

## NC MTSS Assessment Brief: Determining the Effectiveness of Interventions

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This document further explains the methods that schools and districts can use to determine the effectiveness of supplemental instruction. The reader is directed to the **MTSS Assessment Guidelines** ([MTSS Assessment Guidelines](#)) and the **Data Decision Rules** document as background for the steps to determine the effectiveness of supplemental instruction.

### How will we determine that our interventions are effective?

Determining the effectiveness of interventions implemented in schools requires analysis of the intervention implementation as well as analysis of individual student data for students receiving the intervention.

### Intervention Implementation

In order to demonstrate that an intervention is effective, the district and/or school must be able to define and describe the research-based intervention. Elements that should be defined include:

- **Environment:** The instructional environment for the intervention including allotment of resources (time and personnel) to deliver the supplemental support, the intended group size, session duration, and session frequency of the intervention
- **Curriculum:** The materials/resources utilized and the scope and sequence of delivery
- **Instruction:** The design and delivery of instruction including feedback, scaffolding, and practice
- **Learners:** What students are receiving the intervention and how the students were selected for the intervention

When districts and schools analyze the effectiveness of interventions, not only must they define the intention of interventions, they must ensure that the intervention was delivered as intended. This includes questions such as:

- Was the instructor equipped with training, coaching, and sufficient materials to deliver the intervention?
- Was the instructor present for all planned sessions of the intervention?
- Was the intervention delivered for the full allotted time for each session?
- Was the intervention delivered for the planned number of sessions?

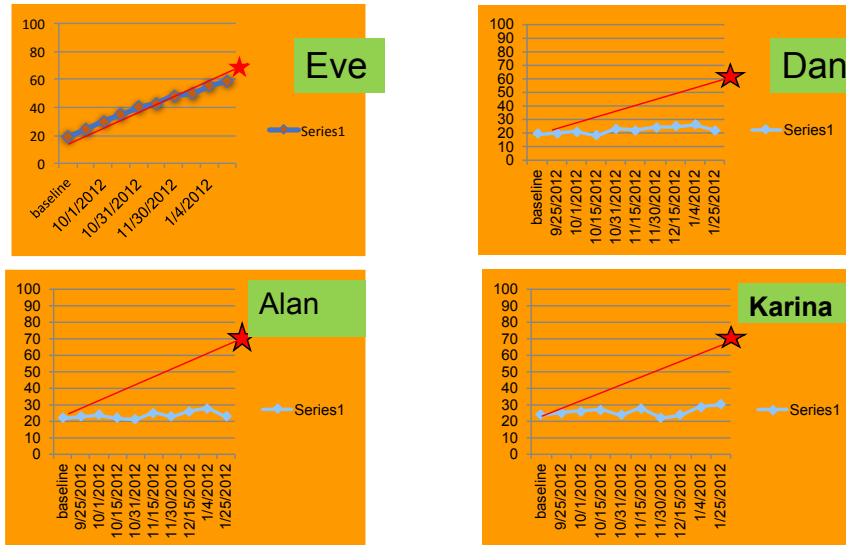
### Student progress

Data decision rules for intervention effectiveness are separate from but include the examination of individual student response to intervention. Individual student response to intervention cannot be ascertained, however, outside of the context of intervention and intervention system effectiveness.

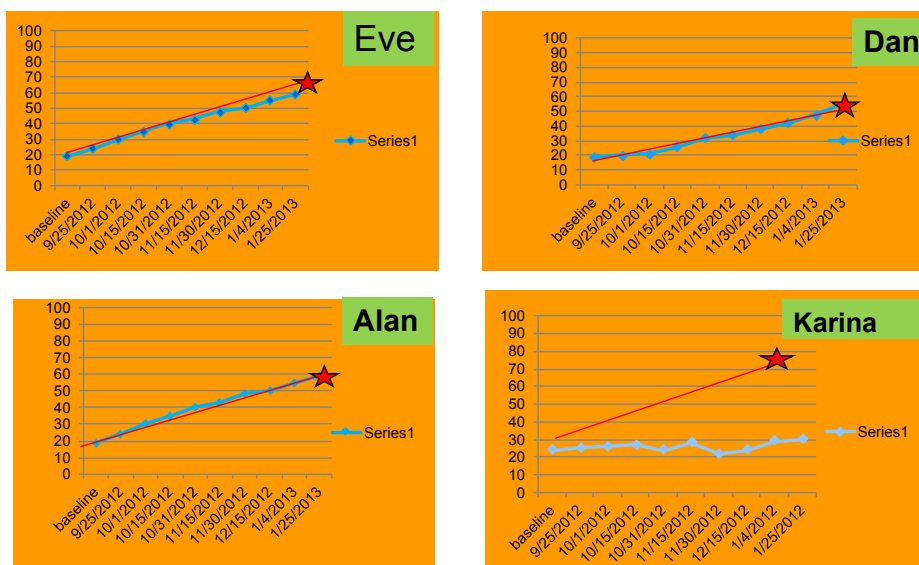
Intervention effectiveness asks the question regarding the effectiveness of a particular practice or program's ability to close gaps for students. We must look at the group of students receiving the same intervention and determine the percentage of students responding positively to that intervention. This requires evaluating the response of individual student performance and then determining the percentage of students who are responding positively to the intervention. The recommended data decision rule for intervention effectiveness is that 75-80% of students within an intervention group should be responding positively to that intervention. In

other words, if you have 4 students receiving the same intervention, then at least 3 out of the 4 students should be responding positively in order to deem that intervention effective for that group. This becomes particularly important when determining if a student or group of students needs an intervention intensified.

In the example below, the students are receiving the same intervention. Only one student is demonstrating positive response to the intervention (25% effective), so this intervention cannot be considered effective. The district or school will further investigate the implementation of the intervention before determining to stop this intervention all together.



In this second example, we see a group of four students receiving the same intervention. Three of the four students are demonstrating positive response (75% effective), so the school or district team may consider this intervention effective. In addition, since this intervention shows positive response, the school or district may consider duplicating this intervention type and implementation in other classrooms, grade levels, or schools.



How will we determine that our intervention systems are effective?



In addition to determining individual intervention effectiveness, teams will also need to determine rules regarding overall intervention system effectiveness. In other words, when looking across school-wide or district-wide data, are the majority of students receiving intervention (all interventions) responding positively. Teams may wish to look to see the percentage of students moving out of the risk range with intervention in addition to the percentage of students moving towards grade level benchmarks. This overall intervention system effectiveness is most often examined first at a district or school leadership level. For example, if School A is providing intervention across all grade levels for 30 % of students and from those 30 % of students, the majority of students are not responding positively (trending towards closing the gap), then the district and/or school leadership team will wish to examine systemic issues with intervention delivery and design. A sound problem-solving model is helpful for these conversations.