.

# **CREATING A DRC INTERVENTION**

# Overview of DRC Components

- Select areas for improvement.
- Determine how goals will be defined.
- Decide on behaviors and criteria for the DRC.
- Explain the DRC to the child.
- Establish home rewards/privileges.
- Monitor and modify the program.
- Trouble-shoot.

# Select Areas for Improvement & Defining Goals

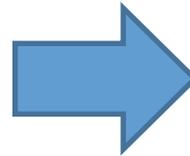
- Review the student's current behavior
- Involve all school staff who work directly with the student
- Key domains
  - Improving peer relations
  - Improving academic productivity
  - Improving classroom rule-following
- Identify specific behaviors to facilitate progress toward goals

# Target Identification

- Select Target behaviors
  - 3-5 is a rule of thumb
- Operationally define target behaviors
- Set criteria for behavioral goals
  - Baseline
  - Guesstimate
  - Archival data

# Target Identification

Rank	Problem Behaviors	DRC Item
1	Disrupts others	Makes X or fewer inappropriate noises Fewer than X instances of talking when not appropriate
2	Does not start assignments independently	Starts work with fewer than X reminders
3	Does not complete class-work on time	Completes assignments within the allotted time
4	Argues with teacher	Talks back fewer than X times
5	Missing or incomplete homework	Completed X% of assigned homework



Date: <u>2/29/2012</u>				
	Reading	Writing	Math	Science
Fewer than eight instances of inappropriate noises.	Y N	Y N	N/A	N/A
Starts work with fewer than two reminders.	Y N	Y N	Y N	Y N
Completes assignments within allotted time.	Y N	Y N	Y N	Y N
Talks back fewer than two times.	Y N	Y N	Y N	Y N
Completed ____% of assigned homework.	Number of Yeses ____		Number of Nos ____	
Mr. Barlet's Comments: _____				
_____				
Home Rewards and Comments: _____				
_____				
Mr. Barlet's Initials: _____			Parent's Initials: _____	

FIGURE 1.1. Example of a DRC for Sky.

Date: 2/29/2012

	Reading	Writing	Math	Science
Fewer than eight instances of inappropriate noises.	Y N	Y N	N/A	N/A
Starts work with fewer than two reminders.	Y N	Y N	Y N	Y N
Completes assignments within allotted time.	Y N	Y N	Y N	Y N
Talks back fewer than two times.	Y N	Y N	Y N	Y N

Completed \_\_\_\_\_% of assigned homework.      Number of Yeses \_\_\_\_\_      Number of Nos \_\_\_\_\_

Mr. Barlet's Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Home Rewards and Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Mr. Barlet's Initials: \_\_\_\_\_      Parent's Initials: \_\_\_\_\_

**FIGURE 1.1.** Example of a DRC for Sky.

# **DRC CONSEQUENCES**

# Working with parents Home-based reward system

- Reward hierarchy
- Daily and weekly rewards
- School-based reward supplementation

# Classroom



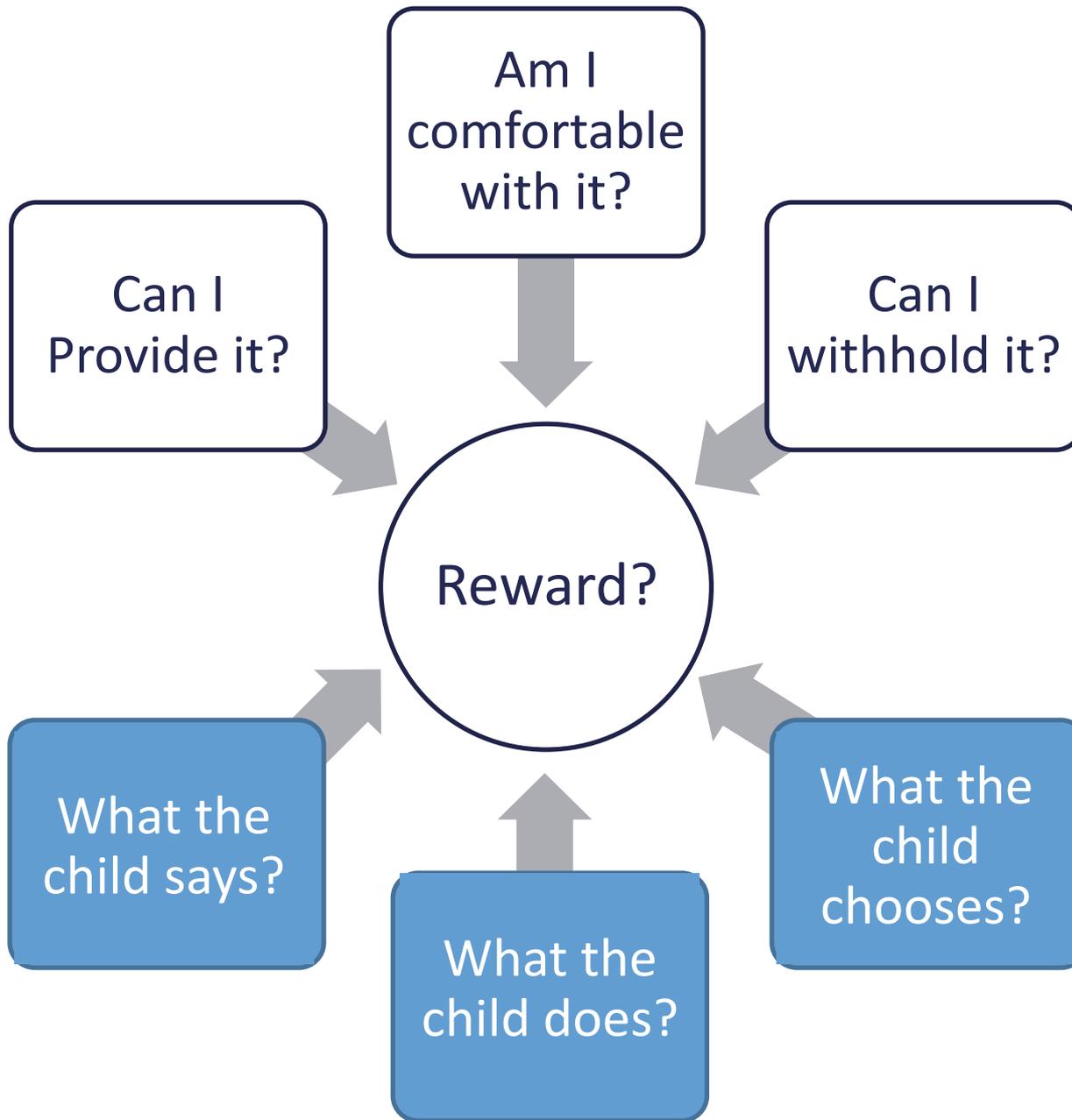
# Home Rewards



## Home Reward Planning Sheet

With your child, review these potential home rewards. As a first step, simply put a checkmark next to each reward your child indicates he/she would like to earn each day.

Home Privileges	_____	Minutes television time
	_____	Minutes computer time
	_____	Minutes videogame time
	_____	Minutes extended bedtime
	_____	Minutes extended bathtime
	_____	Minutes phone time
	_____	Listen to radio/music at bedtime
	_____	Choose dinner
	_____	Choose dessert
	_____	Choose snack
	_____	Get out of a chore (specify: _____ )
	_____	Special snack in tomorrow's lunch
	_____	Sleep in _____ minutes the next morning
	_____	Parent will drive to school the next morning
	_____	Daily cell phone privileges
	_____	Log-on privileges for social networking sites
	_____	Extra outdoor time past curfew
	_____	Use of bike
	_____	Use of scooter/skateboard/rollerblades
	_____	Have a friend over to play
Special Time with Parent	_____	Play a game with parent
	_____	Minutes one-on-one time
	_____	Drawing/coloring with parent



# Principles for Creating a Home Reward System

- Rewards should be natural
- Arranged so that fewer or less desirable rewards can be earned for fewer positive marks; more desirable rewards for more positive marks
- The child should be given a menu of rewards to ensure variety and maintain motivation

# Sample Home Rewards

## Daily Rewards:

- Snacks
- Dessert after dinner
- Staying up X minutes beyond bedtime
- Watching T.V. for X minutes
- Video game for X minutes
- One-on-one time with parent
- Playing outside for X minutes

# Sample Home Rewards

## Weekly Rewards:

- Choosing a family movie
- Choosing a restaurant to go out to dinner or choosing a dinner to make
- Selecting something special at the store
- Going to the movies
- Having a friend over to spend the night
- Going to a friend's to spend the night
- Getting ice cream

# Reward Menu

## Child Reward Form

Child's Name: Michael

Date:

### Daily Rewards:

*Level 3 (50-74% positive marks):* 15 min. of T.V. or pick 1 snack

*Level 2 (75-89% positive marks):* 30 min. of T.V. or both of Level 3

*Level 1 (90-100% positive marks):* 45 min. of T.V. or choose dessert and stay up 15 extra min.

### Weekly Rewards:

*Level 3 (50-74% positive marks):* Choose dinner on Saturday

*Level 2 (75-89% positive marks):* Go out to lunch with Mom or Dad

*Level 1 (90-100% positive marks):* Sleepover and movie with friend

# Explaining the DRC to the Child

- Teacher-Child meeting
- Parent-Child meeting
- Role plays/explanations
- Positive focus to all discussions

# **PROGRESS MONITORING**

# Monitoring progress

- Check progress frequently
- DRC itself is a progress monitoring tool
- Other indicators
  - Seatwork completion
  - Office/discipline referrals

# Rationale for Progress Monitoring of ADHD Symptoms and Impairment

- Because of ADHD's chronic nature (National Institutes of Mental Health, 2008), it is important to have a careful plan in place to monitor symptoms as well as any treatment effects.
- Such a plan should be easily adaptable and flexible to an individual student.
- Progress monitoring using observations and lengthy rating scales is costly and time consuming.

# Rationale cont'

- The DRC is a practical tool for addressing the monitoring requirements of IEPs (Pelham, Fabiano, Massetti, 2005).
  - requires little specialized training
  - sensitive to varying levels treatment
  - can be used by teachers and parents and school psychologists
- DRCs provide a daily indication of a child's functioning in the classroom as well as treatment adherence (Evans & Youngstrom, 2006).

# Rationale cont'

- Using naturalistic treatment opportunities (i.e., DRC) can help increase treatment integrity (Riley-Tillman & Chafouleas, 2003).
- Consultation using data-based decision making involves providing feedback to teachers using data gathered during an intervention to make informed decisions about treatment progress.

# Progress Monitoring and Consultation Cont'

- Modifications are typically done in small steps (e.g., 3 to 2 prompts for staying on task).
- The practice of making small changes during consultation meetings may be important in maintaining teacher interest in treatment.
- Riley-Tillman and Chafouleas (2003) recommend making small changes, since “they may be the only changes that are actually implemented and have greater potential to endure” (p. 139).

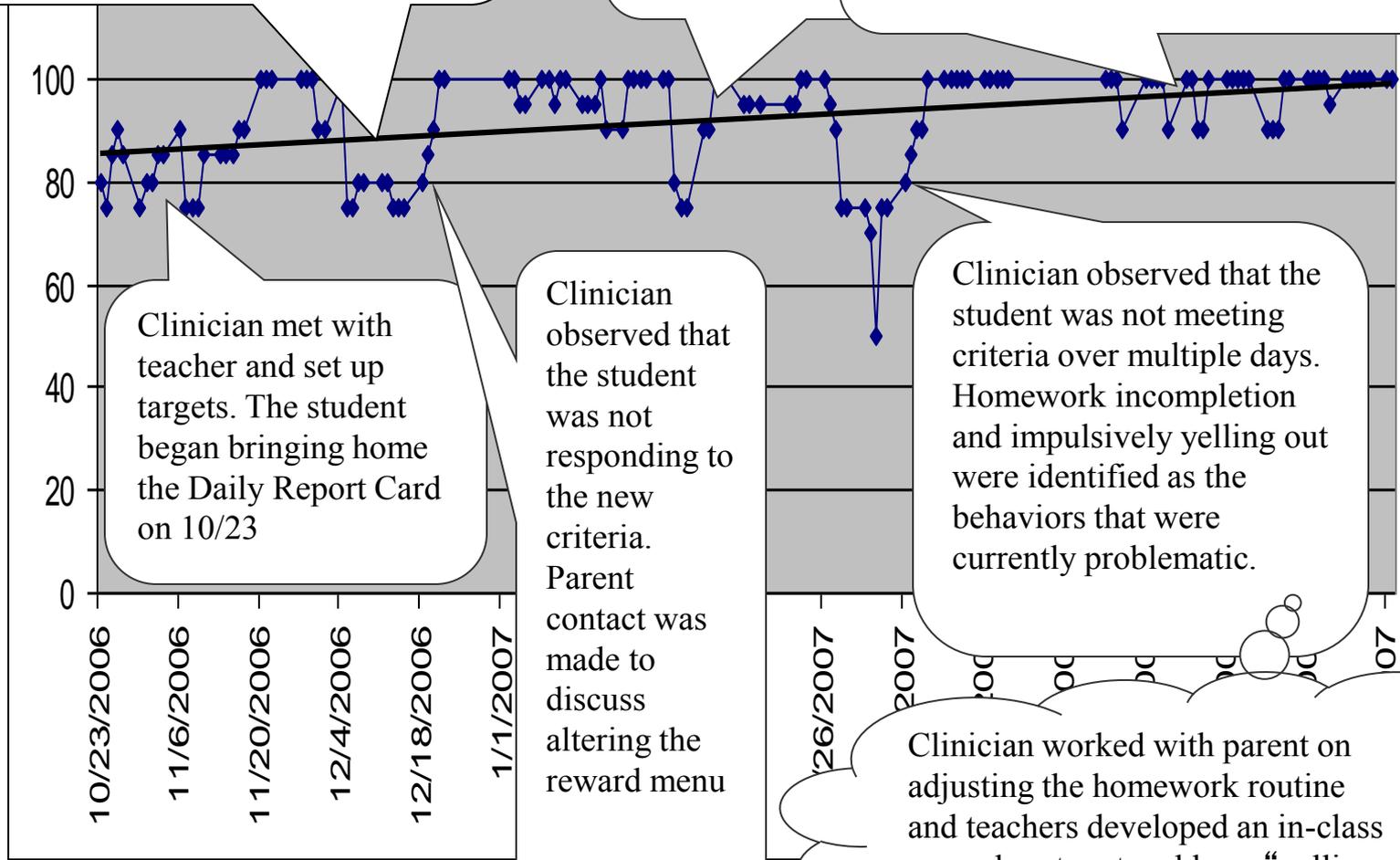
# Interpretation of Progress Monitoring

- Graphs of student progress can be linked to content of parent and teacher consultation meetings.
- Graphs represent data gathered in naturalistic settings that indicate the degree of impairment a student is experiencing in the classroom.
- Graphs can provide information that can be used to motivate teachers and parents to continue using specific techniques that have been effective.

During the December consultation visit, teachers and consultant agreed to modify one of the targets from 2, to no more than 1 reminder for being off-task

During the January consultation, targets changed from 2 to no more than 1 interruption

Student's behavior was maintained throughout the remainder of the school year. Clinician met with the teacher and supported parents in problem-solving homework concerns



# Trouble-shooting the DRC

- Is the report card taken home to the parent(s)?
- Are the targets appropriate?
- Are the criteria for meeting targets attainable?
- Does the child understand the system?
- Is the monitoring/feedback system working properly?
- Is the child able to monitor his/her behavior/standing?
- Is the reward motivating?
- Is the reward provided consistently?
- Is the reward provided frequently enough?

# Thank You

- Questions?
- The DRC materials, as well as other assessment and treatment materials are available for free download at:

<http://ccf.fiu.edu>