

I'm good enough, I'm smart enough and doggone it...I know TBI

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October 9, 2008
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Identifying Brain Injury





INCIDENCE OF BRAIN INJURY: NATIONAL DATA

- CDC reports annual incidence of TBI for Children 0-14:
 - 2,685 deaths
 - 37,000 hospitalizations
 - 435,000 ED visits

These numbers do not include children who sustained a TBI and did not seek medical care or were treated and released without mention of potential TBI

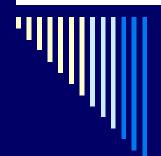


INCIDENCE OF BRAIN INJURY: NATIONAL DATA

- □ Each year an average of 475,000 TBIs occurred among children.
- Most children who sustained a TBI (91.5%) were treated and released from the emergency department without further treatment.

CDC 2005





U.S.D.O.E DATA (STUDENTS AGES 6-21)

- □ During the 1991-92 school year there were a total of 4,499,824 students receiving special education services of that total only 245 were served under the TBI disability category
- During the 1999-2000 school year there were a total of 5,683,707 students receiving special education services of that total there were 13,874 served under the TBI disability category

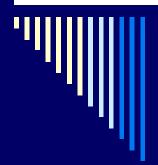
U.S. Department of Education, Office of Special Education Services: Annual Report to Congress, 2000



U.S.D.O.E. DATA (STUDENTS AGES 6-21)

2005 data shows there were a total of 6,021,462 students receiving special education services of that total there were 23,449 served under the TBI disability category

- Interesting fact, Autism became a disability category in 1991 also; in 1992, 15,302 students were identified, in 2000, 79,085 were identified and in 2005 192,643 students were identified under the autism disability category
- Mid-1990's, move toward "educational identification" of ADHD



Systemic Barriers to Identification of TBI

Criteria:

Medical Documentation

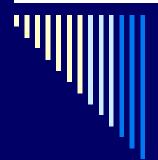
(presumed effect on learning – but what is that effect?)

Currently a binary system:

- black or white
- off or on
- ☐ TBI or not

Where are the shades

of grey?



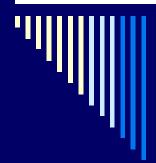
Colorado Department of Education TBI Eligibility 08/08

Medical documentation and/or

(credible) History of TBI

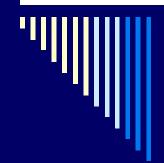
and

"Educational Impact"



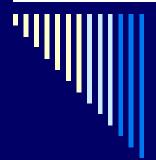
Barriers to Identification

- Specific to TBI only, does not include ABI
- Medical documentation only
- Educational identification:
- 1. lowa RTI
- Massachusetts "educational expert team"



Educational Identification of Traumatic Brain Injury in School Children: A Feasibility Study

Colorado State University Spring 2008



Data Collection

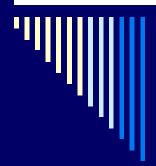
- Extensive literature search
- Website review and survey of states
- 19 states recruited, 16 participated (survey questions referred to state's definition of TBI and eligibility standards)
- Email survey of CO TBI experts
 - 9 recruited, 8 participated

(survey questions related to the feasibility of implementing an educational identification protocol for TBI in CO



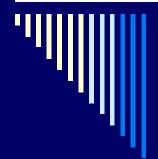
Results by States

State Surv <mark>eyed</mark>	Total Student Pop.	# served/ IDEA	# TBI under IDEA	% under TBI
Colorado	779,826	10,540	413	3.92%
Florida	2,675,024	34,350	613	1.78%
Georgia	1,598,461	20,728	474	2.29%
lowa*	483,482	6,118	234	3.82%
Kansas	467,285	9,267	240	2.59%
Massachusetts	971,909	15,195	5,577	36.70%
Minnesota	839,243	13,402	470	3.51%
Missouri	917,705	15,268	456	2.99%
Montana	145,416	1,925	84	4.36%
North Dakota	98,283	1,520	37	4.36%
Ohio	1,839,683	22,702	1,082	4.77%
Oregon	552,194	8,167	308	3.77%
Pennsylvania	1,830,684	25,964	860	3.31%
Texas	4,525,394	40,236	1,459	3.63%
Vermont*	96,638	1,556	46	2,96%
Wyoming	84,409	2,496	93	3.77%
Total	17,905,636	229,407	12,446	5.43%
*Data from 2003 USDOE				



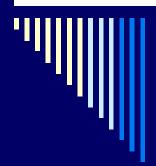
Results States

- 12/16 states require medical documentation
- 2/16 states use a combination of medical documentation and educational identification (IA and MA)
- 2/16 use educational identification (KS and MO)



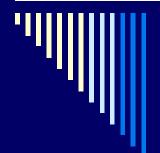
ABI vs. TBI

- Three states include ABI
 - Massachusetts
 - Ohio
 - Vermont



Discussion

- This study has determined that an educational identification of TBI in school aged children could be feasible and yield beneficial outcomes
- Such an identification protocol must be approached with caution





TBI is "low incidence"

27 in 48,000 in CCSD

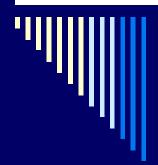
What can we learn from the field of autism and ADHD?

In order to service all the shades of grey – we staff kids SLD, SLI, SED



Binary system of ID reinforces this idea – only the TBI expert needs to determine the presence of TBI Only "TBI experts" know TBI and statistically small chance of getting a TBI kid so no need to have much training – certainly no need to fund a BIRT!





Barriers to services:

No school person/program owns TBI: Case manager does not follow TBI Program does not follow TBI

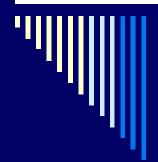
Myth of Rehab Center for TBI students: School **IS** the Rehab Center ILC and BD self-contained programs



Shades of grey!

YOU ARE THE EXPERTS!

- De-mystify TBI eligibility is binary.
 But assessment and treatment of TBI is
- But assessment and treatment of TBI is many shades of grey, red, blue, green...
- □ TBI assessment protocol and a TBI intervention protocol within your creative reach!



RtI for TBI?

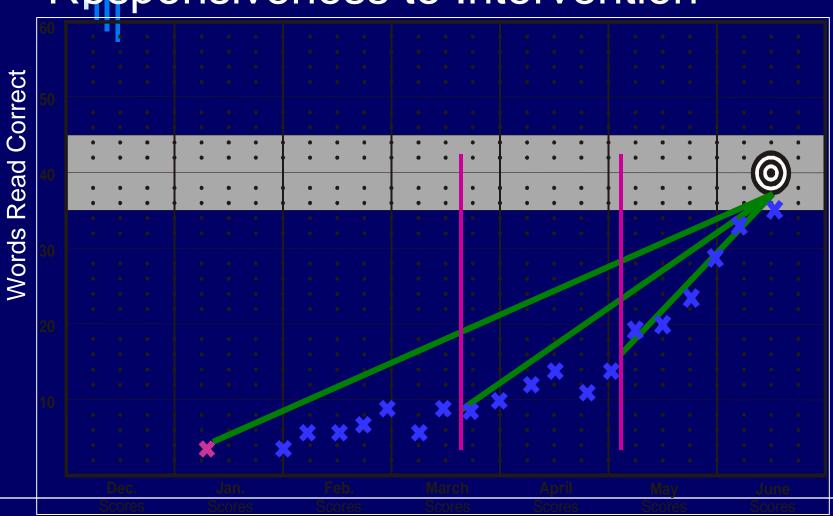
- 1. For **Eligibility?** in Colorado, RTI for eligibility purposes is ONLY for SLD right now
- 2. The process of RtI: group, universal shared responsibility of struggling students, focused assessments (that make sense), early intervention with evidence-based programs and progress monitoring of results.



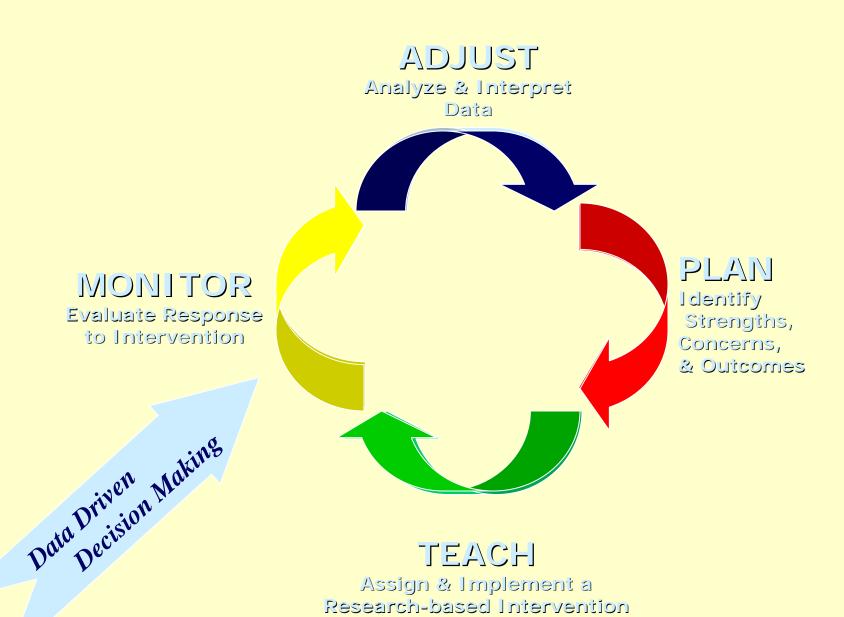
Rtl is a 3 legged stool

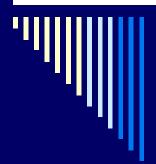


Responsiveness to Intervention



Universal Instruction & Problem Solving Model





How can Rtl help with TBI?

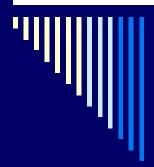
Rtl as eligibility for TBI – depends on your state

Process of Rtl for TBI – embrace the "**spirit**" of Rtl

Does it provide the shades of grey?

Does it allow us the think outside the box?

Does Rtl say "NO" testing or does it say "SMART" testing?



Rtl as BOE

Rtl as a "verb" – did you "RTI" that student?

Rtl as a way to pull together a group of professionals, early on, share responsibility, problem-solve **SYMPTOMS**, test smartly, implement creatively, intervene functionally, collect and interpret outcome, make adjustments and go round and round PRN.

Body of Evidence: BOE



Let's start with: 1. Problem-solving

Assessment: "There are no children who are untestable, only adults who cannot test!"

What is medical documentation? What does the diagnosis of TBI tell you?

Better to ask: what are the functional problems?

- Cognitive issues
- Motor issues
- Executive Function issues
- Behavioral issues
- □ Emotional issues
- Social skill deficits

How can we focus our assessments?



Let's get creative!

Cognitive:

Some of the most common processing problems:

Processing speed:

WISC-IV – Coding and Symbol Search

Peer comparison task analysis

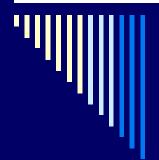
Auditory processing: (looks so much like ADHD)

WJ-III - Auditory Attention

NEPSY – Auditory Attention and Response Set

WISC-III – "working memory" subtests

TOKEN



Cognitive – Organization and Abstract Thought

Visual Processing:

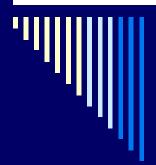
WISC-IV – Block Design, Matrix Reasoning test limits Object Assembly

VMI – test limits

Verbal Processing:

D-KEF - 20 questions

WISC-IV - Word Reasoning



Memory

Working memory/new learning:

WISC-IV Letter-Number, Digit Span, Arithmetic

Short-term verbal and visual memory:

WRAML Design Memory, Verbal Learning (rote), Visual Learning
Story Memory (in context)

Incidental memory: Coding - test the limits

Delayed memory:

WRAML Verbal Learning, Visual Learning, Story Memory Coding, any testing the limits



Executive Functions

Overall Executive Functions:

BRIEF —parent and teacher report initiation, working memory, organization, planning, shift

Ability to organize, ability to plan: watch performance on tests

Attention: can you focus and can you inhibit distraction?

Sample behavior during testing

D-KEFS-Color Word Interference Test – response inhibition

Set Shifting:

Wisconsin Card Sort

Loss of Set – 20 questions

Test limits on Block Design



Non-traditional Testing

Observations:

Observe student over a period of time, over a number of settings

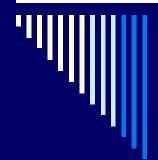
Task Analysis of student versus typical student

Antecedent/Behavior/Consequence

Setting Events

FBA's

Criterion-reference test – Assessment of Basic Language and Learning Skills



Behavior and Emotion

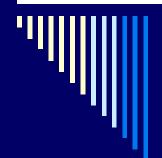
BASC
Connors
Interview and observation
Response to Can't/Won't

Co-morbid diagnosis

CAUTION with ADHD



Name:			Date:
Problem #1:	Can't	Teach replacement behavior:	Outcome:
	Won't	Decide motivation: Decide consequence/intervention:	
Problem #2:	Can't	Teach replacement behavior:	Outcome:
	Won't	Decide motivation: Decide consequence/intervention:	
Problem #3:	Can't	Teach replacement behavior:	Outcome:
	777)		
	Won't	Decide motivation: Decide consequence/intervention:	



2. Interventions



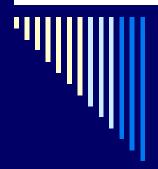
What is in your TBI Toolkit?

Look for overlap between TBI and other functional problems:

Good teaching is good teaching

Good therapy (CBT) is good therapy

Good behavior management is good behavior management



Evidence-Based or Research-Based Intervention:

What Works Clearinghouse www.whatworksclearinghouse.org

CASEL – Collaborative for Academic, Social and Emotional Learning

www.casel.org

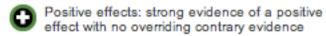
Intervention	Alphabetics	Fluency	Comprehension	General reading achievement
Accelerated Reader/Reading Renaissance			₩	₩
Auditory Discrimination in Depth (ADD)® / Lindamood Phonemic Sequencing (LiPS)®	₩		0	
ClassWide Peer Tutoring				₩
Cooperative Integrated Reading and Composition®			0	
Corrective Reading	₩	#	8	
DaisyQuest	•			
Early Intervention in Reading (EIR)®	₩		₩	
Earobics®	•	9		
Failure Free Reading	9	Ð	₩	
Fast ForWord®	•		•	
Fluency Formula™		₩	-3	
Kaplan SpellRead	•	₩	₩	
Ladders to Literacy for Kindergarten Students	· f8	€9	0	
Little Books				₩
Peer-Assisted Learning Strategies (PALS)©	₩	₩	₩	
Read Naturally		9	•	
Read, Write & Type!™	₩		•	
Reading Recovery®	•	₩	₩	•
Start Making a Reader Today® (SMART®)	₩	#8	₩	
Stepping Stones to Literacy	•			
Success for All	₩		•	₩
Voyager Universal Literacy System®	₩			
Waterford Early Reading Program™	₩		•	
Wilson Reading System®	₩	0	0	



EFFECTIVENESS RATINGS FOR CHARACTER EDUCATION PROGRAMS IN THREE DOMAINS

Intervention	Behavior	Knowledge, attitudes, and values	Academic achievement
Building Decision Skills		•	
Caring School Community™ (CSC)	•	0	0
Connect with Kids	•		
Facing History and Ourselves	0	0	
Heartwood Ethics Curriculum/An Ethics Curriculum for Children	0	0	
Lessons in Character	0	0	•
Lions Quest — Skills for Action		0	
Lions Quest — Skills for Adolescence	•		
Positive Action	•		•
Too Good for Drugs and Violence (TGFD & V)		•	
Too Good for Drugs™ (TGFD)	•	0	
Too Good For Violence (TGFV)	•	•	
Voices Literature and Character		_	

Key

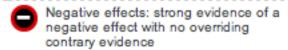


Potentially positive effects: evidence of a positive effect with no overriding contrary evidence

Mixed effects: evidence of inconsistent effects

No discernible effects: no affirmative evidence of effects

Potentially negative effects: evidence of a negative effect with no overriding contrary evidence





Evidence-based Programs for "Students with TBI"





Evidence-based Programs for "Students with symptoms common to TBI"

5 areas of CASEL?

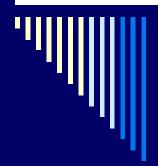
All strategies to improve attention?

All strategies to improve organization?

All strategies to improve memory?

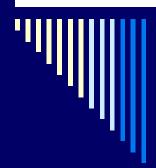
All strategies to improve emotion regulation?

All strategies to improve behavior control?



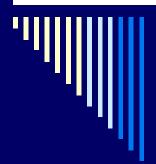
Self-Awareness

- Knowing what we are feeling in the moment;
- having a realistic assessment of our own abilities and a well-grounded sense of self-confidence.



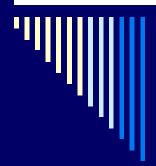
Social Awareness

- Understanding what others are feeling;
- being able to take their perspective;
- appreciating and interacting positively with diverse groups.



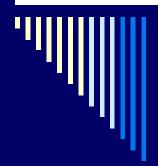
Self-Management

- Handling our emotions so they facilitate rather than interfere with the task at hand;
- being conscientious and delaying gratification to pursue goals;
- persevering in the face of setbacks and frustrations.



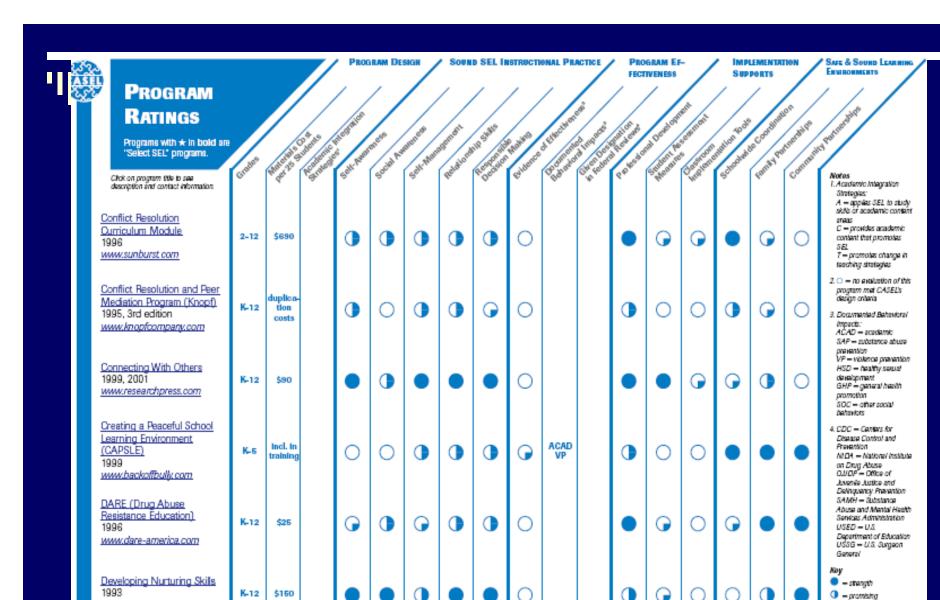
Relationship Skills

- Handling emotions in relationships effectively;
- establishing and maintaining healthy and rewarding relationships based on cooperation,
- resistance to inappropriate social pressure, negotiating solutions to conflict,
- and seeking help when needed.



Responsible Decision Making

- Making decisions based on an accurate consideration of all relevant factors and the likely consequences of alternative courses of action,
- respecting others, and taking responsibility for one's decisions.



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SOC

www.nurturingparenting.com

K-12

\$400

Discover: Skills for Life

www.aasnet.com

1996

— margine/ weginess



		PROGRAM DESIGN SOUND SEL INSTRUCTIONAL PRACTICE								ACTICE	PROGRAM EF- FECTIVENESS			IMPLEMENTATION SUPPORTS		TION /	SAFE & SOURD LEARNING ENVIRONMENTS	
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																		7 — promotes change in teaching strategies
Al's Pals: Kids Making Healthy Choices										VP	SAMH							 no eveluation of this program met CASEL's design criteria
1998, 1999 www.wingspanworks.com	preK-3	\$595			•		•	•	•	soc	USED				•		0	3. Documented Behavioral Impacts:
																		ACAD — academic SAP — substance abuse prevention
Americans AII	K-12	\$276	A. C															VP — violence prevention HSD — healthy sexual development
www.americansall.com	10.12	ŞAZI G	74.0	•	•	•	•	•				•	•	•	U	•		GHP — general health promotion SOC — other social
★ Caring School																		behaviors 4. CDC = Centers for
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1994-99 www.devstu.org				_					_	SOC	0022	_	•		_			on Drug Abuse OUIDP — Office of Juvenile Justice and
★ Community of Caring																		Distinguency Presention 5A MH = Substance
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www.communityof caring.org																		Department of Education USSG = U.S. Surgeon General
Comprehensive Health																		Key - strength
for the Middle Grades 1996	6-8	\$466		•	0	•	•	•	0			•	•	G	•		•	promising mughel
www.etr.org																		O = weakness
Conflict Resolution Curriculum (Mediation																		
Network of North Carolina) 1996, 1999	K-12	\$30		•	•	•	•	•	0			•	•	•	•	G	0	
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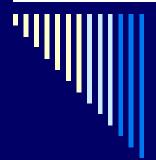


BrainSTARS Manual lapublishing.com

LEARNet

CCSD Wiki

www.ccsdrti.pbwiki.com



Programs:

PBS – Positive Behavior Support

Bully Prevention

Aggression Replacement Therapy (ART)

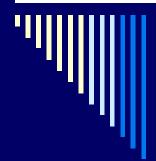
aka PEACE4Kids

Why Try

Behavior Evaluation Program (BEP) aka Check In/Check Out

How Does Your Engine Run?

Cognitive-Behavioral Strategies



Teach whenever possible

Skill deficit – assess level of skill, teach replacement skill

- Can't versus Won't
 - Can't = teach
 - Won't = consequence
- Remediate versus Compensate
 - Remediate = teach
 - Compensate = accommodate



3. Progress Monitoring

Progress monitoring:

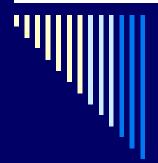
To decide effectiveness

To test can't versus won't

To test remediate versus compensate

To decide next steps

PM **IS** an intervention!



Resources:

www.interventioncentral.org/Tools for Educators/ChartDog 2.0

www.schoolbehavior.com

www.studentprogress.org







SchoolBehavior.com

Awareness, Empathy, and Skills





LINKS MENU (ALPHABETICAL ORDER)

Note: links have been selected with an eye towards information that will be of practical value for educators and not just general information on the condition. If you know of a great link for one of these topics that I may have missed, please send it to me.

ACCOMMODATIONS ANXIETY DISORDERS ATTENTION DEFICIT HYPERACTIVITY DISORDER ASPERGER'S DISORDER AND AUTISM **BEHAVIOR BIPOLAR DISORDER** BULLYING

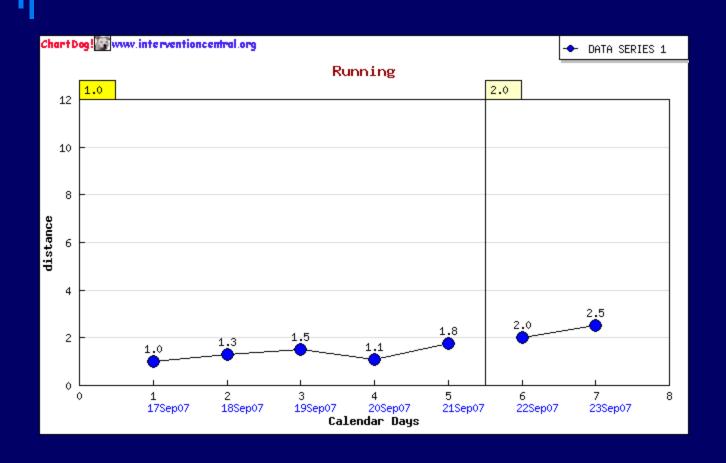
DEPRESSION

EXECUTIVE DYSFUNCTION LEARNING DISABILITIES NONVERBAL LEARNING DISORDER OBSESSIVE-COMPULSIVE DISORDER "RAGE ATTACKS" SCHOOL PSYCHOLOGY SENSORY INTEGRATION TICS AND TOURETTE'S SYNDROME

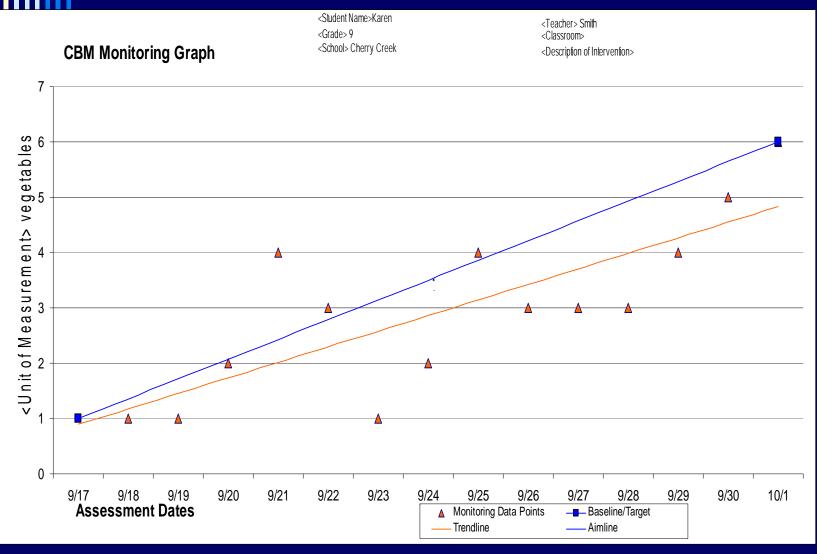




.interventioncentral.org/Tools for Educators/ ChartDog 2.0



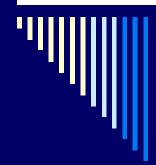






Now repeat after me...

"I'm good enough,
I'm smart enough
and doggone it...
I know TBI"



Questions?

Case Studies?