Assistive Technology in the School Setting: Tips for Planning, Selecting and Justifying

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- [Presenter] Our course title is Assistive Technology in the School Setting: Tips for Planning, Selecting, and Justifying, and it is my pleasure to welcome Dr. Laura Cohen. Dr. Cohen is a fellow, a resident, a principal of Rehabilitation & Technology Consultants in Arlington, Virginia. She has more than 30 years of experience working with individuals of all ages with complex disabilities and consulting with a diverse group of health care stakeholders. Her experience has provided a rare view spanning direct clinical practice, research, claims review and audits, policy, and advocacy. Being able to directly experience various perspectives has created her passion for innovating models of care that will improve outcomes, resolve delivery of care issues, and reduce the overall cost of care for individuals with complex disabilities. So we are so pleased to have you here with us today, Dr. Cohen, and at this time, I'm gonna turn the microphone over to you!

- [Laura] Thank you, Calista, and good morning, or afternoon, depending on where you are. Welcome to the webinar. I appreciate the opportunity to be here with you today and have prepared an action-packed session. So we will need to move swiftly to get through it all in the allowed time. So I will be talking about assistive technology in the school setting, and by design. I plan to talk about a practical model that you can use in your clinic to promote collaborative decision-making in all phases of assistive technology service design and delivery. Using the tools presented, you can evaluate students with diverse abilities and experiences, in the context of the environments they typically encounter, and develop an AT plan of care for participation and achievement. We are here today to learn about key AT tools, to increase both the functional performance and the academic success of students. In the education process, AT helps to facilitate the improved performance of students. It is through participation in everyday activities that children learn and develop skills and competencies. They form friendships, develop a sense of personal identity, and experience well-being. AT significantly contributes to aiding individuals in learning, building self-confidence, being independent, and achieving high quality of life. So here's our agenda, and I've planned time at the end for questions, so please type in your questions in the comment box as we go, and I'll be sure to address them at the end. I also wanna take a moment before we begin to draw your attention to the resources that Calista mentioned that you can download, I have prepared for you, and I will be talking about them in greater detail later in the program. So here are our learning objectives. After this course, participants will be able to explain IDEA requirements for assistive technology devices and services for students with disabilities to support a free and appropriate public education. Discuss the concept of developmental planning and its relevance in the provision of AT services in the school setting.

Describe the four-part SETT Framework designed to promote collaborative decision-making in all phases of AT service design and delivery, and identify at least three sources to assist with preparation of documentation to support AT service provision. So we're going to begin with the laws affecting AT provision in the school setting. The Individuals with Disability Education Act, also known as IDEA, is a critical law that makes available a free, appropriate public education to eligible children with disabilities throughout the nation. Originally enacted in 1975, Congress has amended and reauthorized IDEA numerous times, but most recently in 2015, when it amended the legislation through the Every Student Succeeds Act.

The law governs how states and public agencies provide early intervention services and special education and related services for more than the 6.5 million eligible infants, toddlers, children, and youth with disabilities. Under IDEA, infants and toddlers birth through age two with disabilities in their families receive early intervention services. Children and youth ages three through 21 receive special education and related services. This law ensures that assistive technology devices and services, or both, are available to a child with a disability if required as part of the child's special education related services or supplementary aids and services. This is a little in the weeds, but important to understand how this law and its amendments have impacted the services you provide to children. The 1997 IDEA Amendments mandated that every IEP team address the question, "Does this child need AT "in order to accomplish the educational goals we have set?" Since 1990, school districts have been required to provide AT devices and services if they are needed for a child to receive a free and appropriate public education. Historically, in many schools and school districts, AT has been treated as a special area separate from the general delivery of services. And in some cases, AT was only thought of for children with very severe disabilities such as physical and speech impairments, which I will speak about more.

As the legal definition of AT is very broad, sometimes confusion exists about the distinction between AT versus instructional technology. AT is not technology that helps students practice new skills they are learning, such as software to practice spelling or math. If a child's problem is handwriting, for example, AT might be technology that allows him or her a keyboard to produce more legible spelling or math to assist with the task. When technology is used as assistive technology, it helps a child do a task that she or he either cannot perform without it or cannot perform as well without it. AT can be used in a variety of environments, and can help a child with a task that might be done at school, at home, or out in the community.

This is the legal term for an assistive technology device. The term assistive technology device means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of children with disabilities. And can range from... This is a list of the different categories of assistive technology, such as academic and learning aids that assist with reading, writing, spelling, math, organization, and study. Assisted living devices and environmental aids such as speech amplification, auditory signals, assistive listening devices, closed captioning, real-time captioning, and text telephone. Augmentative and alternative communication or speech-generating devices, which can range from a picture communication board, talking switches, computer-based communication devices. And computer access, which can include adaptive keyboards, software, hardware modifications. Environmental aids to daily living could be examples of alternative input devices for controlling electronic appliances such as switches that might open doors, turn on lights, TVs, temperature, et cetera. Mobility aids, physical therapists are very familiar with, crutches, canes, wheelchairs, scooters.

Seating and positioning devices such as chairs, different positioning chairs that are often seen in the classroom, wheelchair seating, side-lyers, standing frames. Recreational and leisure may include things such as adaptive toys such as switches or motor power cars, and access for books, games, music, bicycles, swings, such as that. And then we also have prevocational and vocational aids. AT services include evaluation, acquisition, customization, coordination, training, technical assistance. First I will define these services and then we will focus on this process when we discuss the SETT Framework. So, let me get the slide, evaluation is the evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environments that they typically encounter.

Acquisition is purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities. Customizing includes selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing or replacing assistive technology devices. Coordination means coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs. Planning is training or technical assistance for a child with a disability, or if appropriate, that child's family. And technical assistance is training or technical assistance for professionals, including individuals providing education or rehabilitation services, employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of that child. So that might be a teacher aide in the classroom or a personal care attendant that is with the child. Okay, so as I said earlier, many schools and school districts have treated AT as a special area, separate from the general delivery of services, and thought of it only for children with various severe disabilities. Bouck and Flanagan conducted a study to analyze data of the National Longitudinal Transition Study in the United States to understand the extent to which students with severe disabilities receive AT in the school and out of school, and the relationship between receipt of assistive technology in school and post-school outcomes for these students.

The inclusion criteria were students identified with moderate to severe disabilities, also known as low-incidence disabilities, which are defined as moderate to severe intellectual disability, autism spectrum disorder, multiple disabilities, physical disabilities, traumatic brain injury, other health impairments, intellectual, sensory impairments, including deaf and/or blindness. This happens to be a very heterogeneous group with diverse and complex needs as compared to the high-incidence students with mild disabilities, such as learning disabilities, emotional and behavioral disorders, and mild intellectual disability, including ADHD.

So what they found was that receipt of assistive technology in school and post-school varied greatly by disability identification, meaning moderate to severe versus mild, but generally was lower, suggesting that students with complex needs received AT in school less frequently than those identifying with mild disabilities. They also found few statistically significant post-school outcome differences existed between students who received AT and those who did not. The results suggest an underutilization for secondary students and adults with severe disabilities, and identifies a need for improved collaboration between professionals in rehabilitation and the school, to ensure continuation of needed services and AT. The authors call for additional research to better understand the adult life post-school outcomes of individuals with severe disabilities, as well as factors from pre-K through 12 schooling or post-school services that positively and negatively impact those outcomes. I do not find this a surprising finding, because students with moderate and severe disabilities require AT services, supports, or both, to level the learning field and the playing field for their education, and even still, often have a ceiling to their capacity for independence and autonomy, even with additional supports. The same authors also researched AT and students with high-incidence, or the mild disabilities, back in 2012 using the same data set from 2000 to 2009. That, we just discussed. Here, mild disability, also known as the high-incidence group, was examined which included students with learning disabilities, emotional/behavioral disorders, mild intellectual disabilities and ADHD. The results showed that fewer students in the study reported receiving AT in high school, and fewer still after high school.

It also showed that students who received AT in school had more positive post-school outcomes in terms of paid jobs, wages, participation in post-secondary education. However, receipt of AT was not found to be a predictor for positive post-school outcomes. So these studies show the impact of the laws on how services have been provided in the schools and in practice. Congress continues to amend IDEA and write other laws to ensure every student has access to a free and appropriate public education. However, these results show we still have room for improvement in educational programs, such as this one today, will hopefully help. So now we're going to transition to developmental planning. The other speakers in the program this week have also addressed this topic, so I will not dwell here long. Okay, developmental planning is used within the early intervention care model based on the use of milestones for planning care and predicting needs. Here is an example of developmental planning using motor milestones, since we are mostly PTs here. Within the early intervention care model, use of milestones is a basis for planning care and predicting needs, but also considers timeframes for other important developmental milestones, considering the domains of language, social/emotional, in gross and fine motor development. This example is developmental motor milestones, and suggests that a child with delays may benefit from consideration for services, AT and/or AT-related services. This is often surprising to clinicians and families, and some consider premature. Research has shown the impact of early self-directed mobility on development. Therefore, planning and providing for early mobility experiences and interventions as part of the educational process is absolutely appropriate. Today we are seeing an increase in this with programs such as GoBabyGo that encourages early mobility experiences for kids as young as 12 and 15 months. The goal of developmental planning...

I didn't expect these to be dynamic slides! Is to have alternate interventions ready when a given milestone would normally occur. Especially for mobility, these technologies can be pricey and require planning to obtain, borrow, rent, et cetera. It often takes a long time. The goal is to be ready to meet the student where they are at, and allow for healthy, striving growth and opportunities for success. For example, if a child is delayed in their ability to stand, adaptive standing, using a standing frame, may be an assistive technology option. The medical benefits may be orthopedic development through weight-bearing, to facilitate bowel and bladder function, manage lower extremity spasticity with prolonged stretch, et cetera.

The educational benefits may be visual orientation to participate in classroom activities, psychosocial development to interact with peers, promoting strength and endurance, et cetera. Using the developmental planning is particularly useful with AT, and as part of the IEP process, to begin early on conversations with the family in planning for a student's anticipated needs based on his or her progress on immediate and future milestones. Related to functional mobility, this can be a very difficult conversation with a family, yet an important one to plant the seeds and talk about the benefits of early age-appropriate mobility, while at the same time the child can still be working on the goals of walking, standing, et cetera. It does not need to be an either/or situation. This topic in itself is another class in its own right. All right, so now we're going to shift gears. I've prepared a series of seven polls that you'll take, and we will compare our results to those from a dated study from 2008. So on your screen you'll see the first poll now, and the scale for each of these first six polls is the same, and it ranges from not at all confident to extremely confident. So please rate how confident you are, recognizing a person with disability may benefit from AT and AT services. Okay, it looks like we're still getting some coming in, so we're gonna give it a second. All right, I'm gonna broadcast the results.

Okay, and it looks like we're at about 50%. The next slide shows the results from 2008. So overall, oh, I have to advance. Okay, so overall, pediatric PTs are pretty confident when it comes to recognizing the need for AT and AT services, and our little group was a little less confident than the group back in 2008. Okay, so we're gonna publish the second poll, and this asks you to rate how confident you are in assessing or evaluating the individual for AT and AT services. Okay, and I'll broadcast those results now. And it looks like we have a confident group here! And we can go to the next slide. So I have to change it, sorry. All right, and notably, in this previous study, that had about 380 pediatric therapists, there was a shift in confidence when it comes to assessing and evaluating for assistive technology.

Okay, and the third poll is up on your screen now. So please rate how confident you are in matching and selecting a specific device to the needs that were identified in your evaluation. Okay, I'm gonna broadcast that now. And we see that confidence wanes a little bit, when it comes to the... I'm sorry, matching and selecting a specific device. So that is consistent with the findings, if we go back to the next slide. So you can see there was a significant drop in 2008's study, where clinicians had less confidence when it came to selecting a specific make, model, device for a client. And that's consistent with a study that I did back in 2004, well, I don't remember exactly, around 2004, when it came to recommending complex manual wheelchairs and seating systems. Okay, the fourth poll asks you to rate how confident you are in identifying or providing training in the use of AT for the individual. Okay, and this is consistent, also, with the next slide. That shows that even though clinicians lacked confidence, they had more confidence providing the training for the AT device than they did matching the person to the specific device. Okay, we're going through the whole process that we're gonna talk about. So the next one is, rate how confident you are in evaluating the outcome of the AT and the AT device services. Well, we have a exceptional group here today. When we go to the next slide, we'll see that the other cohort lacked confidence in evaluating AT outcomes and AT services, and that may be a result of outcome measures that are available today that weren't back then. Okay, we only have two more, this is the last one like this. So please rate how confident you are in justifying and documenting the necessity for recommended AT and AT services. And there is a lot of documentation we're asked to do. We have to not only document for the assistive technology device that we're asking for, but also the services we're providing, and it's two different requirements.

Okay, and this is broadcast, no, I have to broadcast it. Oops, Kathleen, can we go back to the broadcast? Thank you, okay. So this is interesting. I think that it is reflective of the fact that in policy, there are two different policies, one for your clinical services, and one for the durable medical equipment that we're typically requesting. And few therapists realize this, and when you go to the actual policy references, you will be able to see the documentation requirements for each, and for me, that's kind of like the decoder ring, and when you pull up those policies, and I suggest that you do do that, and have that available, I'll tell you exactly what you need to document in order for a person to be eligible for the device you're asking for. So it's a good checks and balance to make sure that you have that information included in your medical record, or your educational record. So the researchers Long and Perry did not ask this question in their study, but I did do a study and asked this question and found that clinicians, more often than not, lack confidence in justifying and documenting their recommendations for AT and AT services. And this is consistent with my work reviewing claims and talking to clinicians from all over the country. This is also a very contemporary practice issue that I encounter daily, and there was actually an article about this in HME News last week. I hear rehab technology professionals, also known as suppliers, say that there are clinicians out there that are wanting the supplier to write the clinical documentation, and if they do not, that the clinician will select a different supplier for that order. I will restrain from jumping on my soapbox on this topic and leave it at, documentation that supports the care we provide, whether it's clinical services or the equipment that we're recommending, is part of our standard of practice.

Plus, we also get paid to do this as part of our billing codes, when we're billing in the medical system. This is true even when payment is inadequate. So inadequate payment is not a legitimate reason to refuse to complete our clinical documentation. So next we're gonna move on to the final poll. It talks about the IP, oh yeah, so why don't you take this poll because I'm curious how your school or school district functions when it relates to AT. Okay, so why don't we switch to the... Oh, yeah, so this is interesting, and I think it's interesting to see the poll here.

So our group today mostly are members of a collaborative team that are responsible for providing AT decisions for the cases of students that they're working with, and as I mentioned earlier, it was not uncommon that AT was a separate service and they would send them out to a resource center, or they had an AT specialist that traveled school to school within a school district. And that seems like that may be shifting in practice, which is a good thing. Okay, we can go back to the slides. Okay, we're gonna move on to the meat of the program, the tools. I always like going to classes where I can go home and take tools that I learn and apply it in practice right away. And so that's what we're gonna do here. The SETT Framework was developed in 1994 by Dr. Joy Zabala.

Since that time, it has been used by learning teams around the world to gather and organize information that can be used to guide collaborative decisions about services that foster the educational success of students with disabilities. Originally, it was developed to support assistive technology selection and use in educational settings, but the principles of the SETT Framework are also used in noneducational environments and service plans. Joy is a superstar and leader in the areas of assistive technology, education, and universal design, amongst others. You can read more about her on her website, where you can access all of the SETT materials and the toolbox that she generously has made available at no charge, and she refers to them as the SETT Scaffolds.

So let's take a deeper look at those. Okay, SETT is an acronym for student, environments, tasks, and tools. The SETT Framework is based on the premise that in order to develop an appropriate system of tools such as devices, services, strategies, accommodations, modifications, et cetera, teams must first develop a shared understanding of the student. The customary environments in which the student spends time, and the tasks that are required for the student to be able to do or learn to do, in order to be an active participant in the teaching and learning process that leads to educational success. When the needs, abilities, and interests of the student, the details of their environment and the specific tasks required of students in those environments are fully explored, teams are able to consider what needs to be included in a system of tools that is student-centered, environmentally useful, and tasks-focused.

Often, people are drawn to discussing solutions before having a common understanding of the learning barriers. It is crucial the learning team first develops a shared understanding of the student, their learning environments and expected tasks, before tools are discussed and selected for trial. The SETT Framework promotes team-building and supports a simple, yet thorough approach to leveling the learning field of students with disabilities to help the students succeed in the classroom. So if you go to Joy's website, which is joyzabala.com, she has a section called Documents, and you can download the four Scaffolds. There's one for consideration of AT needs, one for data-gathering, one for tool selection, and one for implementation and evaluation of effectiveness planning. And all of these tools can be adopted and changed to meet the needs of the people who are using them, as long as credits to their original source are maintained. Okay, so why do we need the SETT Framework to tell us how to do this? You may already know the answer to this, but the obvious one is that schools know they are mandated to consider AT for all students on IEPs, but they don't always have a process to do so.

Also, it is very difficult at times to match up the student with technology that will be used successfully to meet educational goals. Often we do not know what types of AT is available, or even where to begin in the process, and one size does not fit all. The SETT Framework is research-based, and when used, has been found that a higher level of change was experienced. Here's the eight steps for the decision-making process. And at first glance, you would think that this process will take a long time to use. The reality is, it only takes as long as it needs to take to understand and address the needs of the student.

So if the student's needs are complex, it may take a good bit of time, but if not, this process could take only a few moments. Here we have the interdisciplinary AT teams. As mentioned earlier, some schools and school districts approach AT as a specialized service that is provided at the regional or state level. In others, it is integrated at the school level. This slide compares the educational team to the medical team. It works best when both teams can work together, and at minimum, communicate. When I worked in the hospital setting, clinic, with children, we tried to communicate with the school therapist and the treating therapist prior to seeing the child. We would call, and when that didn't work, we would send a questionnaire so that we were able to get their input into the process. And I worked in a wheelchair seating clinic. We invited the therapist to the evaluation, and often collaborated on developing a plan for trial equipment and mobility training that could occur in the school. And so it wasn't uncommon when we had a child with severe cerebral palsy, and we weren't sure if they were gonna be able to operate a power wheelchair, but we wanted to consider that, we would arrange to do a rental power chair, and mock up seating and switches so that the child would have an opportunity to practice using the device. I don't know if any of you have ever gotten into a complex power wheelchair before, but I think it's not uncommon that we expect to put somebody in a chair, turn it on, and then they should go and they should be able to do it perfectly without bumping it into walls or having difficulty going through doors or pulling up to tables, and the fact is, when you get into it, it takes you a while to learn how to operate it, the size of it, how big it is to turn, and the outer limits of it, to maneuver.

And so we would coordinate with the school therapist so that we would get the rental and develop the plan, coordinate with the school therapist, and then the school therapist would work on the training at the school for a couple of weeks during the trial, and we could use those results to then document and request the purchase of a power wheelchair through their medical plan. And that was a good process that worked well for many children. I'm just taking a look at the slide to see if there's anything else I wanna talk about. Just so you know, CRT stands for complex rehabilitation technology. Those are the complex manual wheelchairs. Some of you may know the HCPC codes like the ultralightweight manual wheelchairs, some people refer to them as sports wheelchairs, but they're really different than sports wheelchairs. Or tilt-in-space manual wheelchairs through the power wheelchairs that might have power tilt, power recline, power seat elevation, and be operated with a regular choice stick or a head control or a chin control or a sip-and-puff. Many of the CRT devices can also integrate, like augmentative communication devices, and specialty controls to access things like environmental controls. So that's your CRT team, and we usually have a rehab technology professional as a certified assistive technology professional that works in the supplier role. And they often work with a technician that may be the one who you interface with when you call up and say, oh, your student's chair needs to be adjusted or the brakes need to be fixed or something like that. Okay, the student. The SETT Framework questions are expected to guide and deepen the collaborative discussion. And as each of the questions is explored, it is likely that other questions will arise and it will foster discussion and exchange amongst the team.

So this is a list of the questions, and we'll just look at them quickly. What is or are the functional areas of concern? And it's important to get the different perspectives. The classroom teacher may have difficulties with the student transferring to a desk chair or how do they include them into a circle time activity, it might be on the ground. What does the student need to be able to do that is difficult or impossible to do independently at this time? They may not be able to reach certain objects or participate in the science laboratory, or access the bathroom. So you wanna look at the special needs for that student related to the area of concern, their current abilities, expectations, and concerns, interests and preferences, and that's a really important one. What does the student wanna be able to do? What does their family wanna be able to do? This is a time to engage them in this discussion.

And also, future plans. What are some of their future anticipated needs? And we can think back to the developmental planning. If a child's having a hard time sitting and isn't yet standing, maybe it is time to look at augmentative accommodations to allow that child to reach that developmental milestone with an assistive device. So the SETT Scaffold considers AT needs, and we talked about this earlier. It includes all of these different areas. And it kind of prompts you as you walk through it. And it's consistent with our clinical evaluation, you know? Physically, we look at the child's health, their motor abilities, seating and positioning, sensory. When it comes to AT needs, we're looking at their vision, their hearing, their sensitivity to touch, and the type of touch that they prefer. This can be important when you're looking at switch access. You may need a switch that has an auditory click or one that has a tactical one, so that they know when it's been activated or deactivated, for instance. Communication, the need is about speech or sound production, language fluency or augmentative and alternative communication devices. Some AT needs that relate to cognitive would be prompts that would help with mental processes related to thinking and solving problems. Academic performance are things such as basic and content reading, reading comprehension, mathematical calculations, reasoning and application, written expression, oral expression, learning comprehension, and styles and strategies for acquiring and mastering these academic skills. Environmental control can be ability to control events within the environment, the ability to interact with others to influence actions of others.

Social competence are adaptive behaviors and social skills, which will enable the student to meet the environmental demands and take responsibility for his own and others' welfare. So how to be engaged as part of the classroom, one of the kids, leading the line to the school lunch cafeteria, or out to the playground, things like that. Vocational performance would be general work behavior, such as following directions, working independently or with job supports, dexterity, their interpersonal relationships, and socializations related to work skills. And then recreation and leisure are free time, maintenance, physical fitness, use of the different recreational facilities at the gym, adaptive PE or nonadaptive PE, how can you allow the child with a disability to participate in the regular PE class? And other resources that will help improve and engage the student in social involvement. Okay, so this graphic shows part of one of the SETT documents used for considering AT for a student. Having a form like the one Joy has created will ensure that your team will not forget to address any particular area. It kind of prompts you as you go along. So here you'll see physical, sensory, communication, cognition, academic performance, environmental control, and social competence as well as vocational performance and recreation and leisure needs. So it just prompts you as you go through it to consider those, and even if it's not applicable, as a reviewer, I highly encourage you to indicate that it's not applicable and why, and not just leave it blank or draw a line through it. Okay, so now we're on to environment, and I'm gonna encourage the use of the S there, because students encounter many different environments, and as we said earlier, IDEA is not confined to only the school. It could be what a student needs to be able to implement their educational plan at school, at home, on the bus, and in the community. So in discussing the environments, we'll think about it as a plural, and about the environments that the student typically encounters. In terms of arrangement, when we're talking about that with the team, we have to consider the classroom from both the instructional and physical perspectives. So for instance, how does instruction take place? Are kids sitting, standing, sitting at desks, working in groups, having elevated, you know, desks at a science laboratory where they have to stand? How is the room set up?

Regarding supports, the team should discuss the adult and peer supports available, which includes the ratio of teachers to students, or aides, and supports for personnel whether it comes from within the building or the region, and/or the state. So if you have a student in your classroom that needs to use a technology that you've never seen or used before, where can you get some mentorship or support to help you implement that in your plan of care. Materials and equipment, consider tools commonly used by others, and how the student and their tools get places, so when students change classes, for instance, how is their device gonna move between classrooms with them?

And access issues will include physical, technological, and instructional issues, so things such as, are there steps, ramps, and elevators accessible to the student on the path that goes between their classes, or do they have to go out through a back door or through the loading dock in order to access the area where the other students are? And also, don't forget to consider the playground and the school bus, and how we're gonna move that equipment room to room. And who's gonna be responsible for things such as charging or storing the equipment securely? And then from an instructional standpoint, we have to consider things such as noise, lighting, and positioning. Does the student who uses a wheelchair have the capacity to pull up to the group table to participate in the group activity? Attitudes and expectations, and this relates to the staff, the family, and others. We have to consider fears and biases that can influence the team. This goes back to that difficult conversation that I think physical therapists are best equipped to initiate, is when you have a child with a physical impairment that is quite delayed in reaching their motor milestones, like standing, like walking, or that it's very, very slow, and the family, and oftentimes therapists, actually, are very tied to making them ambulatory.

Those are some biases, and so openly talking about those, and the influence that that has on the decision about assistive technology, is a critical and often a complex conversation, but one worth planting some seeds and having those difficult conversations, because just because someone uses an assistive device, doesn't mean that they're confined to it. They can still get up and get out of it, and it doesn't necessarily have to change your plan of care related to, they can still be working on early mobility experiences using power toys or... I'm all about wheeled mobility, so those are where I go for my examples, or a GoBabyGo car, but that doesn't mean you can't continue to be working on standing and walking, if that's what your therapeutic goals are, but from an educational standpoint for normal development, to support that, it may be quite appropriate to be supplementing that with those experiences.

Okay, so the first T is tasks. So what specific tasks occur in the student's natural environments that enable progress towards mastery of outcomes from the Programs of Study as well as IEP goals and objectives? So the Programs of Study is what everyone is doing in that classroom. And so when the student is identified to have troubles with participating in that, that's when the IEP goals and objectives kick in. And so you wanna be comparing the Program of Study to the IEP goals and objectives, and that will help you come up with the tasks that that child needs assistance with. So what specific tasks are required for active involvement in each of those target environments? Thinking about communication, instruction, participation, and productivity. So what tasks does the student need to be able to do or learn to do that is currently difficult or impossible without assistance? For each task, describe how those barriers to doing those tasks are currently addressed. So do they have a paraprofessional or a teaching aide do it for the student? Does the student struggle? Does the student need extra time, do they need a different environment, do they need a quiet space? So what are the specific strategies or accommodations or modifications or assistive technology that's currently being used to address the identified need? Consider whether new or additional AT would enable performance of that task.

And indicate if assistance or further investigation is needed, and so your plan, the task that might be needed, is further AT assessment and AT trial, or a simulation. And analyze and summarize that information and reflect on your analysis. And so that's what the first T is. The second T, and we talked about it, the first T is like the most important part, and it's kind of human nature that we wanna leap past the tasks and go directly to this part, the tools, and we come up with ideas of what we think will work, but from a systematic decision-making process, thinking about what's the problem you're trying to fix, makes sense. Okay, so the tools, there's two parts, identifying and prioritizing. So the first part is identifying the tools and the devices and services that that person, that student needs.

So you're gonna describe criteria and features needed that could help the student do the identified task. So for example, if handwriting is the problem, where the child needs assistance, what are the criteria that are needed so that they can do it successfully, so they relieve stress on their hands while writing, increase their independence, help accomplish the task in a timely manner, and increase their productivity for their schoolwork? The features that they might require, in that AT system that addresses that need, might be a large-grip writing device that is weighted to help with the tremor. So those would be the characteristics or the features of a device. And then list the promising tools and technologies for trial. So you may know offhand that there's an XYZ widget or a ABC device that will meet that student's needs. Other times you may need to do research or consult with others, and this is where you might have a regional resource center. Most states have an assistive technology project, program, that is a demonstration in a loan library. And so you likely will have regional centers where you can obtain equipment for demonstration and trial. So first you do the research, then you match the functions and tasks needed by the student, and you select the recommended tools for trial, and that's a really important process. And so when I think about my documentation, you help to bring the reader, the person who has to approve this request and pay for this request, through your decision-making process.

So documenting all of this helps them to see what were the criteria, what you considered, what you ruled in, what you ruled out, and the why. And that is, if you can lay that out, that will help you have success in your requests. Okay, prioritizing. So you're gonna first establish a short list of tools to purchase, justifying your choices with the data that we just described, and describe why it matches and why, again, you ruled out. Usually you have to write why you ruled out the lower-level device. Why would the lower-level device not meet that child's needs? Because the people who are paying for it wanna know, "Why can't I get the cheaper one?"

And so if you write that out, you anticipate their question and you address it in your documentation. And then you're gonna establish tool availability. And in the schools, there's times where some of these devices can be shared amongst other students, and so you wanna have knowledge of what exists. I don't know, one of you guys probably do, if there is a centralized inventory, database, or something, that you have that will tell you what exists that you have access to. So you wanna look at what is currently available to all students served by the system, and then programmatically see what special devices and equipment may be available through the special education or through those other services which a student is qualified for, and like I said, the AT Loan Program is a really nice resource that you can check out. And then also additional tools that need to be acquired for the student, and this is where I know I spent the majority of my time. For instance, if I knew I wanted to try a specific positioning seat, oftentimes the manufacturing representative in the area has access to their demo equipment, and if I could plan ahead, I could contact them and say, "Hey, when you're in the area next time, "can you bring one of those by for me to try? "And would you be willing to leave it here "for a week or two, so we can use it with the child?" And that's how can accomplish your demonstrations. And sometimes there's assessment equipment that a school district might own. We had a simulator that allowed us to put... We had a CooperCar and a different seat that we could adjust and put different supports in, and different switches on, so that we could allow a child the access to early switch access and movement, and to participate with the other kids out on the playground, and so those kinds of trials can be part of the AT services that you are providing.

And so that might be something that you ask the school to purchase so that you have access to use it with more than one child, but it would belong to the special ed department. And then you establish training needs for promising tools that match the student's needs. And so that training has to be planned and coordinated. One of the things that you see a lot are standing devices, and so more than one child might use that standing device, and it might need to be set up with different heights and dimensions, depending on the child, and so a schedule of when and how that's gonna be used, and who's responsible for setting that up and documenting and taking pictures so that it's easy for the person working with the child to do so, to get that carryover, is part of what this training part entails. And having it as part of this tool, a part of your IEP, and the documentation, helps to make sure that it happens. So trial is the next one. So it's important to create a written plan containing the trial specifics, like I just said, so you wanna write about the expected changes with the trial, when and how the tools will be used, what is included in the training, the data collection, and the data analysis. And so this can be things like a log of how long that they're using it, how long they tolerated it, with notes describing the quality of use or pertinent descriptions of what happened. Videos, pictures, all of that is very helpful. But this is all part of the planning. So some of the questions about the tools, and these are great, because it prompts you to think about this and to talk about it. So that's essentially what the SETT Framework is, is this toolbox. So who will provide the tools needed for the trial? How will the tools be made available to the student in every environment indicated for that trial? So what time of day, what classes will they be using it in? Where will the tools be stored at the end of the day and whose responsibility is it for doing that, securing it, charging it, programming it? Because all of that takes time, and it needs a designated person. And then questions about the student training.

What specific skills will the student need to learn to effectively and independently use the tools? How much training does the student require? Is it gonna be every day for a hour, twice a day? Is it gonna be three times a week? Do we only have two weeks of this trial equipment, so it has to be every day, multiple times, but once we finish this, we won't need to do, it won't be ongoing, it's a short-term training trial? And then how are you gonna document it? And then who will provide the training and support to the student? Who's the responsible party? And again, thinking about and discussing, what about the training needs to be collected? What kind of data collection and data analysis are you going to have?

So in that example I gave about the early mobility, we wanted to be sure that we got some videos of the beginning of the week and the end of the week to show the involvement, and to demonstrate some of the skills that a child would need that are age-appropriate supervision, but that they stopped appropriately, that they yielded to others walking in their path, that they were able to find their way, that they could turn through the doorway without crashing, you know, age-appropriate. We don't let a kid go out in the parking lot on their own, we wouldn't expect... You know, age-appropriate supervision is the moral of that story. Okay, the next slide still is on trial, and so these are questions about staff and family training. What will various staff and family members need to know about these tools? And which adults in the child's environments will require training on the tools, especially if something's gonna be going home with the child and it needs to be transported, you gotta talk to the school bus driver about that. Who will provide the needed training for these people, and who should be called if technical assistance is needed? And then questions about the environment, are changes needed to ensure accessibility to the tools? You might need to move furniture around in the classroom so a child can maneuver through the room as needed. And is additional support needed? Do we need to get the IT tech involved? Does the supplier need to be there to help you with the programming, during the class time that the student will be with you?

And then questions about the data outcomes. What data will be collected, how often and by whom? And how will the data be evaluated, when and by whom? And so this prompts you to make that plan so you can implement it, which leads me to the next slide. So AT implementation is only as good as the plan that guides the implementation. For AT to be effectively integrated into a learning environment, and support the reduction of barriers to learning, the implementation should include tool purchase information. Who will order it, and who's going to pay for it? And this is where physical therapists in particular have to straddle two worlds, the medical model and the educational model. The primary device may be a medical device that can be covered by the medical plan, but there may be additional features that are on that that would have educational need, and could be supplemented through the educational system. So figuring all of that out ahead of time is important. Tool setup, training, and maintenance information. This is important, and we talked about the standing device. If multiple people are gonna use it, you might need to take pictures and put care plans together that show which holes the system needs to be set in for each child. And then maintenance information, charging of devices is a big one, and securing them so they don't walk away. Strategies to helping students to become increasingly independent in using the tools, and that includes operationally, and functionally, how can you work it into use in the classroom, right? So if you have a kid who's learning early power mobility, can you make it a game that the other kids are also part of it, like follow the leader, and they get a chance to be the leader, that kind of idea. Strategic and social competence are important things from an educational standpoint, so if you can, I think that physical therapists are challenged to have to think about medical necessity and educational necessity. And for the same device and for many of the same reasons, a child may need what you're recommending, but from a documentation standpoint, to be able to provide the device and the services, you need to be documenting to the needs of the pair, basically.

Methods to integrate the tool through the student's day, and methods for assessing effectiveness of your implementation plan. And this whole plan needs to be developed and carried out collaboratively with a timeline and with responsible team members identified for each item on the plan. Okay, the next slide is the reSETT. So reSETTing is not starting over, it's evolving one's practice by being reflective and responsive. So this whole process is an iterative process. It requires looking at your results, and so the critical elements are collaboration, we need to hear multiple perspectives, how's the kid doing in this setting, how are they doing at home?

And getting that shared knowledge, the pertinent information, communication, and having flexibility and patience is all important characteristics of the reSETT process. And this next slide here talks about, it's a picture of the process. And so the first part is the SETT. Then we trial the equipment, we implement it, and then we revisit and make changes as necessary. And we have to share our knowledge and communication along the way in order to get the best outcome. When and how often we do this should occur depends on the needs of the students. So there's important times in particular that we wanna focus on, and then there may be other ones that come up, but a couple are during transition times. So for instance, when a child's gonna move between grades, or they're gonna change schools, or they're gonna graduate from high school and move out into the community, up until they're 21, those transitions are really important. And then that goes back to the studies that we looked at earlier today. That transition time, between 18 and 21 is critical, because until they're 21, they are eligible for many services that they become ineligible for after they age out. And getting assistive technology, especially complex rehab technology, is a time-extensive endeavor. It can take six years to a year to get a new wheelchair, so it's not too early to start doing that, and doing a warm handoff, if providers are gonna change. So if you've been working with a kid with AT in one school and they're gonna move to the next, doing that warm handoff so that the next team can work on the reSETT, without having to entirely start over, is very helpful.

They can learn from your mistakes, and the results of your trials. And then another time when a reSETT is critical is whenever there's been a significant change in the student. Maybe they had surgery, maybe they've declined, their status has changed, or there's been a change in their learning environment, or the types of tasks that are expected of them in the school. Okay, so school PTs work with children with mobility impairments and developmental delays. We're often, as I just said, faced with the challenge of balancing between educational and medical necessity, so let's unpack that further and look at those concepts related to mobility and development and accessing the AT and AT services that are needed. Okay, so let's look closer at AT and mobility in the context of education. Each assistive technology device or system is a tool, and each activity or task must have the right tool, keeping in mind that inclusion and physical/cognitive development are educational goals. And I'm gonna say that again. Inclusion and physical/cognitive development are educational goals. And I think that that's the part that we can really plug into, to help the students that we're working with. Our challenge is to be mindful of these goals and to represent the students' needs in our plans of care. Pictured here are two adapted swings. The top one is with a positioning seat and supports, and the one below is a device used to accommodate a wheelchair. And some schools might have these available, but this is, again, something that could be made available at a school, a specific school, and used by multiple students at different times, and coordinated. And that is also part of the role of the physical therapist. Okay, so let's revisit the importance of on time mobility. So face it, kids are perpetual motion. They need to move to access objects and learn, you know, touch, feel, engage. They need to be independent in mobility as early as their peers. And this is an old study, which is a really important one. It's used in so many research, but it's old, and so oftentimes it's discounted, but it really hasn't changed. Normal walking occurs at 12 months of age.

So if the child is not walking, and can't self-direct their mobility and explore, they're going to be disadvantaged. Mobility allows for exploration of the environment, and there's a couple more studies. All of those are old but they're very important ones to reference. Personality development, so if you don't have mobility, it absolutely affects your personality development. Can the student get to places, can they get themselves into trouble a little bit? Do they have the ability to explore on their own where and when they want to? Can they keep up with their peers? And this is a big one, you know, we spend so much time trying to support a child moving in upright, but they have crutches, and it's very slow and laborious and then they get there and it's late and then they're tired and they have nothing more to give.

Maybe there's a way we can let them keep up with their peers and then they can get out of that device if they want to interact with their peers. So it also helps, on time mobility helps improve psychosocial well-being, increasing participation, and like I said, it preserves energy for meaningful activities, but it also mitigates learned helplessness, and I don't know how many of you've worked with kids who are dependent in their mobility. They have really learned how to make their world work, to have people come to them. Because that's the only way that they can get their needs met, and so that's a really big one. And I've seen big differences in adults who have had the ability to have self-directed mobility and autonomy, versus ones who have not, and are for the first time getting an experience well into their adulthood. Okay, so the landscape of early childhood services is a challenge for families, and a balancing act for clinicians. And so the reality, in today's health care system, is that funding is limited, and now more than ever, coordination of care is critical to ensure access to the necessary assistive technology and related services. And we talked a little bit about that earlier, but many times, well...

We do have codes in the medical CPT codes, that physical therapists can charge, to do our evaluations, to do our fittings, to do the molding of seating systems, and then to do training, and so all of that is covered, and it actually gets paid quite well, when we know how to appropriately use those CPT codes. In the school district, it's a little different, and I know you have huge caseloads of students that you're dealing with. So again, this is where that coordination is really important. States and communities use an array of strategies to support health, development, and well-being of children and families. Efforts are often disconnected, supported by multiple agencies, and with siloed funding sources.

And it's really hard to navigate and use services, even as an educated consumer, but it makes it really difficult to track the total available resources and really difficult to make informed decisions and leverage limited resources. So this is where we can help the families and the students that we work with. Today, more than ever, you're seeing at increase of shifting. So many Medicaid programs are providing payment to schools to provide services, and for that reason, you're seeing many more school therapists being responsible for making recommendations for equipment that will be purchased by the medical plan. And so in those instances, it's really necessary to put your different hats on when you're writing your documentation. 'Cause if you're writing it for the school, for the school to purchase it through their IEP, or you're writing it for medical necessity, so that it'll be purchased through the health plan, but the training might be provided through the school on the IEP plan, you have to be mindful of those different silos. Okay. So for 15 years, I was a second-level reviewer of medical claims, and in that role, I spoke to many therapists across the country, and one of my biggest realizations is that clinicians really had a hard time looking at the big picture plan for functional mobility. And so many of my conversations focused on discussing a clinician's professional opinion about a child's capacity and the potential for functional mobility. We discussed immediate and anticipated future needs, and fiscal responsibility, and this was a difficult concept for many.

So for example, it was not uncommon for me to see this trend in requests for equipment for a child with spastic quadriplegia as the child aged through the system. So we talked about the buckets earlier, birth to two and then three to 21. So at preschool age, you begin to see a request for a stroller, or a dependent mobility device come in. Sometimes at the same time, we begin to see a request for a gait trainer, standing frame, AFOs, also be requested. And then as the child entered the elementary school, the requests would begin, they'd say, "Well, I know that they just got that stroller, "but they're now in elementary school, "and that child needs to be able "to have self-directed mobility, "and we want a manual wheelchair," and often the rationale was, well, they need to be in a manual wheelchair to be transported on the school bus.

And then, shortly thereafter, I'd see a request come in that'd say, "Well, that same child now needs a power wheelchair." And sometimes it wasn't even a consideration. And so my conversations often were with the therapist that was asking for the manual wheelchair. I was asking, "In your professional opinion, "in your crystal ball, do you think that "that child is going to be able "to functionally self-propel their manual wheelchair "all the places that they need to go, "and keep up with their peers, or not?" And sometimes they'd say, "Well, no, "but the insurance company won't pay "for the power wheelchair," and I would say, "Well, I am representing the insurance company, "and I'm asking you that question." Or they would say, "Well, "the family doesn't have a way "to transport it," and I would say, "Well, "if the device is covered, in the plan I was with, "the lift would be covered," but no one ever asked for it. And so having those discussions early on with the family are critical, and I know I've been talking about that a lot. So what I found was power mobility was seldom considered or requested for early experiences, and I would often ask about that child's ability or potential. What was their expectation of how that child was gonna be able to use the device they were asking for? And would it work in all of the environments that they typically encounter, to accomplish the tasks that are expected and desired? And so if the answer was no, I asked if they had considered the higher-level device, such as the power wheelchair, and if not, why not? And so that was a very common theme. And looking back on it, I would say that many times, if you think about it as one pot of money to spend on this child, what's the most appropriate way to do that? If we take fiscal responsibility for our recommendations, does the child really need the stroller, the gait trainer, and the standing device?

Or maybe we wanna go for power, and maybe even a power standing device, or power and a standing device in the school or the classroom that they can use. Just some things to consider. And just wanted to do another plug, that it's our professional responsibility to use fiscal responsibility in our recommendations. Okay, so earlier, we primarily focused on the school-based mandates, and I've kind of talked about this as we've gone, but here I'm going to introduce the concept of blending and coordinating funding, and this requires skillful coordination between the family and the team, working with the child both inside and outside of the school. And this, again, goes back to the schools are billing Medicaid, in many cases, for the services that they're providing, and therefore, the documentation that you produce can serve both the need of the school and also the medical plan, especially regarding medical necessity for seating and wheel mobility. So let's look at the example of the creative coordination and funding of schools that can provide early power mobility experiences. And I'm not sure how many of you have heard of the GoBabyGo program. It's an awesome program where volunteers come into a community and help to adapt commercially available motorized cars with different seating systems and switches to allow early mobility experiences for children. And again, if you have access to some of those kinds of cars, and the switches, and some seating that can be switched out and modified easily, or simulated seating to support the child, you'll be able to allow multiple children to use that device in the classroom or in the school, as part of their IEP and their learning experience.

And if you can demonstrate that they're successful at that, and that they have the prerequisite skills needed for successful power mobility, you can use that evidence to support the purchase of the power wheelchair in the medical plan. And then, again, you can either have the power mobility training happen at the school or at the facility, and it might even transition. It might start at the seating clinic, and then transition into the school, where it'll be integrated into the classroom with other children, in their ability to go out on the playground and things like that. And the key here is that whatever documentation you create, whether it's in the medical record, the IEP, or from a vocational standpoint in the individual work plan, it will dictate the responsibility and the payer mandate.

So if you need the school to purchase something, you will need to make sure it is incorporated into the final IEP. So issues and considerations, we're gonna transition now to things to think about, and we already kind of talked about this so I won't dwell long here, but ambulation versus mobility, pathological gait, manual propulsion and energy, human development and independence, occupational performance, and psychosocial development. So pathological gait is not functional. It results in higher physiological outputs, oxygen uptake, heart rate, and there's plenty of evidence to support that frequently, it's very slow. That leaves the child behind, and as the child ages, that can even decrease further, and result in more exertion. And then as the child ages and grows and gains weight, it can contribute to long-term stress on the joints, and pain. So manual wheelchair propulsion. Marginal ambulators often are marginal self-propellers in a wheelchair, and remember that there's many different ways to propel a wheelchair. You can use both arms, you can use all four, your arms and your legs, you can hemi-propel, just one arm, one leg. So there are different ways to propel, but for many kids that have pathological gait, oftentimes it's due to spasticity, and that spasticity results in difficulty self-propelling a manual wheelchair. But self-propelling a properly-configured manual wheelchair requires less energy than walking, but is still more energy than is exerted, than is in their nondisabled peers, with just walking. And it also, too, can be stressful on the joints long-term and painful. You see a lot of upper-extremity repetitive strain injuries from lifelong, or long-term self-propulsion. So some early mobility questions, does use of the wheel mobility prevent walking? These are some of the controversial questions that you may have to talk to, and address, with the families and the children that you're working with.

There's no research that's substantiated that commonly held fear, that if you don't use it, you lose it, so that children's motor skills will not regress if they use a wheel mobility device. And research has shown that parents, how they feel about wheel mobility, they've reported, they may have resisted it to begin with, but after it's been implemented, they report increased child independence, personal control, child engagement in meaningful life experiences and a positive effect on others. And they've found that wheel mobility has overall increased confidence, motivation, happiness, and reduced frustration. And again, trying to make their world come to them, because they can't get there. So at what age should a child begin to use power mobility devices? Multiple studies have demonstrated children less than two years of age can learn to use power mobility devices. And early mobility experiences can aid development, even if a power mobility device is not pursued. I think this slide has the... Okay, so again, developmental planning. We wanna consider and assess for future milestones the child will be limited in achieving. And think ahead, because it's gonna take you a while to get your plan together and to get the equipment available for you to use. And ideally, determine the technology that will assist in achieving all or part of the milestone and initiate that ahead of time. And use the SETT Framework for your data collection and decision-making, because it helps guide you through the process, and will prompt you to document in a way that can easily be followed. Today we're not gonna have the time to go through this process entirely, but it's important to remember that ultimately, the decision about the device is not our choice, as the therapists. It's the family's choice and the student's choice.

Therefore, what we must do is educate as to the options that are available, and assist with the choice, the facts that they need to consider as they make their choice. Importantly, we must be intentional to not let funding bias our assessment process. Today, funding is shrinking and is a real stress on the system and on our ability to get people what they need, but we still have a responsibility to evaluate a student or a child for all of their needs. I know that I would want all of my options laid out there, even if it wasn't covered, and let the family make decisions. Sometimes they can purchase it themselves, sometimes they can have different fundraising events. There's all different options.

But do not let funding bias your assessment process. Evaluate that person for all of their needs and all the environments, and give them the option of what's most appropriate for them, and then have that discussion about, "Well, if we can't get that, here are other options." They might not do all of it, but they can do some of it. They might be able to be changed in the future, if you progress or want to add something later on. And so those are all things that are our role as clinicians. Remain focused on the child's immediate and future anticipated needs. Think big picture and think function. So let's go back to that example of a power wheelchair. You might get a power wheelchair and think, this kid's doing great, they're gonna be able to keep up with their peers, but they're getting ready to transition into high school, their world's gonna change when that happens. Maybe they're gonna need power seat elevation so they can raise up high and participate in science lab and do presentations in front of the class. We can't quite justify that yet, but let's make sure we get the wheelchair base, and the electronics that are needed, that in the future, if we wanna retrofit that with the power seat elevation, or the family wants to raise the funds to be able to add that on, that we buy the system that can accept it up front, because we anticipate that within the lifetime of that power wheelchair, these changes may occur. And so thinking in that way is being fiscally responsible. And then utilize thorough and defensible documentation geared to anticipated funding source. And again, as kids get older, 18 to 21, and in high school, vocational, pre-vocational training can come into it and there's funds that can be accessed through that, as well as independent living for assistive technology.

And consider and discuss coordination of care issues and solutions and be creative. I'm gonna kinda fly through these a little bit. This is the SETT process again, and obviously, as we do our clinical evals, we look at all of this, but for, again, students who, you're gonna be applying to a medical plan for the device that you're asking for, you need to do your thorough evaluation and expand beyond educational need. And so you're gonna be looking at the diagnoses associated with the conditions, secondary diagnoses like pressure injury, prognosis and potential for change. It's not uncommon, kids go through tendon releases, spinal fusions, J-tubes as they're gonna gain weight. All of that stuff factors into your decision-making process. If they're gonna gain weight, maybe you wanna wait. Or they're gonna have spinal surgery, maybe you wanna wait to order their seating system until after that, because they're gonna be changing. And then complications and contraindications. Medications are important, special needs, such as do they have a respirator, do they need a suction machine that's gonna be on their chair and transported with them, or oxygen? Other assistive technology equipment like speech-generating devices or switches, do they wear orthotics that they'll be seated in during the day? Again, the surgical history and plans. Their physical status, this is all standard, range-of-motion, strength, neurostatus, tone, reflexes, orthopedic scoliosis, fixed, whether it's flexible, how much support's needed and where. Sensation and skin integrity, this is really an important one. Once you have a pressure injury, you always have a pressure injury, even if it's closed, and so you are vulnerable to future problems. Cognitive and behavior, this is critical for a number of reasons. Can they follow directions? Are they gonna be safe in their device? Can they navigate, will they get lost? And then can they integrate sequence and retain information from session to session? Do they use judgment or are they gonna use their device as a weapon and run somebody over?

All of those are considerations in your evaluation. And perceptual and visual limitations, depth perception. Lots of our kids have diplopia or they have, what do you call it? Strabismus, I forget what it's called. One eye turns in, you know, where is their functional vision? There are people who may be visually impaired or functionally blind, but they actually have vision good enough that they can see dark and light, that they can actually operate a chair. So you have to look deeper at visual/perceptual, and that's where our OT partners can really help us when needed. And then endurance, the effectiveness of the current mobility system. Again, if that's walking, how long does it take for them to change classes? Is it the same as all the other kids?

Do they need a head start? Can they walk in a crowd? Can they tolerate standing, and for how long? All of those kinds of things. So we're gonna look at their functional skills. What can they currently do, and what are the desired skills that we're gonna be addressing in a mobility system? Maybe right now they're dependent in toilet transfers, but they want to be able to do that on their own, and what do we have to do to make that happen? And then educational needs, and again, I spelled those out a little bit more because these are things we are looking at, but from an educational standpoint, this is the slant you need to present them in to conform with the educational requirements. So educational needs would be good positioning, comfort, interaction with peers, their ability to have fun, play, and interact with their peers and their environment. Increased independence, explore, learn, touch, do, lead, even. Safety, make sure that no one falls or gets hurt or otherwise, and then how, in particular, how is that gonna be integrated into the educational program to complement the educational and functional goals? The environment, we have to consider accessibility at school, on the playground, but also at home. These devices can go home, and are appropriate to go home. If it's purchased by the school, if it's gonna advance their educational plan, it should be written into the IEP that it'll be used at the home and in the community. The types of terrain that they're gonna encounter, indoors and outdoors, carpet, tile, grass, gravel, hills, snow, ice, inclement weather, rain, all of that kind of thing is important.

That's down here in weather. Inclines in ramps that they're gonna encounter, and are they to spec, are they safe, are they ADA compliant? Do they need to be changed? Are there steps and curbs that need to be considered? Do the student need skills to be able to maneuver over steps and curbs, and can they learn the skills to do that? Those are excellent therapy goals. And then transportation, this is really important for school, obviously, school transportation, or paratransit. Therapists are often speaking to school bus drivers to help talk about how this child should be positioned in the bus, how the chair, should they be riding it as a passenger in the bus, or should they be riding in their wheelchair in the bus? And how should the wheelchair be secured? Clinicians are far better qualified to tell the school bus driver how to secure the chair safely than the bus driver, the untrained bus driver, who may not know where to put those hooks and straps, and may actually cause a problem. There's a whole rehab engineering research center on transportation, and there's standards and training materials available there. Those are entirely different topics, but there are a wealth of resources out there if you want to learn more about that. And the same thing for personal vehicle accessibility, there are many options for transporting, I'm gonna stick with wheelchairs and seating systems at the moment, but there are lots of options for this. And again, these early conversations about the developmental planning is really important, because there's been a number of times where, in my communications with clinicians, they'll say, "Well, the family just went out and bought a new vehicle, "and they can't transport the wheelchair in it." I'm like, "Well, why would the family do that? "Let's talk to them about, it's gonna be easier for you "as the child ages and gains weight, "to be able to load the chair into the van, "for instance, and then transfer the child to the van seat, "because it's safest to ride in the van seat." Or, if they're gonna have to ride as a passenger in the wheelchair in the van, we wanna make sure we have one that's been tested and is safe in the event of a crash, and that has the securement points on it.

This is something that's really an issue, because many of the medical plans will not cover the transport tie-down systems, but because of a free and appropriate public education requirement, the schools oftentimes are the ones that are paying for the transportation securement systems for the wheelchair that may have been purchased through the health plan. Okay, I want to make sure I leave time for questions, so I'm gonna move on. And I think we already talked about this, so I'm gonna skip it, but these are the kinds of tools for seating and wheel mobility. And we'll move on to documentation, and we talked about this, too, but the purpose of documentation is to present relevant information for the purpose of making a value judgment regarding the best intervention for the particular individual.

So my tip, as a prior reviewer, is consider what the reviewer or decision-maker is looking for, and try and anticipate his or her questions and address them in your documentation as you're moving through. And as a reviewer, these are the questions I was asked to consider when I read your documentation. Why is the AT device being requested? Is evidence of need based on the coverage policy? And again, coverage policy, what's required from the medical plan, the educational system, or the vocational system? Are they asking the right payer to get what you're asking for? What is the specific recommendation, in detail, make, model, what's the price and the coding? And rationale for why the recommendation is the most appropriate and cost-effective solution? I'm gonna underscore that. This is really where you can do a shortcut, if you can say to yourself, why is what I'm asking most appropriate? Why would the lower-level device not work for this child? That's really, ultimately, the question. And if you can explain that, you should have good luck. So defensible documentation is the next one. So consider your audience and document to the payer mandate, write clear and concise information pertinent to the individual, and humanize your story. Paint a clinical picture on paper. Bring that person alive so that they understand what that person needs to do and why this need is real. Include your objective physical findings, try not to write real sweeping, broad statements using technical lingo or dependent, you know, cookie-cutter language, like... I can't think of one. Unable to ambulate functional distances.

Well, what does that mean? Can't get to the bathroom, can't go the 50 feet from the kitchen to the bathroom or the classroom to the bathroom. And not dazzling with brilliance as far as flashing all kinds of research in front of the reviewer that has nothing to do with what you're asking about. Connect the dots and spell out your rationale, write legibly, avoid too many unfamiliar abbreviations. Pretend the person reading this, and in many cases, it's a nurse, or sometimes a doctor, write to your audience's needs and anticipate their questions.

Okay, you downloaded some references and resources, and I just wanna go over those quickly. You had the handouts, there's a document called the CE References that has seven contemporary publications on AT including a 2016 literature review on students with special education needs and assistive technologies. So I just wanted to draw your attention to that. And then there's a separate document that is called References & Resources. And this has those older but valuable references including the resources by Joy Zabala, the author and researcher that developed the SETT model. And on the bottom of that page is a list of resources that you can access to learn more about AT and seating and wheel mobility, and in fact, the Academy of Neurologic Physical Therapy actually has a special interest group that I helped found a couple years ago that's on AT and seating and wheel mobility, and so there's more resources there. Through the APTA, I helped create an APTA Mobility Device Clinical Documentation Guide, and so there's a link to that. There's also a Medicare Policies for Mobility Assistive Equipment that tells you how to get to the local coverage determination policies for the durable medical equipment. So these are policies you probably have not viewed, unless you do this a lot. You might be very familiar with what you need to document to justify your PT session and your treatment, but you may not be familiar with the documentation requirements for each of these devices, and there's four of them, manual wheelchairs, power mobility devices, wheelchair seating, and the other one is wheelchair options and accessories.

And so each of those has different documentation requirements, and that really is the decoder ring to helping you know what you need to be writing about. Also, a new chapter, 32 in the seventh edition of the textbook, Physical Rehabilitation and Seating and Wheel Mobility is out, and that will cover more about seating and wheel mobility provision and services, and then there's also a link to the Academy of Neurologic Physical Therapy Synapse Education Center. I was involved in a project where we created 10 modules on the Introduction to Seating and Wheel Mobility. At no cost, you can receive CEUs, and access those materials, and that was through the Nielsen Foundation support. There's also a link to the NCART Standing Device Funding Guide. NCART's the National Coalition for Assistive and Rehabilitation Technology, and they have a package of materials that can be accessed, again, for free, where you can learn more about justifying standing devices. And most importantly, there's a link to Joy Zabala's website materials that include the SETT Framework documents and the other resources that you can download and use immediately in your clinic. And finally, there's a resource for another book that I think just is really useful. It's the "Illustrated Guide for

Special Seating" by Jean Anne Zollars, for those of you involved with seating. And this is links to the National Assistive Technology in Education Network, and again, these are the three groups that have worked on the SETT program and on technology in the schools, and this Quality Indicators for AT is a really nice blog, and a listserv, I think, for networking and asking questions and getting help. Funding resources, I mentioned Centers for Independent Living, that's a good place if you need help making ramps and making some adaptations, maybe at home. The AT Financing Programs are a underutilized, very valuable resource. And so there is a link to all of them, and they have a list of the low-interest loan programs in 42 states, and they provide alternative funding resources for individuals who require AT. And when I was in Georgia, certain counties matched funds, so you could fund things, but they did it once, so you kind of had to put all of the things that you needed together at once and ask for one application that might pay for a ramp, a vehicle, lift, the copayment for the device, like the power wheelchair, and bathroom modifications, so you could put it all together. And so that's a federal program that is not well-known by clinicians, and a very good resource. Okay, I went long, but I'm ready for some questions, Calista.

- [Calista] All right, there was a few questions in queue, so we're gonna go ahead and start with those. The first one is asking, how do we bill for medical documentation if the student is not with us?

- [Laura] The student needs to be with you, and so this is where having these... Well, it depends, are you doing it for the school? Was the question about school, or who are you billing? You're billing the Medicaid program, I presume? I'm thinking that you wanna do your documentation in front of the student, if this is for medical billing. And what you wanna do then is, we bring a laptop in, and we have our templates on there, and we document as much as we can as we're collecting the information. And then maybe you have the student do some exercises or work with an assistant as you are finishing your documentation, and because you're with the student, you can bill for your time. Want me to go to the next one, Calista?

- [Calista] Yeah, let's see, I'm gonna go here. Is liability a consideration when sending a child home with school-purchased equipment such as a wheelchair or stander?

- [Laura] I'm not sure how to answer that question. School-purchased, so who's using it? These are my questions. So if it was purchased for the student, and they're the only one using it... I don't know how to answer that question, so I'm gonna pass on that. I'm sorry.

- Okay. All right, we have a question regarding I guess a quiz question, number seven. It says, an IEP meeting about AT may include which of the following, all the following responses appear to be a part of what would be included in an IEP, let's see, the question states, I'm gonna go ahead and read it to you. An IEP meeting about AT for a student may include which of the following, a discussion about specific tasks the child would be trying to accomplish, modification or customization of AT, training of a child, members of the family, staff, or how to use AT, and technical assistance about operations or use of AT?

- [Laura] Yes, should I tell you the proper answer?

- Yes, mm-hmm.

- The proper answer is A, and reason is, it's a discussion. B, C, and D are actual services. And so you would talk about all of those, B, C, and D, but you're not actually doing those things as part of the IEP. That make sense? Okay.

- Okay, next question, could a non-U.S.-citizen child or an uninsured child also get access to the financial resources?

- [Laura] Again, I don't know the answer to that question. Great question.

- Okay, that's a good question.

- You need to call them up, mm-hmm.

- Okay. All right, and there's a question about number nine, which reads, which of the following statements about the SETT Framework is true? A reads, it is possible to complete the SETT Framework, B, it takes a lot of time to use the SETT Framework, C, it is a decision-making sequence before tools are considered or selected, D, it is a school-based assistive technology assessment protocol.

- [Laura] Okay, so it is possible to complete the SETT Framework is incorrect, because we have the reSETT. It's an iterative process, and you're constantly going back to reevaluate. New technologies might come out, the student might change, the environments where they are might change. So that's why A is incorrect. B, it takes a lot of time to use the SETT Framework. We talked about that at the beginning. For a complex patient, it might take a long time and multiple visits to go through the full Framework, but for a simple thing it might just take a couple minutes. It is a decision-making sequence before tools are considered or selected, and that's the correct answer, 'cause this is all about decision-making and collaboration with the team. It is a school-based assistive technology assessment protocol, it was designed initially for schools, but it's used in other settings, including medical settings and vocational settings, so that's why D is incorrect.

- [Calista] Okay, the next question is a little bit long. So it states, knowing that with the inclusion model, we may have one or two physically-challenged students over multiple schools, and understanding that modification of play is done to assist in maximizing socialization, peer interaction at recess, et cetera, are there requirements for children to have access to adaptive swings, like the picture you showed, or similar equipment for all public schools, or have you seen adaptive swings written on an IEP under supplementary aids?

- [Laura] That would be, writing it into the IEP, if it's appropriate in the goal for that student, would be the appropriate place, but then as soon as it's written into the IEP, it would become the responsibility of the school to purchase it, and I think that's why I hear, I do not work in the school, but I hear that many therapists are faced with pressures to not put technology recommendations into the IEP, and are fearful for retaliation if they do. So again, if the family includes it in the IEP, and the team adds it to the IEP, it would be the responsibility of the school to buy it. And if there's multiple students at a school, it's quite possible that multiple students would benefit from it, so socialization and play is a important part of education, and so I would encourage you to start those conversations!

- [Calista] Very good, well that was our last question, Dr. Cohen. Thank you so much for presenting for us today, and preparing the content for us today.

- [Laura] Sure, here is my contact information, and if there are people who have questions, feel free to reach out to me. I thank you for the opportunity to be with you today.

- [Calista] Wonderful, well I'm gonna officially close out today's course, but thank you, everyone, for attending, and for attending throughout the week. Have a great day, everyone, and have a great weekend.