

FEBRUARY 11, 2021

# LET'S GET THE RIGHT KIDS IN TIER 2: PREVENTING OVER IDENTIFICATION

MAKING RESEARCH RELEVANT

TESSIE ROSE BAILEY, PHD  
Director of MTSS Center at American Institutes for Research

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG



1

---

---

---

---

---


---

---

---

### What do we know about Tier 2 Identification?

- Typically follows the administration of a schoolwide, brief, valid and reliable screener of the target outcome(s).
- Identification as an at-risk student does not necessarily mean the student will be identified for Tier 2.
- The percentage of students identified for Tier 2 depends on the capacity of the school's Tier 2 system.



AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

2

---

---

---

---

---

---

---

---

## Why Accurate Tier 2 Identification Matters: Avoiding MTSS Implementation Pitfalls

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

3

---

---

---

---

---

---

---

---

### Over Vs. Under Identification

Public Health	Education
<ul style="list-style-type: none"> <li>Overidentification               <ul style="list-style-type: none"> <li>Expense of additional testing</li> <li>Unnecessary worry</li> </ul> </li> <li>Underidentification               <ul style="list-style-type: none"> <li>Miss serious health problem</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Overidentification               <ul style="list-style-type: none"> <li>Expense of additional testing</li> <li>Expense of early intervention services</li> </ul> </li> <li>Underidentification               <ul style="list-style-type: none"> <li>Miss opportunity for prevention/early intervention</li> </ul> </li> </ul>

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

4

---

---

---

---

---

---

---

---

### Three Major Pitfalls to MTSS Design and Implementation

- Poor quality Tier 1 programming
- Flooding Tier 2 with false positives
- Failing to meaningfully distinguish the intensity of Tier 2 from intensive intervention

These pitfalls create inefficiencies and decrease quality of services.

Fuchs and Fuchs, 2018

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

5

---

---

---

---

---

---

---

---

### Pitfall 1: Poor Quality Tier 1

- Costly error because poor quality Tier 1 increases the number of students who will require expensive Tier 2 intervention.
- When schools need to provide a high percentage of students with Tier 2, the quality of what can be provided in Tier 2 decreases (larger group size, shorter duration sessions, less qualified tutors, less support for tutors).

**Indicator:** Less than 75-80% of students are identified as at or above grade level expectation

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

6

---

---

---

---

---

---

---

---

### Solution: Robust Tier 1 and Tier I Classwide Supports

- Peer Assisted Learning Strategies, [www.peerassistedlearningstrategies.net](http://www.peerassistedlearningstrategies.net)
- High Leverage Practices
- Differentiation and Universal Design for Learning (UDL)
- Vertical and horizontal alignment of curriculum
- [IES Practice Guides](#)

7

---

---

---

---

---

---

---

---

### Pitfall 2: Flooding Tier 2 with False Positives

- Results from poor screening system or failure to use risk verification procedures.
  - ALL 'yellow' kids get Tier 2
  - Too much deference to screening results
  - Poor predictiveness of cut points or inappropriate for population
- Universal screening cut scores are designed to identify *false positives* (FPs) to avoid missing any truly at-risk children.

**Indicator:** More than 20% of population receiving Tier 2 interventions

8

---

---

---

---

---

---

---

---

### Problems with Providing Tier 2 to False Positives (FP)

- Over-identification of FP students for Tier 2 is a costly error.
- It dilutes the effectiveness of intervention for the students who do require Tier 2.
- It negatively affects FP students because they don't require Tier 2's foundational level remediation and should instead need instructional time on more challenging material.

9

---

---

---

---

---

---

---

---

**Solution: Robust Risk Verification**

- Use at least **two other data sources to verify decisions** about whether a student is or is not at risk.
  - Assess only students who fail or almost fail initial screen
  - Consider data on classroom performance, performance on state assessments, diagnostic assessment data, short-term progress monitoring
- Limit Tier 2 interventions to no more than 15-20% of population (based on available resources)

10

---

---

---

---

---

---

---

---

**Why is risk verification important?**

- The Stage 1 screen identified 72 false positives (students identified to enter Tier 2 who, according to year-end performance, did fine without Tier 2).
- Adding the additional data to the decision making decreased the number of false positives to 29.
- Administering additional assessments to the 72 students who failed the universal screen costs the school \$5,400 (72 students X .75hrs = 54 hrs X \$100 = \$5,400)
- But not tutoring 43 FPs saves the school \$23,800 (~14 triads X 34 hrs/triad = 238 hrs X \$100/hr = \$47,600)
- Savings: \$47,600 - \$5,400 = \$42,200

11

---

---

---

---

---

---

---

---

**Pitfall 3: Failing to meaningfully distinguish between Tier 2 and 3**

- Tier 3 students fail to receive required the clinical approach afforded by specialized teachers engaged in data-based individualization.
- Costly error because these students fall farther and farther behind if permitted to languish in Tier 2+, when they have already demonstrated inadequate response to validated (standard, non-individualized) programs.

**Indicator:** More than 7% of population receiving Tier 3 interventions, paras/volunteers delivering Tier 3, or a "Tier 3 intervention list"

12

---

---

---

---

---

---

---

---

### Pitfall 3 Solutions

- Reserving Tier 3 for students who prove unresponsive to Tier 2 delivered with fidelity (with quality Tier 1 and Tier 2, the expected rate in intensive intervention is 5-7% of the school population).
- Relying on the validated individualization process known as data-based individualization (DBI) to structure intensive intervention.
  - Provides indicator if students NEED specialized instruction

13

---

---

---

---

---

---

---

---

### How can you avoid these pitfalls?

- If more than 20% of students are identified as at-risk by your universal screening process, conduct a root cause analysis of Tier 1 and identify and implement approaches to improve Tier 1 instruction and support.
- Prior to identifying students for Tier 2 supports, determine the number of students your Tier 2 system can effectively support.
- Use validated approaches to identify students for participation in Tier 2 intervention.

14

---

---

---

---

---

---

---

---

### Assessing Tier 2 System Capacity

15

---

---

---

---

---

---

---

---

### Why do we need to understand our Tier 2 System Capacity?

An overwhelmed Tier 2 system—one that attempts to serve more students than it has the capacity to serve—can result in limited or poor learning outcomes and ineffective use of staffing and resources.



AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

16

---

---

---

---

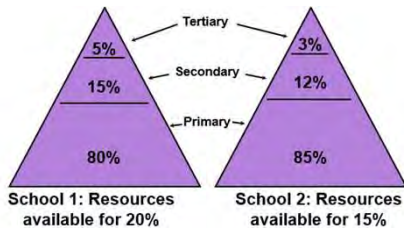
---

---

---

---

### What does it mean to 'understand' the Tier 2 System Capacity?



AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

17

---

---

---

---

---

---

---

---

### How do we determine Tier 2 capacity?

Total Number of Students our System Can Support <i>(last column from Step 1)</i>	Total Number of Students in Target Grade(s)	Percentage of Students our Tier 2 Can Realistically Support

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

18

---

---

---

---

---

---

---

---

How do we determine Tier 2 capacity? *Example*

Total Number of Students our System Can Support	Total Number of Students in Target Grade(s)	Percentage of Students our Tier 2 Can Realistically Support
42	213	20%

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

19

---

---

---

---

---

---

---

---

Considerations

- Which grades or schools need more ‘intervention’ opportunities? Is our capacity ensuring equitable access to intervention?
- Is our capacity sustainable? Is it realistic?
- Does our system address all areas of need?
- What do we do if more students need intervention than our Tier 2 can effectively support?

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

20

---

---

---

---

---

---

---

---

Identifying and Verifying Risk Status

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

21

---

---

---

---

---

---

---

---

### How do you identify students as at-risk?

- **Written decision rules** about risk identification can ensure teams make consistent and equitable decisions efficiently.
- **Staff can articulate** the risk identification and verification processes.
- Accurate risk identification depends on the **use of valid and reliable screening tools** and **validated risk verification procedures**.

22

---

---

---

---

---

---

---

---

### Identifying Students as At Risk

- **Cut scores** for universal screening tools are often set by publishers to over-identify students as at risk.
- MTSS success depends on accurate identification of the students identified as at risk.
- Perfect screening would result in 100% accurate identification of “True Positives” (those who need additional support) and “True Negatives” (those who do not need additional support), but there is no perfect screening tool.

23

---

---

---

---

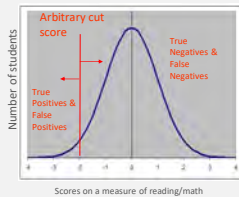
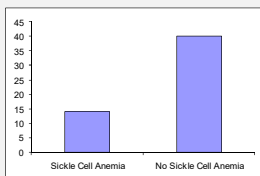
---

---

---

---

### Defining Risk: Categorical Vs. Continuous



24

---

---

---

---

---

---

---

---



### Clinical Decision-Making Model

		Outcome	
		At risk	Not at risk
Screen	At risk	True Positive <i>(Sensitivity)</i>	False Positive
	Not at risk	False Negative	True Negative <i>(Specificity)</i>

**True Positive** – students correctly identified at risk  
**False Positive** – students incorrectly identified at risk  
**False Negative** – students incorrectly identified not at risk  
**True Negative** – students correctly identified not at risk

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

25

---

---

---

---

---

---

---

---

---

---

### Comparison Based on Changing the Cut Score

Overlapping distributions N=100 students

TP 40	FP 10
FN 10	TN 40

80% Poor Readers | 80% Good Readers

20% | 20%

Number of items correct on screening instrument

Overlapping distributions N=100 students

TP 33	FP 2
FN 17	TN 48

65% Poor Readers | 95% Good Readers

5% | 35%

Number of items correct on screening instrument

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

26

---

---

---

---

---

---

---

---

---

---

### Is it a good screening tool?

- Sensitivity* is the probability of correctly identifying a problem (i.e., the proportion of **true positives** that the screener correctly identifies).
- Specificity* is the probability of correctly identifying that there is not a problem (i.e., the proportion of **true negatives** that the screener correctly identifies).

NCII screening tools charts rate a screening tool highest when it has a **sensitivity rate of 70%** or higher and a **specificity rate of at least 80%**

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

27

---

---

---

---

---

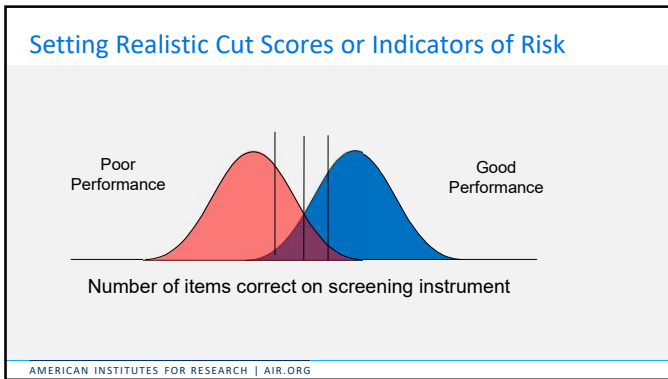
---

---

---

---

---



28

---

---

---

---

---

---

---

---

### Problems with Schools Independently Establishing Cut Scores

School	Percent At or Above School Cut Score
School 1	50%
School 2	63%
School 3	48%

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

29

---

---

---

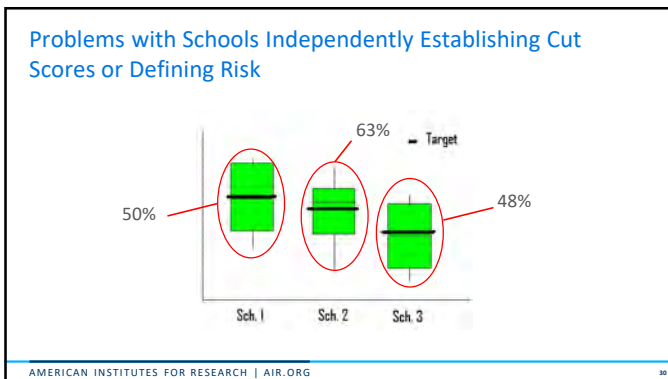
---

---

---

---

---



30

---

---

---

---

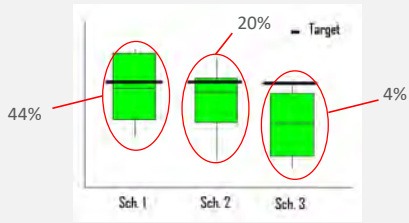
---

---

---

---

### Importance of District Cut Scores or Risk Definition



AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

31

---

---

---

---

---

---

---

---

---

---

### Developing Risk Identification and Verification Procedures



Risk identification and verification typically occurs following fall or winter screening. For incoming 9<sup>th</sup> graders, it may begin spring of 8<sup>th</sup> grade.

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

32

---

---

---

---

---

---

---

---

---

---

### Definition of Risk

- What is the definition of a student at-risk for poor learning outcomes?
- Is there consensus among staff? Can staff articulate the definition?



Using parent friendly language, define a student a risk. What is the target outcome?

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

33

---

---

---

---

---

---

---

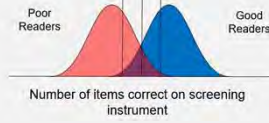
---

---

---

**Primary Data Source**

- What is the primary data source for risk identification?
- Is there evidence of the tool's classification accuracy, or ability to accurately identify students at risk and not at risk?



What is your target outcome? What is your primary data source for risk identification?

34

---

---

---

---

---

---

---

---

---

---

**Risk Verification**

- What secondary and additional data sources will be used to verify risk status?
- What is the validity of these data sources?

What are your secondary and additional data sources for risk verification for the target outcome?

35

---

---

---

---

---

---

---

---

---

---

**Decision Making**

- How will risk status be determined using the primary, secondary, and additional data sources?
- What happens when more than 20% of students are identified and confirmed as at-risk?
- How will these data be used to improve decision making processes overtime?



36

---

---

---

---

---

---

---

---

---

---

### Sample Tool For Documentation Risk Verification

Student	Primary Data: <small>Valid Screening Tool</small>	Secondary: <small>Ex. Common class assessment</small>	Additional Data: <small>Ex. State Assessment</small>	Risk-Status Determination
<i>Ex. Conner</i>	Yes	No	Yes	<i>At-risk</i>
<i>Ex. Jenny</i>	No	Yes	No	<i>Not At-Risk</i>

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

37

---

---

---

---

---

---

---

---

---

---

### Identify Primary Indicator of Risk Status

- Requires valid and reliable screening tool
- Uses tools with high classification accuracy

Examples of Common Tools

- AIMSweb, iReady, MAP, iSIP, SRSS, attendance, early warning system

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

38

---

---

---

---

---

---

---

---

---

---

### Step 2: Identify Valid Secondary Screener

- Progress Monitoring
  - 4-6 progress monitoring data points
  - Most effective in K-2 Settings
- Additional Valid and Reliable Screener
  - AIMSweb, MAP, iSIP, SRSS, attendance
  - Consider costs and implementation time
- Common Classroom Assessment
  - Core Assessments/Grades
  - Concerns about validity and reliability

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

39

---

---

---

---

---

---

---

---

---

---



**Use Additional Data Sources for Risk Verification for Very Few Students**

1. Not necessary when using progress monitoring for secondary screening or risk verification
2. Data should be readily accessible and generally valid and reliable
3. Consider progress monitoring or classroom assessment

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

43

---

---

---

---

---

---

---

---

---

---

**Verify Risk Status through Additional Data Sources**

	Initial Screener	SECONDARY	ADDITIONAL DATA Source	Decision
Bill	Potentially At-Risk	Not At-Risk	-	Tier 1+
Bob	Potentially At-Risk	At-Risk	At-Risk	?
James	Potentially At-Risk	Not At-Risk	-	Tier 1+
Sara	At-Risk	Not at-Risk	At-Risk	?
Tina	At-Risk	At-Risk	-	Intervention
Lena	At-Risk	Not At Risk	At-Risk	?
Sandy	At-Risk	At-Risk	-	Intervention
Frank	At-Risk	At-Risk	-	Intervention
Vivian	At-Risk	At-Risk	-	Intervention
Monty	At-Risk	At-Risk	-	Intervention
Ken	At-Risk	At-Risk	-	Intervention
Brian	At-Risk	At-Risk	-	Intervention

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

44

---

---

---

---

---

---

---

---

---

---

**Verify Risk Status through Additional Data Sources**

	Initial Screener	SECONDARY	ADDITIONAL DATA Source	Decision
Bill	Potentially At-Risk	Not At-Risk	-	Tier 1+
Bob	Potentially At-Risk	At-Risk	At-Risk	Intervention
James	Potentially At-Risk	Not At-Risk	-	Tier 1+
Sara	At-Risk	Not at-Risk	At-Risk	Intervention
Tina	At-Risk	At-Risk	-	Intervention
Lena	At-Risk	Not At Risk	At-Risk	Intervention
Sandy	At-Risk	At-Risk	-	Intervention
Frank	At-Risk	At-Risk	-	Intervention
Vivian	At-Risk	At-Risk	-	Intervention
Monty	At-Risk	At-Risk	-	Intervention
Ken	At-Risk	At-Risk	-	Intervention
Brian	At-Risk	At-Risk	-	Intervention

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

45

---

---

---

---

---

---

---

---

---

---



46

---

---

---

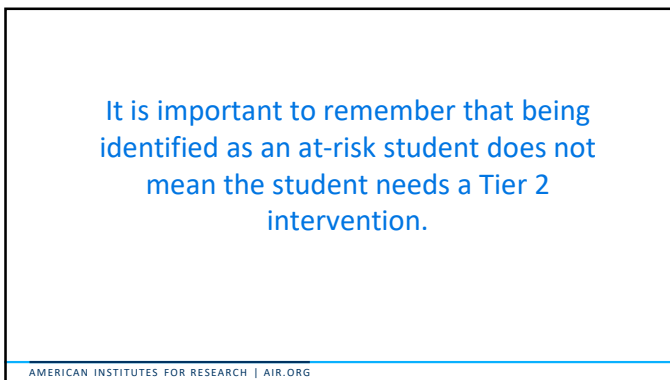
---

---

---

---

---



47

---

---

---

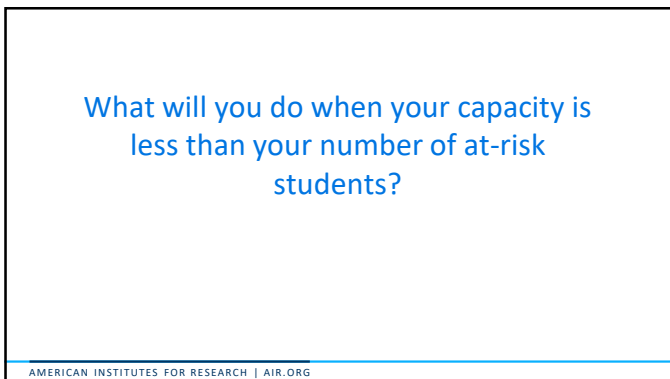
---

---

---

---

---



48

---

---

---

---

---

---

---

---



Considerations

- Progress monitor all students identified as at-risk.
- Provide additional supports in Tier 1, such as small group instruction.
- Focus on improving Tier 1 capacity to support more students.

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

49

---

---

---

---

---

---

---

---

Considerations for Ongoing Improvement

1. Does the current Tier 2 system continue to have the capacity to support the number of identified students? Are educators able to implement Tier 2 interventions and supports with fidelity?
2. Does progress monitoring data suggest that some identified students in Tier 2 intervention can move to less intensive supports?
3. Does progress monitoring data suggest that some students not initially identified for Tier 2 now need Tier 2 intervention?
4. Does the data suggest that the Tier 2 identification process was effective and efficient?
5. How can the efficiency and effectiveness of the risk verification and Tier 2 identification be improved?

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

50

---

---

---

---

---

---

---

---


TESSIE ROSE BAILEY PHD

tbailey@air.org  
www.MTSS4success.org

THANK YOU

AMERICAN INSTITUTES FOR RESEARCH | AIR.ORG

MAKING RESEARCH RELEVANT



51

---

---

---

---

---

---

---

---

## Tier 2 Identification Procedures

Identification for Tier 2 intervention and supports is an important decision teams will make as part of implementation of a multi-tiered system of supports (MTSS). Tier 2 identification typically follows the administration of a schoolwide, brief, valid and reliable screener of the target outcome(s). The percentage of students identified for Tier 2 depends on the capacity of the school's Tier 2 system. Teams will use validated procedures implemented with fidelity to identify students for Tier 2. To avoid overidentification of students for Tier 2, consider the following.

- If more than 20% of students are identified as at-risk by your universal screening process, conduct a root cause analysis of Tier 1 and identify and implement approaches to improve Tier 1 instruction and support.
- Prior to identifying students for Tier 2 supports, determine the number of students your Tier 2 system can effectively support.
- Use validated approaches to identify students for participation in Tier 2 intervention.

This resource is designed to support teams in addressing the last two considerations.

### ***Step 1: Assess Tier 2 Intervention Capacity***

Using a review of resources and infrastructure, determine the number of students your delivery of Tier 2 interventions with fidelity can effectively support. To provide a more accurate assessment, assume at least 5% of students will also need more intensive intervention (Tier 3).

When determining capacity, consider the following:

1. *Intervention*: What evidence-based interventions do we have at the target grade levels?
2. *Intervention Implementation Requirements*: What is the recommended frequency, duration, and grouping size necessary for fidelity of implementation and desired effects?
3. *Schedule*: What does our schedule realistically allow for delivery of each intervention?
4. *Staffing*: What staff are trained to deliver the intervention with fidelity? Are these staff available to provide high-quality instruction at the recommended intensity and duration?

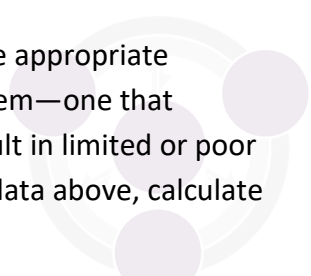
A sample tool and approach for evaluating the requirements and capacity of each grade level intervention is provided below. Teams should only focus on their capacity to implement the

interventions with fidelity within the school’s current context. Remember, it is important to understand your system’s current capacity before making changes to scheduling or intervention selection.

Grade Level	Intervention and Content	Implementation Requirements (frequency, duration, grouping size)	Staff Available to Deliver with Fidelity	Available Intervention Blocks	# of students our system can support with fidelity
Ex. 4 <sup>th</sup>	<i>Fraction Face Off</i>  <i>Math: fractions</i>	<i>Group Size: 2-3</i>  <i>30 min, 3x wk for 12 weeks</i>	<i>2 trained paraprofessionals</i> <ul style="list-style-type: none"> <li>• <i>Sari</i></li> <li>• <i>Mike</i></li> </ul>	<i>1-1:30 and 1:30-2pm</i>  <i>M, T, Th</i>	<i>12</i>

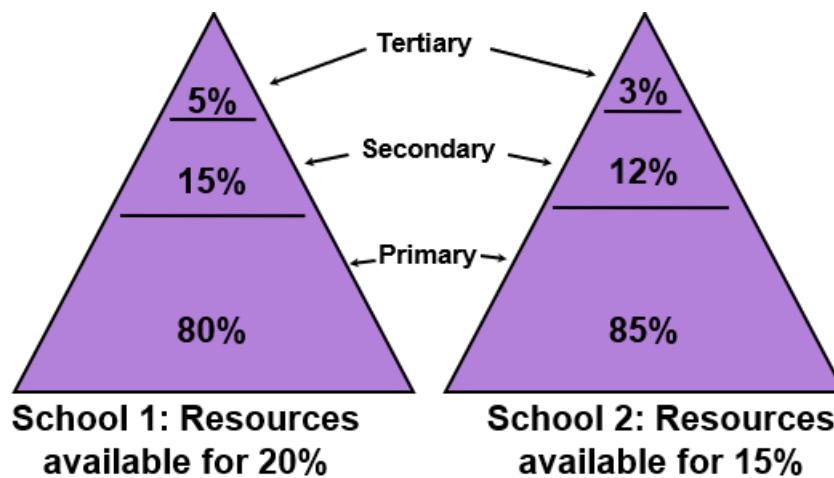
**Step 2: Assess Tier 2 System Capacity**

Understanding the capacity of the Tier 2 system allows teams to make more appropriate identification decisions for Tier 2 participation. An overwhelmed Tier 2 system—one that attempts to serve more students than it has the capacity to serve—can result in limited or poor learning outcomes and ineffective use of staffing and resources. Using the data above, calculate



the percentage or raw number of students your Tier 2 system can support when all interventions are delivered with fidelity.

Total Number of Students our System Can Support <i>(last column from Step 1)</i>	Total Number of Students in Target Grade(s)	Percentage of Students our Tier 2 Can Realistically Support



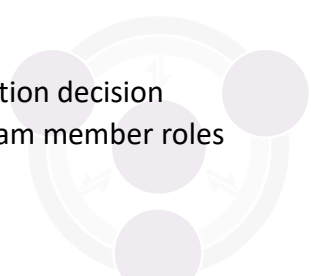
The image above demonstrates the percentage of students each tier has the capacity to **support** in two different schools. Understanding the Tier 2 system capacity can assist teams in making decisions about how many students can be effectively supported.

**Step 3: Identify and Verify Risk Status**

Once teams understand their capacity, the next step is to identify which students are at-risk. For accurate decision making, teams should have a written, agreed upon definition of an at-risk student. Accurate risk identification depends on the use of valid and reliable screening tools and validated risk verification procedures.

Written decision rules about risk identification can ensure teams make consistent and equitable decisions efficiently. These rules should be succinctly written and easily accessible to team members. When developing procedures, consider the following:

- *Teaming:* What staff will participate in Tier 2 teaming and identification decision making? When and how often will the team meet? What are the team member roles (e.g., facilitator, timer, recorder)?



- **Definition of Risk:** What is the definition of a student at-risk for poor learning outcomes?
- **Primary Data Source:** What is the primary data source for risk identification? Is there evidence of the tool's [classification accuracy](#), or ability to accurately identify students at risk and not at risk?
- **Risk Verification:** What secondary and additional data sources will be used to verify risk status? What is the validity of these data sources?
- **Decision Making:** How will risk status be determined using the primary, secondary, and additional data sources? What happens when more than 20% of students are identified and confirmed as at-risk? How will these data be used to improve decision making processes overtime?

The following is a sample tool teams can use to support risk-identification and verification using primary, secondary, and additional data sources.

<b>Student</b>	<b>Primary Data:</b> <i>Valid Screening Tool</i>	<b>Secondary:</b> <i>Ex. Common class assessment</i>	<b>Additional Data:</b> <i>Ex. State Assessment</i>	<b>Risk-Status Determination</b>
<i>Ex. Conner</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>At-risk</i>
<i>Ex. Jenny</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Not At-Risk</i>

#### **Step 4: Select Students for Tier 2 Intervention**

Once students' risk-status has been confirmed, the team's focus shifts to how to support identified students. It is important to remember that being identified as an at-risk student does not mean the student needs a Tier 2 intervention. Based on student data, teams may choose instead to provide additional Tier 1 supports with progress monitoring. The school's capacity to effectively support students in Tier 2, determined in Step 2, should also be considered when selecting students for Tier 2 intervention. For example, if the school identifies 32 fourth grade students as at-risk but can only effectively support 23 fourth grade students in intervention, the team must decide how best to support the remaining nine students. Overwhelming the Tier 2 system can have poor outcomes for all students.

Teams need clear decision-making procedures about which students will receive Tier 2 interventions versus additional Tier 1 supports. Regardless of the level of support provided, all students identified as at-risk (Step 3) should participate in frequent progress monitoring. Teams

may use the tool below to make Tier 2 identification decisions. Remember, students with the greatest need should have access to Tier 2.

At-Risk Student	Tier 2 Supports	Tier 1 Additional Supports
<i>Identified Need: Fractions (12 intervention Slots)</i>		
<i>Ex. Conner</i>	X	
<i>Ex. Jane</i>		X

### ***Step 5: Ongoing Improvement of Tier 2 Identification Processes***

Once students have been identified for Tier 2 intervention or additional Tier 1 supports, the team's focus shifts to ensuring implementation of the selected interventions for the identified students. Throughout Tier 2 implementation, the team will need to consider the following.

- Does the current Tier 2 system continue to have the capacity to support the number of identified students? Are educators able to implement Tier 2 interventions and supports with fidelity?
- Does progress monitoring data suggest that some identified students in Tier 2 intervention can move to less intensive supports?
- Does progress monitoring data suggest that some students not initially identified for Tier 2 now need Tier 2 intervention?
- Does the data suggest that the Tier 2 identification process was effective and efficient?
- How can the efficiency and effectiveness of the risk verification and Tier 2 identification be improved?

