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Making Sense of Progress Monitoring Data to Guide Intervention Decisions

Webinar Transcript

Dr. Kern (Presenter 1): Today we'll be discussing common progress monitoring measures that are used in academics [and] in behavior. We'll also talk about some of the challenges with collecting accurate and efficient data and how you can plan ahead to optimize your data collection. And finally, we'll be talking about a series of structured questions you can ask throughout the progress monitoring process that can help you interpret the data, [and] make decisions about what your next steps will be in the intervention process. For example, we'll talk about what patterns of data might reveal, what they say about student needs and what changes or adaptations could be made to help students do better.

Dr. Fuchs (Presenter 2): [Slide 5 – Data Rich, Information Poor? Making Sense of Progress Monitoring Data to Guide Intervention Decisions]: So, when we do progress monitoring, what we're referring to in the Intensive Intervention Center [National Center on Intensive Intervention] is a standardized method for tracking the progress of students in academics or behavior to evaluate, in a quantitative way, the student's response to instruction or intervention and their progress towards meeting their academic and behavior goals. And these kinds of on-going progress monitoring data can also help us, improve the nature of the instruction and interventions that students receive. And for information about specific progress monitoring tools we encourage you go to the link that's on the slide, where you can find various tools, evaluation charts of those tools, and even training modules on the various tools. But what we're talking about today is not specific commercial products, but rather general progress monitoring tools and approaches, the kinds of measures that are sometimes incorporated into those commercial products.

[Slide 6 – Why Implement Progress Monitoring?]: So there're several different purposes that we use progress monitoring data. As the slide shows, if we start over on the left hand side, we can estimate the rate of improvement over time and it helps us set appropriately, ambitious, realistic goals for individual students. We can compare the efficacy of how well different forms of intervention work for a specific students, we can be alerted to when students are not making adequate progress, and we can use the data to help us determine when an instructional change is needed and help us think analytically about what the nature of that instructional or intervention change may be.

And I should clarify that in this presentation, progress monitoring systems can be used for groups or for an individual student. And what we're talking about today is specifically using the data for individual students.

[Slide 7 – Progress Monitoring Tools Should Be]: So when we're selecting a progress monitoring tool for a given student we're always looking for assessments, progress monitoring tools, where the test is brief because we don't want to eat up too much of our instructional time in administering tests. We want a measure that has multiple alternate forms so that we can track student's progress over time but without giving the exact same test every time we index the student's performance. We are also looking for measures that are grade, age or are instructionally appropriate, for the standards that they are expected to learn.

I'll note that sometimes, in the area of academics, we're looking at material that may not be at the student's grade level, but [may be] lower than of the student's academic grade level. But we are teaching the skills at that academic level in the service of helping the student make progress towards the grade level goal. And then we also want to make sure that the tools that we select give us accurate and meaningful information. And the tools chart, the link that I talked about a few minutes ago, gives you information about the reliability and the validity of various tools that had been submitted to the Center for evaluation.

[Slide 8 – Common Progress Monitoring Measures: Academics]: [This slide shows] some of the commonly used progress monitoring measures, and again these are not commercial products, but many of the commercial products incorporate similar measures. Not all of them, but many of them. The common frequently used progress monitoring measures in the area of reading at kindergarten – letter-sound fluency is frequently used. At first grade, word identification and fluency is frequently used. At grades two and three, oral reading fluency, sometimes called passage reading fluency. In both cases students are reading aloud from passages. And then at grades four through six, maze fluency.

And when we're looking at Mathematics, at kindergarten, a frequent progress monitoring tool is number identification or quantity discrimination, or identifying missing numbers from a series of numbers. And then at grades one through six, the most commonly used math measures are computation curriculum-based measures (CBM) that sample at grade level all the different objectives that are incorporated in the standards of that grade level, and that can be used in conjunction with concepts and applications of CBM measures. Sometimes computation and concepts and applications are used in conjunction together and sometimes we use one or the other.

Dr. Kern (Presenter 1): [Slide 9 – Common Progress Monitoring Measures: Behavior]: For behavior there are two types of progress monitoring measures commonly used, or that we recommend. The first is Systematic Direct Observation and the second is Direct Behavior Rating (DBR).

[Slide 10 – Common Progress Monitoring Measures: Behavior]: So first we'll talk a little bit about Systematic Direct Observation. Systematic Direct Observation is a process of watching a person or environment for a period of time and then systematically recording behavior. There are several different methods for actually observing behavior and collecting data, which can be broadly divided into two classes. One of those measures a specific aspect of an event such as how often an event occurs, or how often, how long the event lasts. And there are also those that are based on recording what occurs within a particular time frame. So for example, was the student engaged during each five minute interval?

Some of the examples of Systematic Direct Observation in the classroom might be the total number of times a student raises his or her hand. The amount of time spent out of seat or the percentage of appropriate peer interactions. The advantages of direct observation data are that they're a direct representation of the behavior, so by directly observing behavior rather than relying on recollection, they tend to be more accurate. Systematic Direct Observation is also applicable to a wide range of observable behaviors, just about any externalizing behavior can be measured using direct observations and they're also adaptable. So you can measure various dimensions of behavior.

There are some limitations, one is that they can be difficult to implement. It's difficult to find blocks of time to sit down and directly watch a student, particularly on an on-going basis. And as educators, we know we have many competing responsibilities so if it's difficult to do, it might not be used and of course if it's not used then we won't be able to implement data-based individualization.

[Slide 11 – Common Progress Monitoring Measures: Behavior]: But fortunately there is an alternative method for collecting data that has recently emerged in the literature and is not as labor intensive as direct observation. And this approach is Direct Behavior Rating or DBR. The Direct Behavior Rating can be adapted to focus on a range of target behaviors and also provides an opportunity to measure broader and more general outcomes. One of the premises of the Direct Behavior Rating is that it's based on the notion that teachers can reliably and accurately rate student behavior on a continuum following some specified period of time. And there is research that supports that that is the case. And the ratings are then used as data to monitor student progress. This method has the greatest research to date. The one with the most research is the single item scale that allows the rater to rate behavior on a single continuum from zero to ten.

So the numbers on the scale are anchored by terms such as never, for example, corresponding to zero, sometimes, corresponding to fifty percent, and always, corresponding to one hundred percent. So those would correspond with ratings zero, five and ten. A major advantage of this form of data collection is that it doesn't require constant recording or constant attention. Instead, it allows teachers to instruct and manage their classrooms while they're also providing a research based method for tracking behavior. So like I said, there is a growing literature base to support this approach to on-going monitoring and it appears that it may parallel some of the well-established methods that had been used in academic progress monitoring with respect to accuracy and sensitivity.

[Slide 12 – Graphing Progress Monitoring Data]: Graphing data is really crucial for decision making because it allows you to see patterns that might not be evident by just looking at raw data. So as you can see in this graph on the slide, the graphed data provides a clear picture of behavior change. And we can see progress over time. The graph shows the Direct Behavior Rating data and clearly reflects lower ratings of disruptive behavior after [the] intervention was implemented.

Moderator: I have a couple of requests, the audio is a little quiet on your end, If you wouldn't mind either turning up your phone volume or just try to speak up a little bit.

Dr. Kern (Presenter 1): Ok, sure! Thank you!

Dr. Fuchs (Presenter 2) [Slide 13 – Key Considerations for Optimizing Data Collection]: So we're going to talk about the academic side of, selecting measures.

[Slide 14 – Common Challenges: Academic Data]: So there are challenges as we all know, in identifying measures that are going to be suitable for the school districts, states, and the individual students that we work with. And here are some of them. Aligning the measure to the content of instruction. I see that there have been a few questions about the Common Core, that people have written into the chat box and I think that's a very big issue right now because, as these questions are indicating the progress monitoring tools that are out there right now are not aligned with Common Core.

I think on the one hand it's important to note that in order to do well on the Common Core, you need the kind of foundational [skills typically measured with progress monitoring measures], the students need to be competent with the kinds of foundational skills that are reflected within any progress monitoring tool. So I don't think that the Common Core makes those existing progress monitoring tools not useful. I think they are still useful and necessary for the kinds of students who are requiring intensive intervention. What I think needs to happen is that those tools need to be extended and people are working on accomplishing that. And I think in the meantime there are things that teachers can do, special educators and other teachers can do, to keep the existing progress monitoring tools useful.

For example, for Math problems, selecting different problem types on different days and asking students for a given problem, to write a substantive explanation for how they solved the problem and why they solved the problem that way. I think that's the way of using existing materials in an efficient way to extend to the kind of format that we are going to see on the Common Core test. I think something similar can be done in Reading.

Besides aligning, we need to have measures that are going to be sensitive to change and when you go to the link, the tools charts that AIR has created, there are data for the various tools on whether, and to what extent, they are sensitive to students change. And what we mean by that is if we are going to be using on-going progress monitoring data to make decisions about whether students are responding to interventions, we want to make sure that there are data on the assessment system to indicate that the tool is in fact going [to work]; that the scores will go up when students in fact, learning new material. So that's what we mean by sensitivity to change. In terms of data collection we want the tools to be providing enough alternate forms so that we can collect data over time. And, when we're setting, when we're selecting a level of an assessment in reading or in math we what to make sure that, the material isn't so hard that students will not register increases in scores even though they are learning material. And on the other hand, we don't want the material to be so easy that within a semester or a year we'd have to keep changing the assessment system to keep pace with the students learning. So we want to select material where the student, where the level of material, where the student has some competence but not so much competence that the progress monitoring tool will soon become irrelevant. Next slide please.

Moderator: Is this the one? Common Challenges with behavior data?

Dr. Kern (Presenter 1): Yes

Moderator: Okay

[Slide 15 – Common Challenges: Behavior Data]:   So with respected collecting behavior data there are a few challenges. One is defining the target behavior accurately. So it's important to use objective language that refers to observable characteristics of behavior. For example, rather than saying 'Jimmy is hyperactive' we would specify the behaviors he exhibits, such as, tapping his pencil, getting out of his seat, wandering around the classroom and so forth.

We also want to make sure that the instrument allows for the behavior to be readily measured. So if, for example, if we are trying to reduce self-stimulatory behavior a frequency count wouldn't reflect an accurate measure of that behavior. It would be better to measure duration or maybe use the Direct Behavior Rating that operationalizes how scores align with the amount or duration of self-stimulatory behavior.

And we should also describe what the behavior includes and what it does not include. So for example, self-stimulatory behavior might include hand clapping but not foot tapping. And finally, as far as consistency we want to identify a regular schedule of data collection and consistently adhere to that schedule. Okay next slide please, thanks.

[Slide 16 – Structured Questioning for Analyzing Progress Monitoring Data Patterns]: Okay, now we're going to switch gears a little bit and talk about questions that are important to ask in order to facilitate data analysis and interpretation. Next slide please.

Dr. Fuchs (Presenter 2) [Slide 17 – What Can a Graph Tell You?]:   So we're going to talk about different dimensions of graphs and what the data on the graphs can give you insight into. So, let's advance slide now.

[Slide 18 – Use Structured Questioning to Arrive at a Hypothesis]:   So, when we talk about, looking; when we look at graphs, we may find patterns that reveal areas in the students profile of strengths and weaknesses that gives us insight into how to revise the program to make it stronger for that student. So we're going to talk about three dimensions of questions to ask yourself when you're trying to come up with a hypothesis about what direction we need to move in to make the program more effective for the students. And we're going to talk about data and assessment. That is making sure that the data that you're collecting is giving you the right information or instead the problem is not with the student but with the assessment system.

We're going to talk about dosage and fidelity. If progress is unsatisfactory, then one of the questions you probably want to ask yourself is whether implementation of the program, rather than the nature of the program, is the barrier to the student making progress. And then finally, and usually, the data and the dosage and fidelity, we hope that those are both appropriate. And often what we are looking at is the content, the methods of instruction, the intensity of instruction, in the program to determine how to make the program more effective for the child. Advance [the slide].

[Slide 19 – Structured Questioning]: So sometimes though, when we're collecting data, and trying to use the information to improve student learning, sometimes the data are not being collected often enough, which means that we don't have enough data on a frequent basis to even formulate a decision about the effectiveness of the program for the student. So, different data

systems, progress monitoring tools, provide you with information about how often that system, is designed to be collected. So often with Curriculum-Based Measurement tools, data are collected on a weekly basis. And you have to though look at the assessment system that you're implementing to understand what the appropriate schedule for collecting data is.

The second problem of when we sometimes, or when we're questioning whether the data and assessment system we're using is appropriate for a giving student is we ask ourselves whether the progress monitoring tool is sensitive to the progress that the student is actually making. And we can get flat scores, which we'll talk about in a few minutes, we can get low flat scores when students are really not learning and that is the problem. But we can also get low flat scores when the progress monitoring tool that we are using is too hard for the child.

So for example, at first grade or for a student whose instructional level is at first grade, if we're using oral reading fluency; that is for students reading aloud from passages, often the student can be making progress and we don't see that in the passage reading fluency measure. If we were to implement with that child a word identification fluency measure by contrast, for that same student we might sometimes see nice progress. So we have to make sure that when we see low flat scores that the system is not the problem. That we're not; it's not that we are collecting the wrong data; it's that really the student is not learning adequately.

And the same problem exists when we see high flat scores that looks like no progress and it may be that the student has ceilinged out on that measure. For example, maybe a first grade, some first grade students need to be in passage reading fluency because they can read sixty or more words in a minute from the word identification fluency measure. They need to be advanced to a harder level of the CBM system.

The third issue is does the measure align to the content of intervention and we talked a little bit about that before. We want to make sure that the assessment systems that we're using for progress monitoring are connected to the objectives and goals that are relevant for the given student and connected in a clear way to the standards of the district and the state. And then I've already addressed collecting data at the right level.

[Slide 20 – Structured Questioning]: With respect to dosage and fidelity, if the student is supposed to be receiving intensive intervention, three times a week for an hour each time, let's say, we wait and if we see that the student's progress monitoring scores are not improving, one of the things we want to do is make sure that the intervention is being implemented at the right dosage. That could be group size, that could be number of sessions per week, number of minutes per session. We want to make sure that the intervention is being delivered at the right frequency and duration.

A second question is did the student receive all aspects of the intervention as it was originally conceived? And are there other factors that are creating difficulty for the student to receive the intervention as planned? For example, being absent, or behavior issues that need to be integrated into the academic instructional plan and so forth.

Dr. Kern (Presenter 1)[Slide 21 – Structured Questioning]: And the third area of questions that we might want to consider if we're not seeing responsiveness to the intervention is the

content and intensity of intervention. So we might want to ask whether we're sure the intervention is a good match for the student's skill deficits or problem behavior. What specific academic skill deficits have we identified, or what function does the problem behavior serve? And does the intervention address those deficits or functions? Also, is the intensity appropriate?

So for example, are we pre-prompting social skills frequently enough? Do we need to provide more prompts maybe every fifteen minutes rather than just at the beginning of the class period? And then to what extent are academic and behavioral issues related? There's a lot of research indicating that academic skills are associated with behavior problems. So, we want to make sure to address both. If we're only intervening to reduce behavior problems, but not to improve academic skill deficits, then it's not likely that we are going to see reductions in behavior problems.

[Slide 22 – Trend: Improvement in Scores After Change (Behavior)]: So this graph shows a student's rating of engagement using the Direct Behavior Rating scale. And you can see that following intervention, responding improved and then we see an ascending trend. So after reviewing the data, we would continue with the intervention. And I would typically review data after probably around five data points to make a decision about whether to continue or to make changes in the intervention. But that's just sort of a rule of thumb. It depends on a lot of variables including how quickly the intervention is expected to work.

So some intervention such as cognitive behavioral therapy may take longer to work or to show progress or observe responsiveness than an intervention such as self-management or some of the antecedent interventions. And also, it also may depend on how often we're measuring behavior. So if we're only measuring behavior once a week or so, we're likely to see more change than if we're measuring it frequently every class period or every day. And we also want to look at variables such as students past responsiveness to interventions. So, students who engaged in problem behaviors or have significant academic skills deficits, we may not see as quick progress with other students.

So again, back to the graph on the slide. In this case, the intervention appears to be working and I would continue with the intervention until the student met criteria which might be set at something like eighty percent engagement across five consecutive sessions.

Dr. Fuchs (Presenter 2) [Slide 23 – Trend: Improvement in Scores After Change (Academic)]: So when we look at graphs, especially for academic graphs, we're often looking at a trend of improvement. And what happens with the data that are graphed in many progress monitoring systems is that each score is graphed and after baseline data the first three data points are taken, you see that vertical dashed line, a goal is set which is reflected in that blue line and the star at the end of the blue line matches the approximate rate of improvement that we expect to see. And when a student's rate of progress, in the last instructional phase here, we see that second red line where the trend line is actually exceeding the goal line. Then that's a favorable data picture and it's nice to know that the student is on track for achieving the goal.

At the same time, there's long standing research to show that what we need to do for children who have serious academic deficits, those are the students requiring intensive intervention, is that when we see a data path like this, we want to consider increasing that goal. So, that might

mean moving to a higher level of the progress monitoring system or it might mean staying the same level of the progress monitoring system. But moving that star higher up on the graph to require more, and make sure that the goal is appropriately ambitious. Advance the slide please.

[Slide 24 – What Could This Pattern Be Telling You?]: So I think that covers that topic.

Dr. Kern (Presenter 1) [Slide 25 – Trend: Flat Line (Behavior)]: Ok so in this graph we see that the direct behavior rating of engagement is similar across base line and intervention phases and we see a flat or stable trend. So again it would be important to determine whether the function of behavior was accurately identified and whether intervention matches that function. Another thing to look for is what we referred to as ceiling or floor effects and Dr. Fuchs mentioned this earlier. So we may see that a behavior occurs at a very low rate or a very high rate.

So for example, behavior like cutting or fighting may occur at a very low frequency and it's going to be difficult to see changes in that behavior as a result of intervention. So in cases like this we might want to identify an alternative target behavior maybe a pre-cursor to fighting such as arguing with peers. And then collect data on that behavior, or we could collect a data over extended periods of time and then maybe see changes. Next slide.

Dr. Fuchs (Presenter 2) [Slide 26 – Trend: Flat Line (Academic)]: So in terms of academics when we see a flat data pattern like the one on the presentation slide. There we have four consecutive data points all below the goal line and from research we know that in the most commonly used data systems, progress monitoring systems, when four data points all, consecutive points all fall below the goal line, that we do not have sufficient progress. Can you advance a slide please?

[Slide 27 – What Could This Pattern Be Telling You?]: So the student is not responding to the intervention. Now as I mentioned previously we want to consider the possibility that, the progress monitoring tool, we're experiencing a floor effect. So that maybe the teacher feels quite certain that the student is making progress but our tool is not indexing that progress. In which case, we may need to move to a lower level of monitoring so that we can see progress that is occurring.

Now I know there were a couple of questions that people have been asking about. I saw one comment that in Idaho you have to measure at the instructional level. I think that that's not in the law, federal law, but it might be in the state of Idaho guidelines. So I think when that's the case, I think that it may make sense to monitor at the grade level more periodically. For example, maybe once a month to track how the student is doing on the grade level content, but to measure more frequently on a weekly basis at the level where the student's instruction needs are.

So you know I think there's tension between, remediating foundational skills and addressing the Common Core. It's a definite tension and it's going to get worse. But if we're to serve the needs of students who require intensive intervention we can't ignore their foundational deficits because they need to be competent on those precursor skills in order to demonstrate competence on the Common Core Standards. So we have to walk a tricky line and I think that we have to communicate, what we're doing to our supervisors, our classroom teachers, in a way that helps

connect instruction on foundational skills to the Common Core. I think that, that is an argument that can be made articulately and I think we also have to periodically index, criteria behaviors that are close to the Common Core. So that we can talk articulately to parents and classroom teachers and our administrators about how the students are making progress toward, the grade level program.

So when we have a flat data path the student may not be responding or the progress monitoring tool may not be sensitive to the students learning. We also have to consider dosage problems. Has the intervention been implemented with fidelity as you know, as it was supposed to, as it was planned? And then the final thing which is connected to the first bullet up here is that the students not responding so we have to interpret that graph as communicating to the teacher. It's time to make a change in the intervention program.

Dr. Kern (Presenter 1) [Slide 28]: So again when we see this flat data pattern or non-responsive, non-responsiveness to intervention we first want to consider whether the measurement is too difficult which Dr. Fuchs just talked about. We also want to re-evaluate whether the measurement is sensitive to change. So for example, in the area of behavior, office disciplinary referrals may give us a gross measure of behavior change but they're not going to be sensitive enough to detect changes on an everyday basis. We also want to ask whether the progress monitoring measure aligns with the intervention content or target behavior. Are we accurately measuring what we want to measure? And if however the data and assessment aren't an issue then we next want to consider dosage and fidelity.

And as I mentioned before if the student doesn't receive the appropriate dosage of the intervention that's going to be a problem. For example, if intervention does occur four times a week for thirty minutes we want to make sure that the student received each session for the full length. On the other hand if the student received the appropriate dosage of the intervention and it was delivered with fidelity we might want to take a look at the content intensity of the intervention. So for example, that we might ask does the intervention appropriately target the function of the student's behavior or that student's specific skill deficits? Does the student have the necessary pre-requisite skills for the intervention or do we need to back up our instruction? For example, we may have taught and role played a response for a student to use to peer provocation but we, that student may not be able to engage in that response when she's angry.

So we might then need to teach an intermediate step like self-talk or self-instructions or relaxation or something of that nature. And then finally, as I also mentioned earlier, we want to determine whether the behavior and academic challenges are interrelated. So if the behavior is impacted by academic deficits then the plan should also involve both academic supports in addition to behavior supports. Next slide.

[Slide 29 – Trend: Highly Variable (Behavior)]: So this graph shows the Direct Behavior Rating for disruptive behavior and we see that the data are highly variable. With baseline and intervention days being pretty similar. So we don't see that the student has adequately responded to our intervention and there is quite a bit of variability. Next slide.

Dr. Fuchs (Presenter 2) [Slide 30 – Trend: Highly Variable (Academic)]: So when we have high variability as shown in this graph, on the academic side, advance a slide please?

[Slide 31 – What Could This Pattern Be Telling You?]: We want to consider several possibilities. The first is if a progress monitoring tool is not reliable. Now we can actually check that for most progress monitoring tools. You can go to the National Center on Intensive Interventions tools chart and many of the most commonly used tools for progress monitoring are on the tools chart and you can look to see what the reliability and validity of the system is. And I think that, when you use adequate reliability shown for a given tool, then you need to reject the hypothesis that the problem is with the assessment system. And instead look to see what's going on in the instructional environment and in the child.

So sometimes we can see a lot of bounce when the test is not being administered in a consistent way. One of the things that we want with an academic progress monitoring tool is that the assessment is administered in exactly the same way from day to day that minimizes variability, and also helps us understand that when we see changes in the scores that it reflects student learning and not a different administration procedure. But a third hypothesis about a highly variable graph is that the student has attentional issues, is not engaging, either in instruction and/or in the assessment of his learning. And often we need to consider motivational systems for the kinds of kids that are in intensive intervention, the kinds of things Lee [Dr. Kern] can speak articulately to. But to ensure that students are, working hard, attending to what's going on and producing the work that they are capable of, both during instruction and during the assessment.

And then the fourth bullet really is harder for us to address and that's when other situational or external factors are affecting performance things about the child's home experience, classroom experience. Often times we have to work in conjunction with the classroom teacher and the social worker to address those kinds of issues.

Dr. Kern (Presenter 1) [Slide 32]: Okay so I understand that I'm still hard to hear so I'm going to try and scream into my phone. So, with variable data first we what to consider data and assessment. We want to ask is the progress monitoring tool a valid and reliable measure, and has the assessment been administered and scored with consistency. We also want to consider dosage and fidelity, is the intervention being delivered consistently and with fidelity or the way it was designed. And then we want to look at content and intensity.

So what other factors might impact variability? Maybe medication changes, a lot of times we see that parents are inconsistent with giving medication. So, we see this kind of variability in behavior, in student's behavior, or sometimes a student's schedule changes and they don't regularly get the intervention. We also what to ask are there certain days of the week or times of the day that changes in behavior or academic performance are occurring. And then we want to take a better look at why that's going on most days or at those times.

We also want to ask whether external factors such as home life or interactions with others might be impacting performance, maybe a fight on the bus, or the student lacks a quiet place to do homework or so on. And also if the student engaged in the intervention? So for example, is a student actually self-monitoring his or her behavior? Is the student aware of the goal and motivated to work toward it? So, in other words, is the value of that academic or behavioral outcome meaningful to the student. Next slide.

[Slide 33 – Trend: Slow Rate of Improvement (Behavior)]: Okay this graph shows that engagement is improving but at a very slow rate. So the trend is ascending but it's very gradual. And assuming our criterion is eighty percent engagement or actually this is disruptive behavior, this is engagement, at eighty percent or above for five consecutive sessions, then we might what to consider an intervention change or provide additional support to the existing intervention. Maybe increase the schedule of reinforcement or make some other type of change in order to see more rapid progress.

Dr. Fuchs (Presenter 2 [Slide 34 – Trend: Slow Rate of Improvement (Academic)]: So on the academic side, this is a graph we don't like to see with the kinds of students that are in intensive interventions. We see a lot of graphs like this and, here we have the trend line, the red line, is clearly flat compared to the goal line. The student's scores are improving somewhat but not enough to meet the long term goal. Advance a slide please.

[Slide 35 – What Could This Pattern Be Telling You?]: So if we continue with the program as it's been designed assuming that it's been implemented as planned, then the student is not going to make the amount of progress that we had hoped for. So this is where we get to on the positive side, we get as teachers the opportunity to exercise our instructional expertise. Sometimes it's helpful to interact with colleagues to share; have sharing sessions where we brainstorm about the nature of productive instructional revisions; to prompt better student progress. Sometimes we need to administer diagnostic assessment. Because lots of times the kinds of outcome measures that are monitored in progress monitoring tools, don't provide rich diagnostic information.

So an example of that would be the oral reading fluency measure. We don't get a lot of information direction about whether we should be working on syntax versus semantics; whether we should be working on decoding, whether we should be working on word level skill generally including decoding and word recognition as opposed to fluency, as opposed to comprehension. So we need to both reach out to our colleagues and we need to be introspective and analytical about what the student strengths and weaknesses are and where we can make a change in the instructional program that's adequately big to potentially have an impact on a way that which progress monitoring scores are going up, but not so big as to derail the entire program. So we want to identify an appropriately ambitious change in the instructional program. And this is a good place to be cognizant of the kinds of skills that are valued in the Common Core System.

So for example, closed reading - is there an opportunity to modify the instructional program in a way that helps the student monitor the gist of the series of points that are being made in the passages or to draw inferences within the passage, that are required for a deep understanding. If we are looking at the word level, what kinds of word recognition modifications can we make to the program to really try to boost the progress monitoring scores? Or what's the profile of decoding scales for this trial? Is there a diagnostic assessment we can administer to identify a kind of word decoding pattern that the student clearly hasn't mastered and that is highly teachable?

So we need to in a way not be discouraged when we see that pattern, an inadequate rate of progress we need to make an instructional change if you're going to feel dispirited about that. But, I think we need to see that as an opportunity to I guess exercise our instructional expertise and be analytical and clear about the nature of the instructional change. And when we make that

change and draw that solid vertical line in the grass, we expect to see improvement and if we don't that helps us think about the next instructional change we're going to be required to make.

And as we interact with a child implementing the present, instructional program we should always be mindful of generating hypothesis about what the student requires to boost the efficacy of the program we're delivering. Advance a slide please.

Dr. Kern (Presenter 1)[Slide 36]: So back to our key issues. If you see this slow change behavioral progress, we might want to consider first the data and assessment. We want to ask whether the goal is appropriate. Again, is it too high or is it unrealistic? We also want to think about what constitutes typical growth for a student in a particular grade level and also look at the student's prior growth rates. In the area of behavior, we might want to look at how long the student has engaged in problem behaviors and whether we would expect them to necessarily disappear quickly if they've been on-going for a long time.

With respect to dosage and fidelity, we would ask whether the student requires an intervention with greater frequency or for a longer duration. And then if we look at content and intensity, we would ask does the content of the intervention adequately address the student's needs? For example, does the student require more explicit instruction in particular areas of deficit? Or would the student benefit from more frequent opportunities for feedback, in the case of behavior? So again this will guide our instructional changes. Okay next slide.

[Slide 37 – What Could This Pattern Be Telling You?]: Okay so to summarize, we want to remember that an appropriate monitoring tool is valid, reliable, brief, sensitive to change, and measures the skill or behavior targeted for intervention. And second, graphing your data allows you to see patterns that we might not be able to otherwise be detected with raw data. And the third bullet, once those data are graphed, we can ask questions about the data to determine whether the student was responsive to the intervention. And then finally let those hypothesis or conclusions about the data guide your decision making about whether a change to the intervention or assessment is needed.

[Slide 38 – Additional Resources]: So at this graph, we've mentioned these resources a couple of times, this graph lists three resources, The National Center on Response to Intervention that has really focused on implementing and skilling up RTI and also has applications with diverse populations. It provides a lot of information about the components of RTI and screening and also provides some information about progress monitoring and data-based decision making but it is primarily focused on academics.

And then the second website the National Center on Intensive Intervention, this link directs you to our training modules for data-based individualization. And there are a number of modules on different topics related to providing intensive intervention. The website is really a great resource in a number of different areas. It has the tools charts for evaluating progress monitoring tools in both academics and behavior and also the behavioral or academic interventions. And so I recommend you to take a look at that website.

And the National Center on Student Progress Monitoring has a ton of information about progress monitoring and academics. It also has a number of webinars available and has resources for

families and professional development as well. So, it's also an excellent resource. I don't know Lynn, if you want to mention anything else about those websites?

Dr. Fuchs (Presenter 2): No, I actually think the websites have a lot of really good information. They even have completely designed professional development sessions for people to implement, if they want to do local training. There is something that I think that, in response to some of the questions that people have posted, it's important to see the graphs that we have incorporated into this Power Point as meant to be heuristic. So that an actual graph you know that has, for example, baseline data on the left hand side and the goal, long term goal on the right hand side would have to be a lot longer wider than, the graphs that we have, here. And we're just showing patterns of data to give you the gestalt of what we're talking about.

And some of the questions that some of the people have asked have to do with how long do you want to implement intervention before making a decision about whether the student is making progress or not. And on one hand the individual progress monitoring tools that you're using should provide guidelines about that. I will say that for the tools that we have developed at Vanderbilt and I think that a lot of the other progress monitoring systems rely on our decision making frameworks. What we recommend is that at least four to six weeks of instruction have occurred, so that the instructional program is being implemented with quality as planned, but we're giving enough time for that program to take some effect. So we recommend four to six weeks. I think that, that by the way the whole framework is different for behaviors, so Lee probably needs to comment on that separately, but in academics, four to six weeks of instruction and we want to see, when we see four consecutive points above or below the goal line we know that we can reliably predict that the goal is going to be reached if those four data points, consecutive data points, are above the line or that the, goal will not be reached if four consecutive data points are below the line. But often, we don't have four consecutive points above or below by the time we get eight weekly data points. And when we have eight weekly data points then we draw a trend line, and we use the trend line steeple and the less steep goal line then for making the decision about, whether to raise the goal or whether to make a program change.

Dr. Kern (Presenter 1): And those are good points. I think in the area of behavior we tend to discontinue interventions if it's not effective immediately and we forget to think about the problems may have been on-going for a long time, and that they may have been reinforced over time and that they're not going to necessarily readily disappear. So we what to look for progress in the direction that we would like and also as I mentioned there are a number of different variables to consider when we're evaluating progress including the history of problem behavior and expectations for that particular intervention as far as how long it takes to take effect or to result in some noticeable behavior change.

Moderator: Thank you so much Dr. Fuchs and Dr. Kern. We have a few other questions that we've received ahead of time. Many people submitted questions whenever they registered for the webinar. So I've noted a few, but just a general response to all of our attendees today, many questions were submitted about suggestions about specific progress monitoring tools and while the Center doesn't endorse any specific progress monitoring tools or programs the tools charts that are available on NCII website are extremely helpful in reviewing different progress monitoring tools and comparing the reliability, validity and sensitivity to change of these tools.

So those tools are available on the link on the previous page and also on the closing slide that I'll show in just a moment.

But we have a couple of questions that I'll pose for our presenters and if you have any others please continue to type those in the Q and A box. But we received many questions about using progress monitoring within an RTI framework. So how should progress monitoring be used within an RTI framework to document interventions that have been tried and to determine if a student is making sufficient progress maybe at that tier or at that level? So can I pose that question to Lynn [Dr. Fuchs] first to answer from the academics realm?

Dr. Fuchs (Presenter 2): Well the progress monitoring tool is a screening system; I guess it would be the progress monitoring tool they are using should specify what the benchmarks for adequate progress are. And those can be framed in terms of weekly rate of improvement or the final set of three scores at the end of the intervention run. And in one of the PowerPoints that's available on the NCII website, there is a day-long session on using progress monitoring tools within a RTI framework. We provide in that PowerPoint criteria for judging responsiveness. So and it's done, jointly with those decision making frameworks that we provide, it relies on a combination of the amount of progress the child has made while the intervention was in effect and his final score. And that's that duel discrepancy criterion is used to decide whether the child moves to a less intensive level of the RTI system or a more intensive level of the RTI system. So I encourage you to look at those decision making guides that are in the PowerPoint. If you're using an assessment system that's quite different from the one that's used as an exemplar in the PowerPoint, then you should be looking at your progress monitoring system. They should be providing benchmarks for adequate progress, adequate final status, and on the NCII tools chart, one of the criteria for judging the adequacy of a progress monitoring tool is the extent to which the system provides this kind of information. And by the way there was a question about how to set goals, and in that same PowerPoint there is a whole segment about strategies for setting ambitious goals.

Moderator: Thank you Dr. Fuchs. And Dr. Kern, could you speak to using progress monitoring maybe within a similar behavior tiered system of support framework?

Dr. Kern (Presenter 1): Sure, so unfortunately we're not as advanced in the behavioral arena with measuring progress on an on-going basis as the academic area. But, there are differences, there are measurements in each tier and there are differences. At Tier I, typically office disciplinary referrals are used and I think that's fine most of the students at Tier I don't have a lot of behavior problems. So it's kind of a gross way of monitoring their progress. And then at Tier II, we've tended to use 'check and connect' is the major Tier II interventions and that program is accompanied with usually a three point monitoring scale. And I would recommend at Tier II to begin using the Direct Behavior Rating. It appears to be much more accurate and sensitive to change than a three point scale. And then at Tier III, I would definitely use the Direct Behavior Rating or even direct observation if that's feasible.

So depending on the severity of the student's behavior, I think its fine to use some of the on-going measurements such as ODR (Office Disciplinary Referrals) or other types of systems. But I would try to identify something that is going to get you more accurate data at Tiers II and III.

Moderator: Thank you and I'll pose another question a couple of different folks have mentioned this issue today; that within certain states or maybe certain districts, there is a requirement that progress monitoring data is collected on a student's grade level. So that kind of poses a challenge for certain teachers that want data on the student's instructional level. So do you have any suggestions for those teachers who are somewhat bound in collecting those grade level probes but who also want instructional level data? Maybe how frequently should they be collecting each type? Or do you have any suggestions for working with a district or state that has that guideline?

Dr. Fuchs (Presenter 2): I think it's hard to make a dent in the state system without great effort and I think the thing that I would do in that situation is to monitor at grade level, once a month, once every six weeks, depending on frustrating it is for the child. And I would progress monitor on a weekly basis on the instructional level. And I would also, you know, have a well framed argument, in my notes, for why it makes since to be doing this combination of progress monitoring to provide a full picture of the students' progress and why working on foundational skills is an important target for producing grade level outcomes, that we can't just, why we can't just skip to the grade level content and ignore the deficits that exists in the foundational skills for that child.

Moderator: Thank you, I think we have time for about one more question so I will read one of the ones that were submitted, before the webinar and the registration. So, do you have any suggestions for addressing fluctuating scores that maybe due to the progress monitoring measure? For instance, maybe fluctuating Oral Reading Fluency scores that maybe due to a lack of background knowledge on the passages.

Dr. Fuchs (Presenter 2): Well we know that reading passages produce a fair amount of variability. And one source of that variability is the content knowledge that the children have on the specific passage. That's one reason why we require, if we're making trend decisions, we require eight data points. Because we find that with our passages, we can get reliable accurate information that's in need for an instructional change when we have a trend line that runs across eight passages, that's a lot of passages. So we're going to have some unusually high and low scores in there, but when we do our trend line that's going to essentially minimize the problem that those very high and low sores create.

When we get four consecutive score above or below the line, then you know that's despite whatever variability that's attributable to the passages. And we find that when we have that consecutive data point pattern that provides accurate information. But because of the variability that is inevitably going to occur when we have passages with content in them. We want to be very careful about making any decisions about two few data points. So for example, in screening we're using Oral Reading Fluency from passages; we need to have several scores to make a sound decision. Or, we want to be using passages that the data system; the authors of the data system, tell us that are pretty robust across kids variations and background knowledge.

Moderator: Well thank you so much Dr. Fuchs and Dr. Kern. This concludes our webinar today. We strongly encourage you to take the survey about your experience with today's webinar and we thank everyone who had any technical issues with the sound; we'll definitely work to address those next time. So we encourage you to take the survey that will pop up in your browser

after the webinar ends. By taking the survey you'll be helping us to improve our future webinars, and thank you in advance for your feedback.

As a reminder, this webinar will be recorded and archived on our website and the power point will also be posted along with the Q and A document. So if we didn't get to your specific question today, please feel free to email the center and our email address is up on the screen ncii@air.org. Thank you so much for joining today and thank to our panelists Dr. Fuchs and Dr. Kern. Have a nice day!