Universal Screening in RtI

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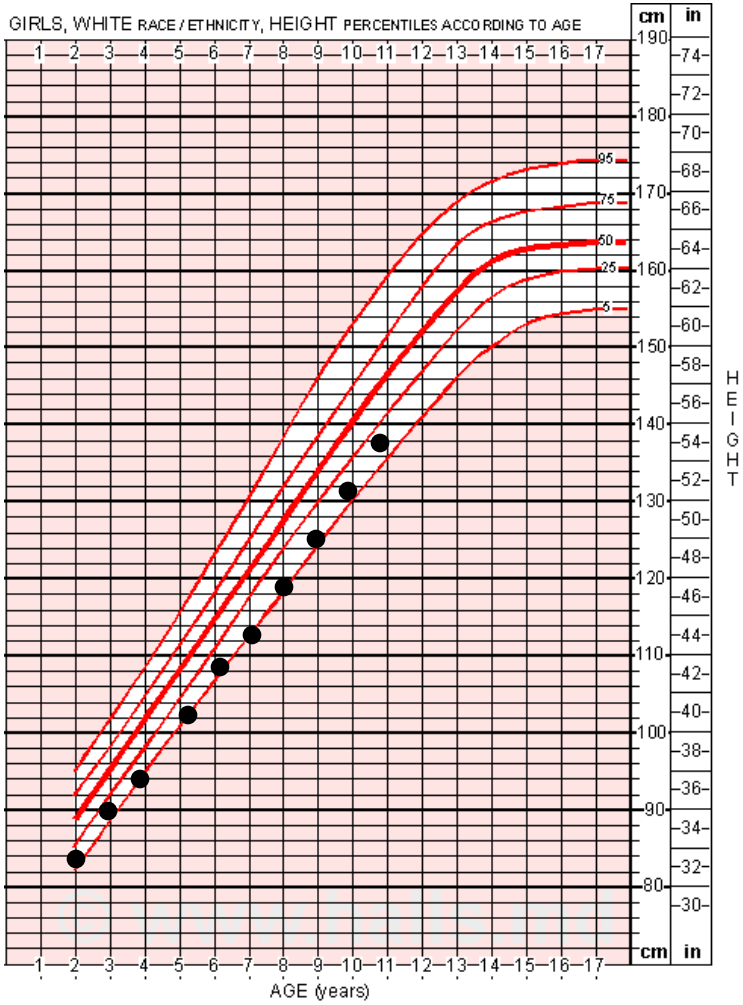
RtI Screening Measures Growth & Development



Why Use RTI?

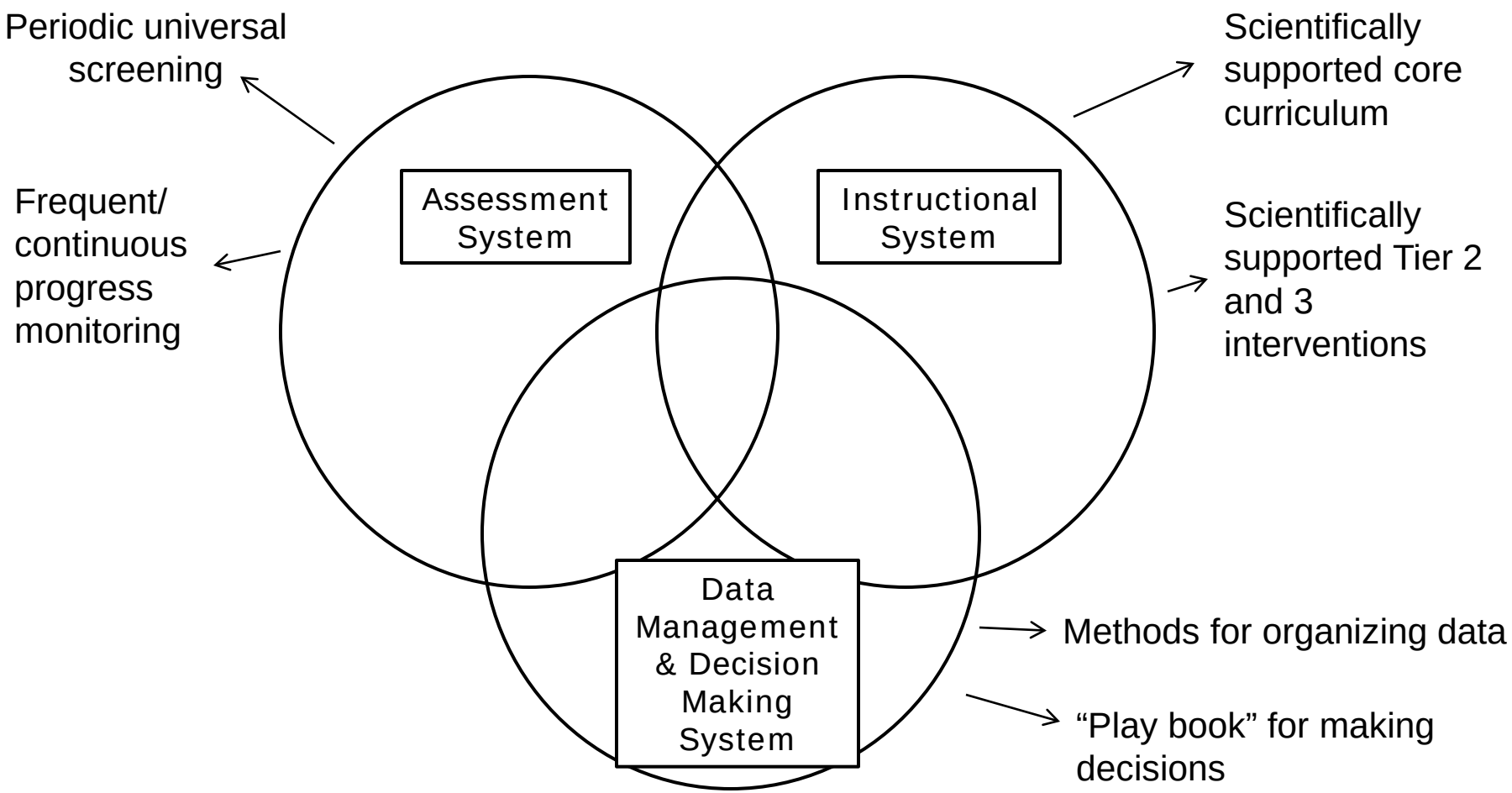
R-CBM

		Fall		Winter		Spring		
Grade	Percentile	Num	WRC	Num	WRC	Num	WRC	ROI
1	90	23611	53	86561	81	89495	109	1.6
	75		23		49		82	1.6
	50		9		24		53	1.2
	25		3		13		29	0.7
	10		0		7		16	0.4
	Mean		19		35		59	
	StdDev		26		32		37	
2	90	80328	105	73547	131	84689	145	1.1
	75		80		106		120	1.1
	50		55		79		94	1.1
	25		28		53		69	1.1
	10		14		25		42	0.8
	Mean		57		79		95	
	StdDev		36		39		40	
3	90	75327	133	69394	151	80557	164	0.9
	75		105		127		140	1
	50		78		98		112	0.9
	25		50		69		84	0.9
	10		30		42		53	0.6
	Mean		80		97		111	
	StdDev		40		42		43	
4	90	57382	151	58592	169	59844	184	0.9
	75		125		141		156	0.9
	50		100		114		127	0.8
	25		73		89		101	0.8
	10		48		62		72	0.7
	Mean		100		115		128	
	StdDev		40		42		44	
	90		170		184		198	0.8

Overall RtI Model

- Three tiers (all in general education; special education is separate)
- Designate risk status using *universal benchmarks* or *universal benchmarks plus brief progress monitoring*
- Use commercially available *manualized* interventions in Tier 2
- Use individualized *problem-solving* in Tier 3
- Define response to intervention via *slope* (i.e., rate of growth over time) and *final status* (i.e., universal benchmark).
- Under-responders may go through a comprehensive evaluation to answer questions and distinguish LD, BD, and MR

Before we even begin however .....

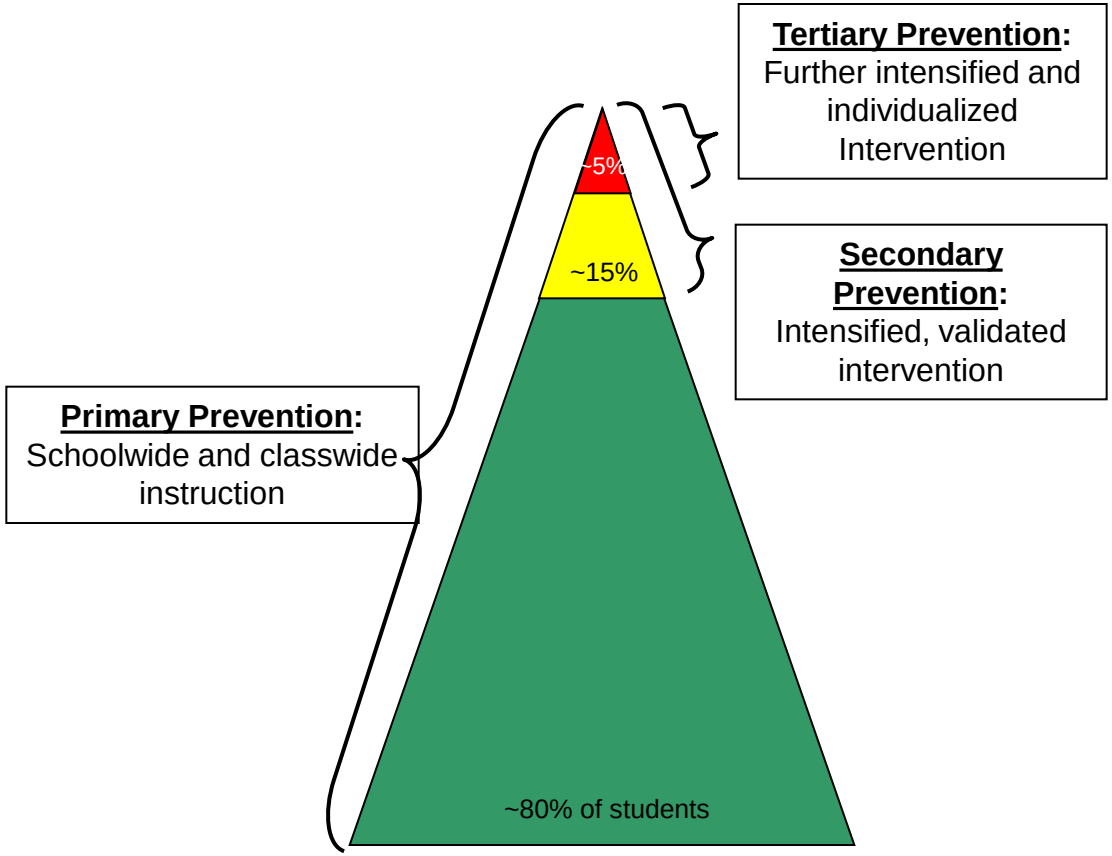


Once we have these things in place .....

- Multi-tier prevention system that identifies and intervenes with students who are exhibiting academic difficulties

- Public health population based methods
  - Primary prevention
  - Secondary prevention
  - Tertiary prevention

Continuum of Schoolwide Support



Basics of RTI: Tier 1 (Primary Prevention)

- All students receive a scientific validated core curriculum (instructional system)
- All students are periodically screened using universal assessment (assessment system)
- Students whose performance falls below benchmark expectations are considered to be possibly at-risk (decision making system)
  - In addition, the progress of these students may be monitored for a number of weeks to:
    - Confirm risk: these under-responsive students move into Tier 2
    - Disconfirm risk: these responsive students remain in Tier 1 primary prevention

Tier 1: Determining Risk Status

R-CBM

		Fall		Winter		Spring		
Grade	Percentile	Num	WRC	Num	WRC	Num	WRC	ROI
1	90	23611	53	86561	81	89495	109	1.6
	75		23		49		82	1.6
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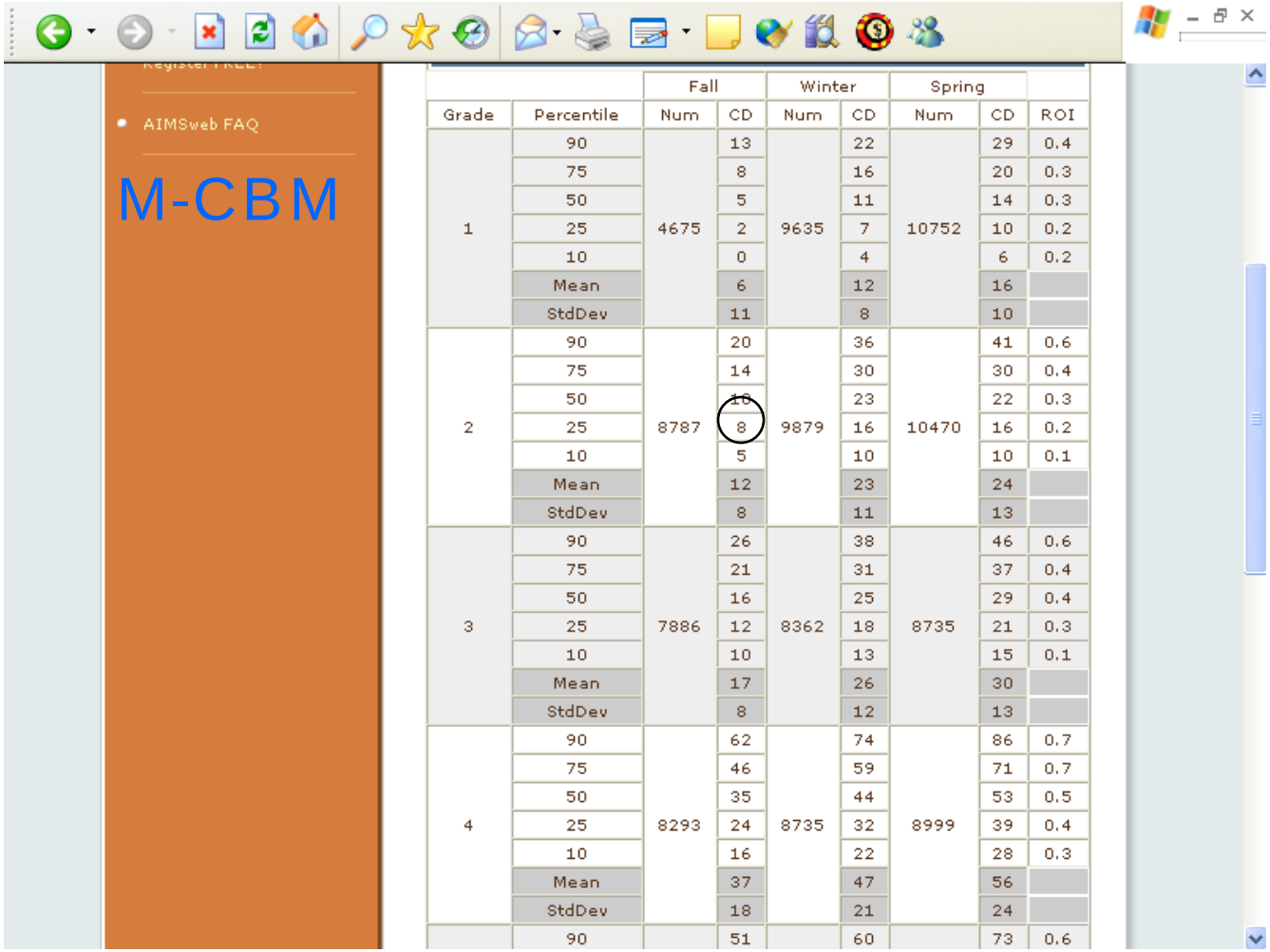
	Mean		100		115		128	
	StdDev		40		42		44	
	90		170		184		198	0.8

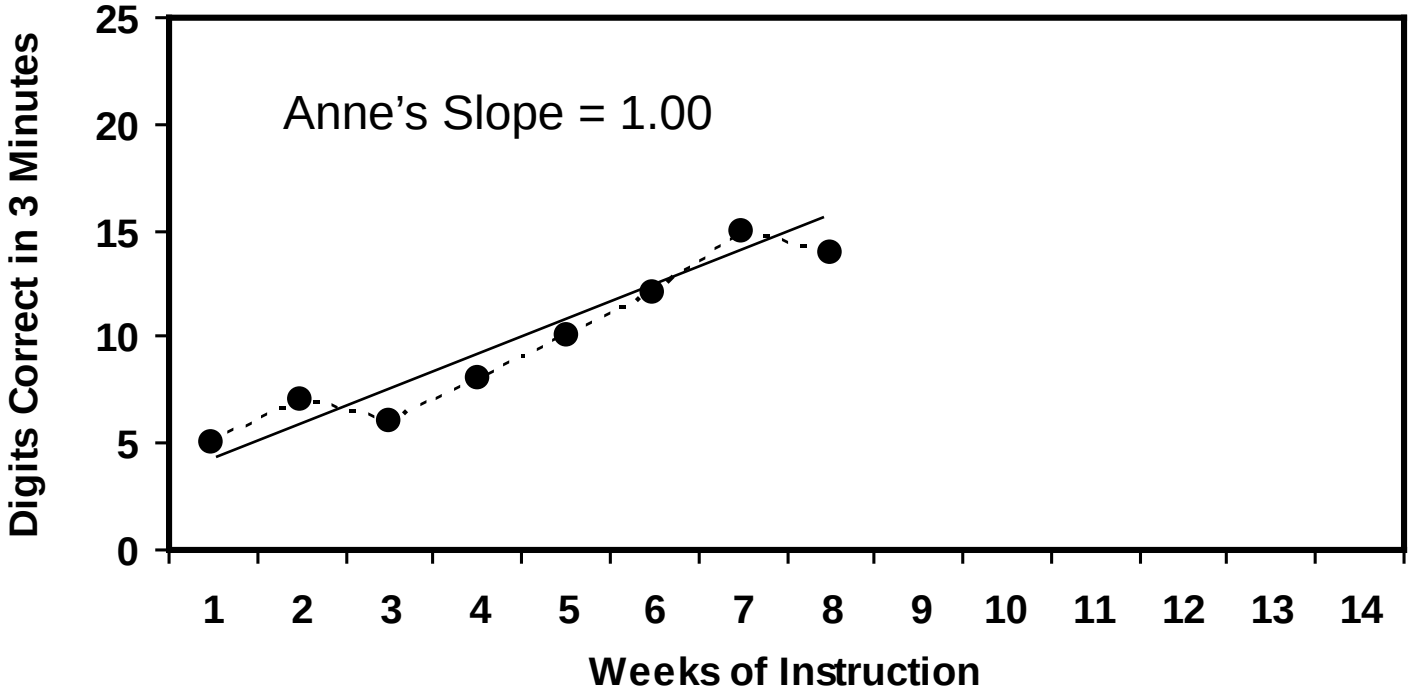
Tier 1: Determining Risk Status

On her Fall benchmark assessment Anne is only able to compute 5 digits correct.



		Fall		Winter		Spring		
Grade	Percentile	Num	CD	Num	CD	Num	CD	ROI
1	90	4675	13	9635	22	10752	29	0.4
	75		8		16		20	0.3
	50		5		11		14	0.3
	25		2		7		10	0.2
	10		0		4		6	0.2
	Mean		6		12		16	
	StdDev		11		8		10	
2	90	8787	20	9879	36	10470	41	0.6
	75		14		30		30	0.4
	50		10		23		22	0.3
	25		8		16		16	0.2
	10		5		10		10	0.1
	Mean		12		23		24	
	StdDev		8		11		13	
3	90	7886	26	8362	38	8735	46	0.6
	75		21		31		37	0.4
	50		16		25		29	0.4
	25		12		18		21	0.3
	10		10		13		15	0.1
	Mean		17		26		30	
	StdDev		8		12		13	
4	90	8293	62	8735	74	8999	86	0.7
	75		46		59		71	0.7
	50		35		44		53	0.5
	25		24		32		39	0.4
	10		16		22		28	0.3
	Mean		37		47		56	
	StdDev		18		21		24	
	90		51		60		73	0.6

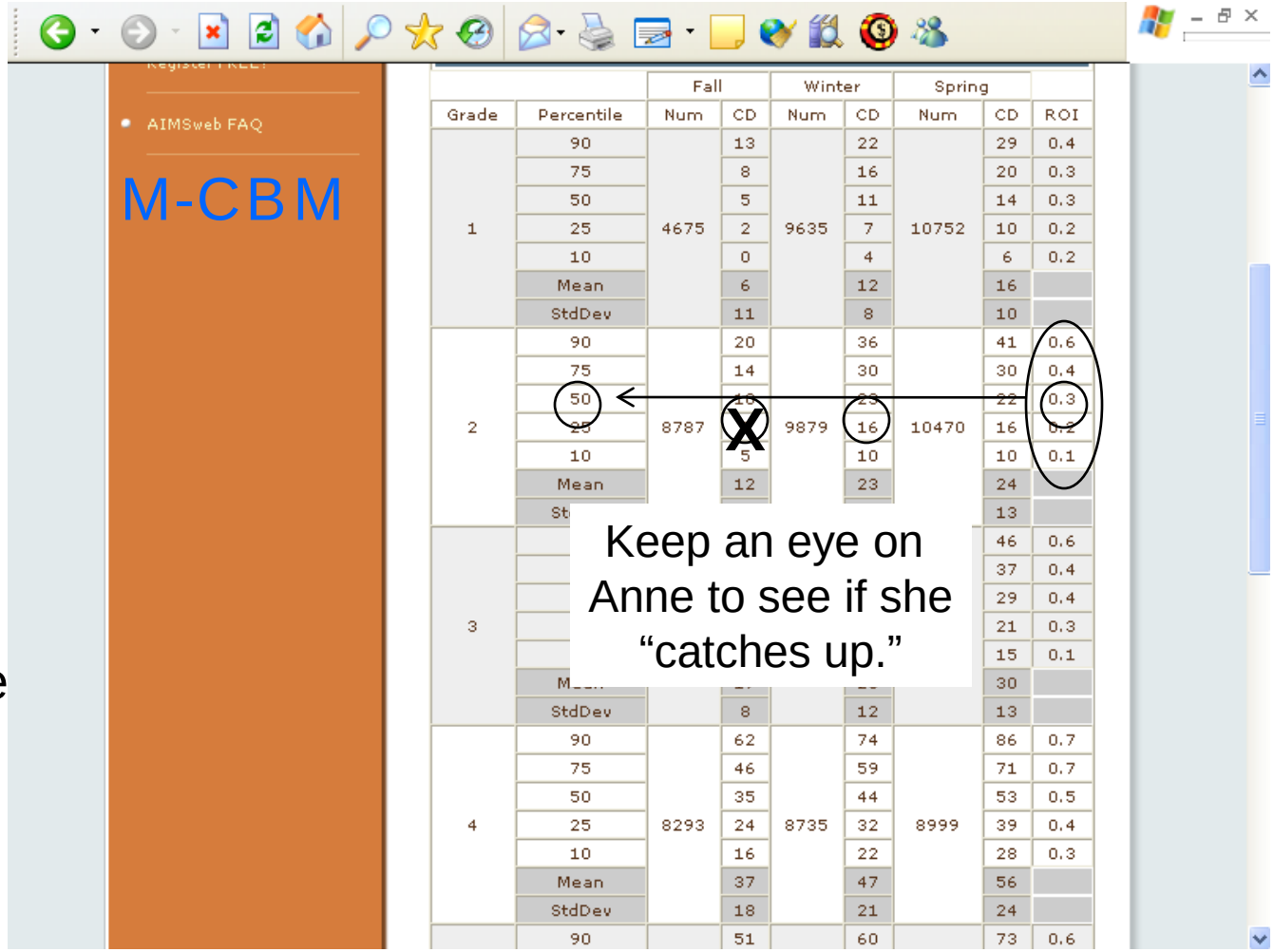
Tier 1: Determining Risk Status



Tier 1: Determining Risk Status

Anne is improving on average 1 digit correct per week.

Anne can now compute 14-15 digits correct in 3 minutes.



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	Mean		6		12		16	
	StdDev		11		8		10	
2	90	8787	20	9879	36	10470	41	0.6
	75		14		30		30	0.4
	50		[illegible]		[illegible]		22	0.3
	25		[illegible]		16		16	[illegible]
	10		5		10		10	0.1
	Mean		12		23		24	
	St[illegible]						13	
3	[illegible]						46	0.6
	[illegible]						37	0.4
	[illegible]						29	0.4
	[illegible]						21	0.3
	[illegible]						15	0.1
	M[illegible]						30	
	StdDev		8		12		13	
4	90	8293	62	8735	74	8999	86	0.7
	75		46		59		71	0.7
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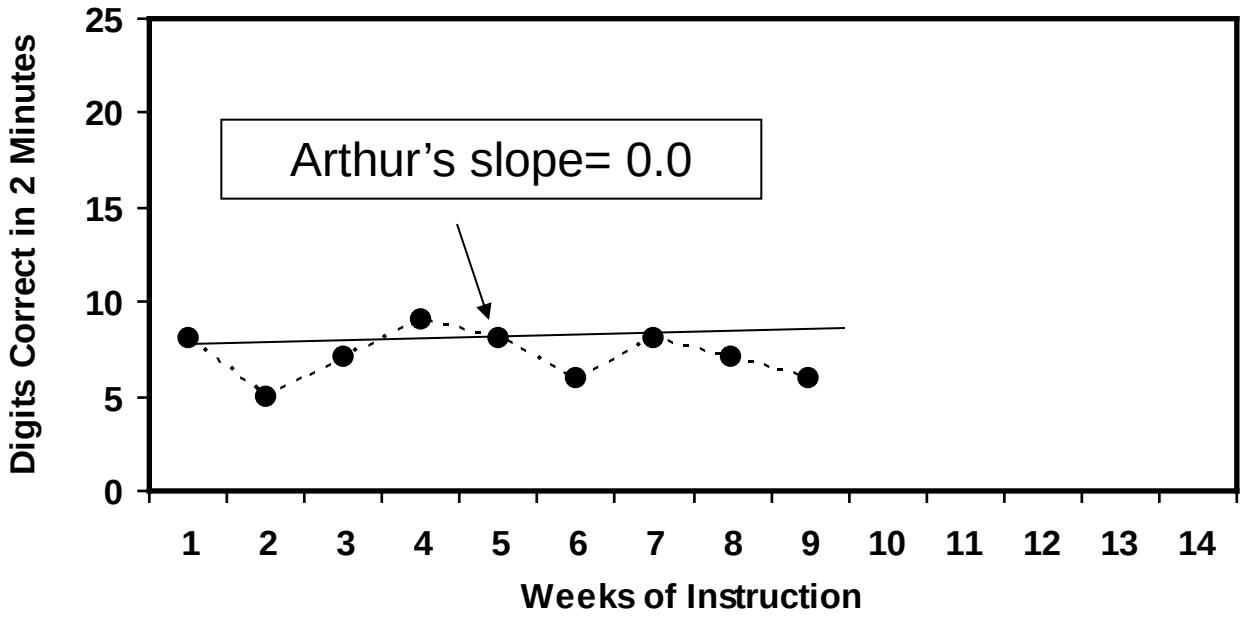
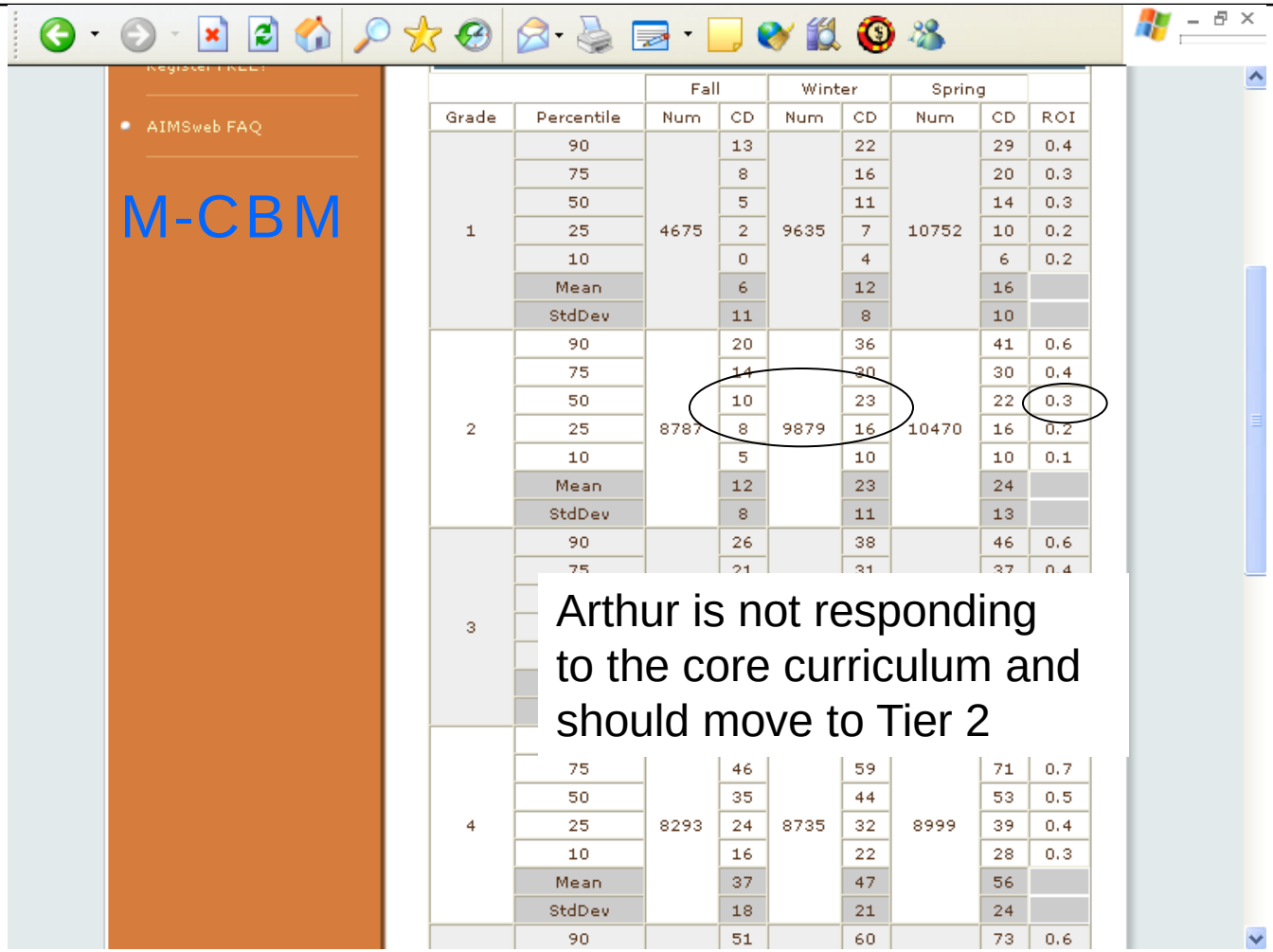
	10		16		22		28	0.3
	Mean		37		47		56	
	StdDev		18		21		24	
	90		51		60		73	0.6

Keep an eye on Anne to see if she "catches up."

Tier 1: Determining Risk Status



Tier 1: Determining Risk Status



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	10		16		22		28	0.3
	Mean		37		47		56	
	StdDev		18		21		24	
	90		51		60		73	0.6

Arthur is not responding to the core curriculum and should move to Tier 2

National Center on Response to Intervention (www.rti4success.org)

NCRTI defines **screening** assessment as: "screening that involves brief assessments that are valid, reliable, and evidenced based [that] are conducted with all students or targeted groups of students to identify students who are at risk of academic failure and, therefore, likely to need additional or alternative forms of instruction to supplement the convention general education approach."

Reliability	Validity	Classification/ Diagnostic Accuracy	Generalizability
Test-Retest	Concurrent	Sensitivity	Replication
Alternate Form	Predictive	Specificity	Resampling
Split-Half		PPP	G-theory
Internal Consistency		NPP	

NCRTI Example

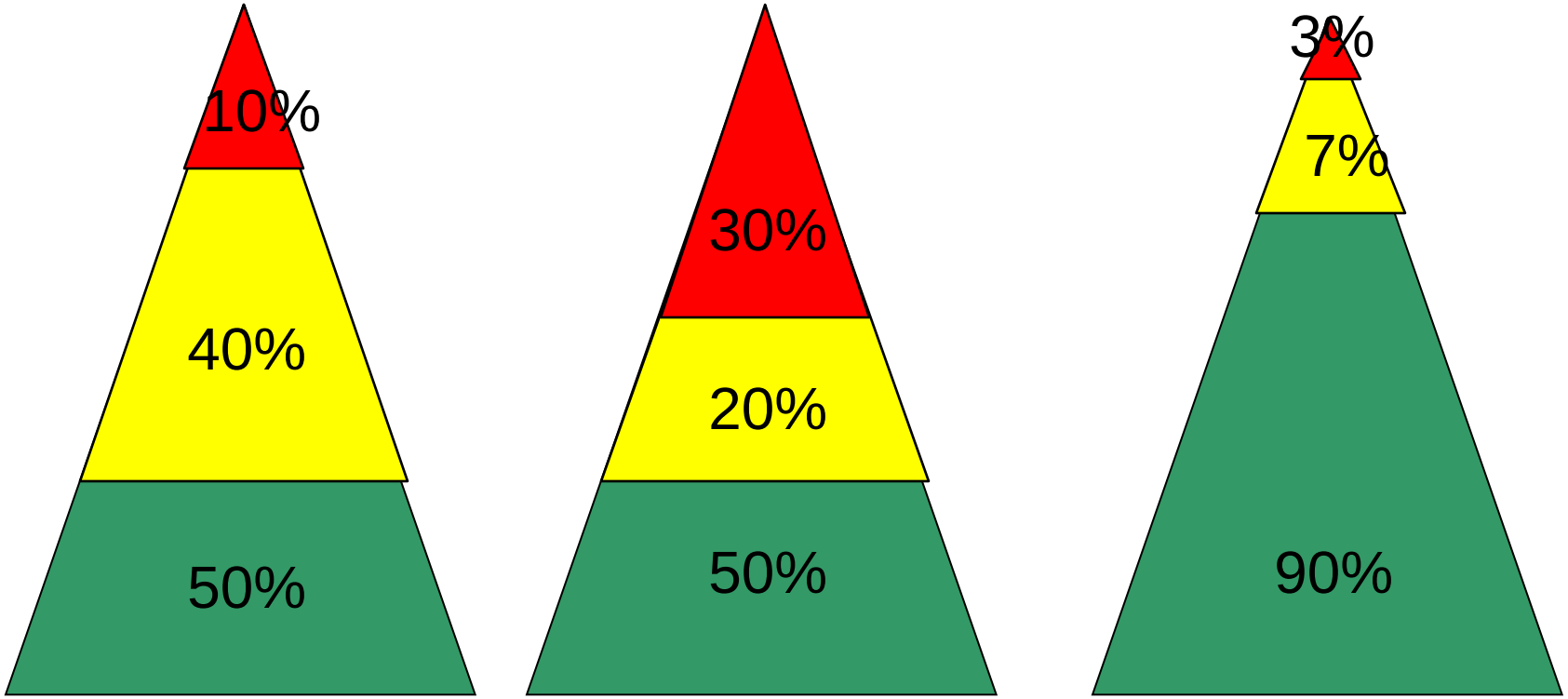
TOOLS	AREA	Classification Accuracy	Generalizability	Reliability	Validity	Disaggregated Reliability, Validity, and Classification Data for Diverse Populations	Efficiency			
							Administration Format	Administration & Scoring Time	Scoring Key	Norms/ Benchmarks
AIMSweb	Reading Curriculum Based Measurement (R-CBM)	◐	Moderate High	●	●	〰	Individual	2 Minutes	Yes	Yes
Dynamic Indicators of Basic Early Literacy Skills (DIBELS)	Letter Naming Fluency	○	Moderate Low	●	◐	〰	Individual	2 Minutes	Yes	Yes
	Nonsense Word Fluency	◐	Moderate Low	●	◐	○	Individual	2 Minutes	Yes	Yes
	Oral Reading Fluency	◐	Moderate High	●	◐	◐	Individual	2 Minutes	Yes	Yes
	Phoneme Segmentation Fluency	○	Moderate Low	◐	○	◐	Individual	2 Minutes	Yes	Yes
Scholastic	Phonics Inventory - Screener Version	◐	Moderate High	●	◐	〰	Individual Group	10 Minutes	Computer Scored	No
STAR	Early Literacy	◐	Broad	●	◐	●	Individual Group	10 Minutes	Computer Scored	Yes
	Reading	◐	Moderate High	●	●	●	Individual Group	10 Minutes	Computer Scored	Yes
STEEP	Oral Reading Fluency	●	Moderate High	●	◐	〰	Individual	1 Minute	Yes	Yes

Chart Legend: ● Convincing Evidence | ◐ Partially Convincing Evidence | ○ Unconvincing Evidence | 〰 No Evidence Submitted

Decision Making Using RTI Screening Assessment

- Once adequate reliability, validity, and classification/diagnostic accuracy conditions are satisfied
- RTI screening measures can be used to:
  - Evaluate the overall quality of the general education program
    - Number and percentage of students who are responding to the core curriculum program
  - Determine those students for whom the general education program is insufficient for ensuring adequate academic development thus placing them at risk for further academic difficulty

Decision Making Using RTI Screening Assessment



Tier 1 Primary Prevention Review

- All students receive a scientific validated core curriculum (instructional system)
- All students are periodically screened using universal assessment (assessment system)
- Suspected at-risk students remain in Tier 1 primary prevention and their progress is monitored for 4–6 weeks:
  - Students with adequate slopes (i.e., rate of growth is equal to or exceeds peer expectations) remain in Tier 1primary prevention.
  - Students with less than adequate slopes move to Tier 2 secondary prevention.

Thank You!