

## **Building Statewide Capacity to Serve Students with Traumatic Brain Injury**

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HEATHER CROWN: Good afternoon and welcome to our webcast, Building Capacity of Educators to Serve Students with Traumatic Brain Injury. I'm Heather Crown from the Traumatic Brain Injury Technical Assistance Center at the National Association of State Head Injury Administrators. Our purpose today is to raise awareness of state decision makers about the need for specialized training for educators in the area of traumatic brain injury and provide specific information about promising models of training and available resources. We would first like to thank Jane Martin Heppel, Director of the Federal TBI Program and the Maternal and Child Health Bureau for their support of this Web cast through their contract with the Technical Assistance Center and their contract with the Center for advanced and distance education also known as CADE for webcast services. We would also like to thank CADE the wonderful technical support people for their technical support. I'm joined by Dr. Roberta DePompei from the University of Akron, in Akron, Ohio. She has been a long time advocate for children and adolescents in TBI and is chair of the special interest group on pediatrics for the Brain Injury Association of America. Dr. Ann Glang, a researcher in childhood brain injury. Dr. Glang's interests include child injury prevention, teacher training and the development of effective strategies for helping teachers and families support children and adolescents with brain injury. And Dr. Janet Tyler. Dr. Tyler is director of the Kansas state Department of education's neurologic disabilities support project, a statewide program providing professional development, training, consultation and technical assistance to educators serving students

with TBI. Dr. Tyler has been active in the field of brain injury for the past 18 years. We have a few housekeeping details to go over. The slides will appear in the central window and should advance automatically. The slide changes are synchronized with the speaker's presentations. You don't need to advance the slides. You may need to adjust the timing of the slide changes to match the audio by using the slide delay control at the top of the messaging window. We encourage you to ask questions at any time during the presentation. Simply type in your question in the white message window or on the right of the interface, select question for speaker from the dropdown menu and hit send. Include your state or organization in the message so we know where you're participating from. The questions will be given to the speakers at the end of the broadcast. If we don't have the opportunity to respond to your questions during the broadcast, we'll email you following with an answer. Submit questions at any time. On the left of the interface is the video window. You can adjust the volume of the audio using the volume control slider which you can access by clicking on the loudspeaker icon. Those who selected accessibility features will see closed captioning underneath the video window. At the end of the broadcast the interface will close automatically and you'll have the opportunity to fill out an online evaluation. Please take a couple of minutes to do so. Your responses will help us to plan future broadcasts. We'll begin today with a discussion about under identification and myths about children with traumatic brain injury. We will then discuss the need for specialized training and the types of training that are effective. During this discussion we will hear from two states, Hawaii and Tennessee, via conference call about their experiences in serving students with TBI and conclude with a discussion of selected resources for states to access for training.

Dr. DePompei will get us started by introducing us to some children with traumatic brain injury.

ROBERTA DePOMPEI: We thought perhaps you would like to meet some of the most important people that we deal with, our kids. We would like you to meet Rhonda and Timmy and Mary and Cooper and Stella. They all look from their pictures to be fairly healthy children and indeed they are. However, they all have a very common story and that is that they've all sustained and survived a traumatic brain injury. They meet a lot of the CDC statistics about children with traumatic brain injury. They are one of the 30,000 children who have been injured annually severely enough to have been hospitalized for their injury in the age range of newborn through age 18. They've been injured in a car crash, in a car/pedestrian crash, assault, one had a concussion and a sports injury. One has a severe injury, two moderate and two mild injuries. Out of these five children, two are doing fairly well and are in school systems where their teachers have been trained, their family is feeling supported and the community is helping them to reintegrate to normal life. Three of these children have a somewhat different story. The fact when you speak with their teachers they say they don't know exactly what to do about their children because they haven't had anybody else with a traumatic brain injury in their classroom. The parents have feeling unsupported and the children are not integrated into the community and in one case there is a due process underway -- [inaudible] they are fairly typical of the stories -- while there may be a lot of different reasons for these children to not be doing well one of the things we do know is the training of the personnel around them does make a significant difference. We would like to thank TBI TAC for the opportunity to talk to you

today about some very important issues around these children and we really do hope there will be additional ones because we can't deal with all the pediatric issues we would like to in one web cast. We also realize that there are a number of problems that we could present to you today but we know the problems have been discussed for the last 15-20 years. So today what we're hoping to do is say to you that the future is now. And so we do have states and systems that have many years experience and are telling us what promising practices are - we even have states and systems now that are engaged in best practice and we hope soon some of those systems will recognize in order for us to be real clear through IDEA and others to support our children so some of these practices might have to become required-- I would like to spend a few minutes talking to you about some of the myths around children. First of all, we keep hearing that materials and techniques that are used for adults can simply be applied to the use and application of children and we know that that is not particularly true. Children are not little adults. Children have their own developmental issues, their own personalities, and behaviors and so specialized training and information is necessary in order to care well for our children.

Secondly we hear that TBI is an educational problem for kids only. But I have to ask you – if TBI is a medical condition in need of rehabilitation in the adult population, then why are we not concerned about medical issues and rehabilitation as well as education in the child population?

Also, we hear that treatment for children in the schools is free and we don't really need to be concerned about other funding streams and supports for kids. Again, I have to ask

you, I don't know about you, but every time I pay taxes to take care of my schools I believe I am helping to pay for the education and training of our special needs children and Medicaid and other federal agencies also provide services for our kids as well so we really have to recognize that no services for our children are really free.

Three more myths about children that we need to think about and the ones that we are going to address in more detail today, the first one says that this a really low incidence population so why in the world would we be worried about these kids, they just sort of, there's not enough of them to be concerned about so let's just fold them into other special education categories and not be too concerned.

The second myth is that they are going to grow out of it, don't worry about it the brain is very plastic and it is just going to recover on its own over time, we don't have to be concerned they will be fine.

And the third myth is that mild injuries and these are sometimes called concussions are not really a problem especially for educational community members.

Well let's go at these myths one at a time and see what we can find out about them. The first question really is if we have 30,000 kids injured annually and our hospitals are reporting that and our schools don't necessarily say that they are there then the question becomes, where in the world have all these children gone? Maybe Ann can help us with that.

ANN GLANG: If we have 30,000 children that are injured each year and that they have long lasting alterations in cognitive, communication, academic and physical domains we could estimate that over eight years' time as this graph indicates, over eight years between 1992 and 1999, 1992 being the first year after IDEA recognized TBI as an eligibility category we would have about 240,000 children who require support because of the challenges that they have because of traumatic brain injury. However, very few of these kids are being identified. The bottom line with the squares on your graph shows that over those eight years' time really the number of kids did not increase and that, in fact, by 1999 there were only about 15,000 total students on the Office of special education program census with traumatic brain injury. There are a lot of reasons why kids are not being picked up but that's not the point of today's presentation but to touch on a few Roberta will be talking about it in a few moments how kids tend to grow into their injury as they get older and as the context in school change.

Secondly, the injury is often forgotten. Kids maybe injured when they were younger goes back to school and does relatively well and then as they get a little bit older perhaps in middle school or so start to have a lot of problems. And then thirdly, there is really a lack of awareness, which we'll be talking about throughout today's broadcast. Really a lack of awareness among educators of this population. The key point is that if we have under identification as you see in the next slide, that this perpetuates – an apparent low incidence which also connects and is related to the lack of awareness and to the lack of

research and training dollars and in the end perpetuates a nasty cycle where kids aren't getting appropriate services.

ROBERTA DePOMPEI: Okay, what can our systems do about these numbers? There have been a number of task force at the federal level. I'll give you references in a few minutes. Who have met and made some recommendations and when we talk about the numbers regardless, of which group of individuals have met, the same recommendations tend to come forward. The first one is that we need to fund studies that will get us appropriate numbers. While some agencies and some systems and some states have said OK, we know how many leave the hospital and we know how many go into the schools, that's a one point in time measure. While that is a nice measure, it probably isn't the measure we need for children.

The studies for children probably have to be longitudinal and they have to take a look at the developments of these children over time and they have to look at outcomes for them in education, in family and in community. So when you're thinking about funding a study, it is good to get those definite numbers but we also have to count out a series of years from the injury to know actually what is really happening with these children. What could you do right now? There are two things that some states are doing right now. We're doing in Ohio in a study in Summit County. On the health forms that go home and every child takes a health form home every year and the parents tend to want to send those back, add a question or two about a concussion or blow to the head. Also, any time that you're doing any intakes for your kindergartners or special needs children, the same questions should

be on those questionnaires as well. Then if there are educational problems that emerge you have a red flag and an idea you might want to investigate the possibility of a traumatic brain injury with these kids. Let's go on a little bit and talk about some of these other myths about children.

The next myth is simply that they will grow out of it. If we look at the next slide, I would like to thank Dr. Sandy Chapman at the University of Texas in Dallas for her permission to let us use some of these slides today. This one is simply a slide that is a graphic that says this is a normal child growing up. So we have a child who is getting older across the bottom and along the top we see performance. We simply see normal development, normal learning going up as we would expect to see. But what happens if there is a traumatic brain injury?

In the next slide we have the idea that is always suggested that the child's brain is plastic and just going to get better but we have a puzzling paradox about pediatric brain injury recovery and that is that yes, the younger you are you have a previous base of knowledge and that seems to help you a little bit if you are young functionally. Recovery of old skills is better if you are young. But the paradox is that the prognosis for acquiring new information and new learning after the injury is worse. The younger you are. If you're injured when you're 10 you have perhaps a little better shot than you do if you're five or two so we have a lot of research and investigation to needs to tell us how to support these kids along the way.

The next slide is a graphic that shows us what happens to that normal development of the child when there is a brain injury. So we have someone normally developing. We have a notch here that says Oh, yes, there is where the brain injury is and we have a little bit of a period where they rely on old knowledge so they seem to be OK but yet as they grow older if you notice the slope of that graphic, it goes back down. Developmentally we see many of our children over time not able to keep up with their education. So we would say that children literally are growing into their injury. And there are several things that we need to be concerned about that, just to be clear and put it on one slide for you. Immediately after the injury, there is a previous knowledge base that when we test sometimes kids appear to do OK.

They are either one or two standard deviations below the norm and we go good, this child isn't going to be injured. As they get older they can't keep up with that and that affects the developmental milestones we expect to see in children and so we know that our 7th grader who should be able to do deductive and inductive reasoning who is injured in the second grade may not have a milestone happen and lots of times we aren't looking back in the child's medical history to say maybe the behavior we're seeing in the 7th grade has something to do with the 2nd grade injury. Thus the recommendation we follow our kids for their whole educational career. Finally, then, the child's brain does continue to develop and change over time. But sometimes that is not a positive change in development. So our children really have to recover at every age along the developmental scale that they are on. That leads us then to look at the next slide which says well, we probably need to seek answers at least two places or two stages after the injury. Yes, we need to be

concerned about the time right after the injury, but there is a whole scope of development afterwards in the second circle which says that we have to worry over a longer period of time.

And then we look at the next slide which simply says, if we intervene in multiple time frames the yellow line that's in there, the second yellow line says, if we put supports under our kids all the way along the line we won't see the downward slope but we hopefully will see a slope that manages to go along with the upward slide that all of our kids have as they develop over time. So we do know that our kids are not going to grow out of it. They may well grow into it.

The next myth that we have about children and the last one that I'm going to discuss this morning -- this afternoon quickly is that mild injuries which we often call concussions are not a real problem and certainly nothing we need to be concerned about in the educational system. But when is mild not mild? We know that 90% of individuals who sustain a concussion are OK after a month. That's why our athletes, professional, high school, college sit out for a week or so and then are allowed to play when symptoms are gone. But we also know that about 10% of our kids, after three months and six months and nine months, really are still symptomatic and that 10% is the ones we have to be worried about in our school systems. Mild is actually a term that is used in the acute care facility and it has to do with the neurophysiological injury. A mild injury to the brain, moderate injury to the brain and a severe injury to the brain. That 10% who continue to have problems after their symptoms should have gone away are really a problem and so they become more of

a severe injury over time. Not that the injury was severe but there is a severity having to do with their ability to learn and actually do well over time. So even some of our mild kids end up with severe learning problems.

On the next slide we talked about this for a long time but we -- there have been a number, over the past ten years, a number of meetings, federal agencies which have been brought together, the brain injury association, TBI TAC, the HRSA grantees came together. The TBI act of 1996 which funded the states and some systems to actually look at kids' problems. And we've seen these recommendations and talked about these issues for many, many times. The CDC and there are references here for two articles that they have that are available to you. Have come out with some issues and recommendations, as has an article by Ylvisaker and others in the journal of head and trauma rehabilitation. That reference will show up later in your references and resources. But in all of these meetings, we keep getting issues that are problems and recommendations. Let's talk for a little bit about what the number one issue always tends to be. That is the training of service providers. The recommendations almost always say something like this. We need to mandate training. Our teachers, our personnel, our school personnel as well as our rehab personnel and our community personnel need to know about these kids. We need to provide technical assistance so we know where to go for additional help.

Our universities, our pre-service universities now are required to have competencies for each class we teach so we have to have teacher therapist competencies around teachers and traumatic brain injury. We need to develop those and have them in the classroom. We

need consultants. We need to know who they are and how to find them to get help when we have questions. We need to know something about training methods. How should we train our teachers? Should we give them a book, watch a CD. Send them to a lecture. Go to a university class and is there a way that is better and maybe today we might find one that might be? Finally we also need to remember the aids, the people who are with our kids three and four and six hours a day need to be included in the training sessions. The people we entrust our children to on a minute by minute basis are oftentimes the ones with the least information in their hands so training of personnel becomes a major, major issue. Let's see if Ann has anything to tell us about that or Janet, I'm sorry, it's Janet.

JANET TYLER: We know traumatic brain injury significantly impacts a student's ability to learn in confusing and unpredictable ways. We have documentation that physical, cognitive and behavioral changes occur after a traumatic brain injury. We have cognitive changes which include problems with memory, attention, executive functioning which include problem solving, planning, organization. We also know these students definitely have more behavioral issues than other students and all these deficits, the pattern really varies because of pre-injury characteristics, severity of injury. Every student is not going to have the same type of characteristics. They'll vary. Whatever the deficits, those are certainly going to impact the student's educational achievement. We also know that traumatic brain injury has the biggest impact on the learning of new information. Even those students with mild injuries may have academic impairments as a result of this. Over and over again researchers and educators have documented that the learning and

behavior characteristics of students with TBI are very different from students with other disabilities.

It does not mean that some of the same strategies that we use for students with other disabilities wouldn't be effective for students with traumatic brain injury. However, the educators really need a firm understanding of what traumatic brain injury is, how it impacts a particular student's learning ability and be able to plug in those kinds of effective strategies. Probably one of the most frustrating things for the educators on a day-to-day basis is the variability in functioning of students with traumatic brain injury. We do know that students with traumatic brain injury, their performance can vary over week to week, day-to-day and even within a particular school day if fatigue becomes an issue they could look different in the afternoon than they did in the morning. If a behavioral issue came up that function will be different, too. It's constantly fluctuating. Given all these needs that students with TBI have, we do know that specialized programming will be required for these students and that educators will need to understand traumatic brain injury to be able to provide that kind of specialized programming that they require.

ANN GLANG: I want to stop at this point and take a minute to bring us back to what the presentation is about. Which is kids with brain injury and tell you about young boy named Trevor who was 8 years old when, in the care of a relative, he ran across a two-lane highway and was severely injured. He spent several months in the hospital, his family moved across the country. Now five years later he says I want people to know that I'm a nice kid who had some bad things happen to him. I'm the same boy inside I was before

the accident, I just can't talk or act the way I feel inside. A few years earlier his teacher, who was really struggling with how to serve him in her classroom said he's the only identify child with traumatic brain injury we have. We don't know what to do with him.

JANET TYLER: This is really representative of many educators. That they have very few educators actually have a good understanding and knowledge of traumatic brain injury. A 2001 survey of the state directors of special education showed that none of the states actually have a TBI certification program. Only ten states actually have pre-service education courses offered and only 8% of the graduate programs surveyed actually offer, again, training in special education classes in traumatic brain injury. Surveys of speech/language pathologists and school psychologists, those are two groups that generally are more knowledgeable and receive more training in the area of neurologic disabilities. Surveys of those individuals found they actually don't have a lot of hands-on practical training in the area of traumatic brain injury for assessment and things like that. So definitely limited knowledge of educators. Educators are certainly more knowledgeable than the general public on traumatic brain injury, but they still don't have some of the specifics on how it does impact the student's performance from day-to-day. A lot of times misconceptions arise from educators.

For example, educators often think that behavior following traumatic brain injury cannot be changed. That's a permanent thing that is a result of the child's brain injury. Well, misconceptions like that can be really a barrier to providing appropriate services for a student. If we don't think we can change behavior, then we aren't implementing the

effective behavior programs we should on those students. Also, the lack of feelings of competence for the feeling of educators. Special educators and general educators are being asked to serve more students with more severe needs with less resources. Now with traumatic brain injury they're looking at that population and they don't really feel like they're prepared.

The State of Oregon had done a needs assessment survey of educators and they found out that the educators had limited knowledge in the area of traumatic brain injury and also that they reported that they only felt somewhat prepared to even serve these students. And in 1999 the multi-agency task force that was brought together by the Brain Injury Association of America, they named teacher training -- this was parents, teachers, educators, all different kinds of agencies, they all named teacher education as the number one priority for traumatic brain injury. Who needs this kind of specialized training that we're talking about? We certainly know special education teachers need that. We also know regular education teachers need that kind of training because as we have more progressive inclusion, regular or general educators will be more responsible for these students. So certainly those are two groups. The simple answer is really pretty much anybody that comes in contact to the student.

In contact with the student. And so we know our students with traumatic brain injury often have a very large cadre of people that work with them. We have speech/language, all kinds of different therapists, social workers, counselors, school nurses are involved, paraeducators all the way down the line. All those folks do need to have an understanding

of traumatic brain injury. This even includes some of those personnel that will have some kind of contact with a student whether it be the cafeteria worker or the bus driver. If a student goes to the cafeteria and is having some processing problems and takes longer to respond and the cafeteria worker yells at the student because they don't respond quick enough in the line to what kind of food do you want, that may impair the student's whole day because they'll be frustrated that the cafeteria worker yelled at them and then the afternoon is shot. We need to have everyone have an understanding. Certainly the special educators do need to have a very in-depth understanding because they are going to be serving as consultants to the classroom teachers and some of the others. And also, being able to share that information with the parents. Because the parents, as they come out from the medical study, they have a lot of information on the medical aspect of traumatic brain injury but have really no contact with special education or how the long term impact of the brain injury is going to be for the student once they return to school. They need to be able to be able to share information and provide some knowledge to the parents along the road, too.

Now, what kind of training? Over the years, is state departments of education across the country have increasingly been offering lectures and workshops on traumatic brain injury. Now, these workshops in kind of one-shot deals would be good in the sense that they would provide a general awareness of traumatic brain injury and at least alert the educators that they need to seek additional information, they need to look for this in the child's history, they need to go through the resources. There is very little evidence that this changes actual classroom practice. So we need to look at training that is more practical in

terms of affecting day-to-day practices. Now, the federal No Child Left Behind Act defines the professional development looking at it as sustained, intensive classroom focus. We're not talking about the short term workshops. So that's one thing we need to keep in mind when we're talking about our traumatic brain injury. But also more specifically in the area of traumatic brain injury this comes from the Ylvisaker article that we did back in 2001 and in the reference on the slide. Roberta referred to earlier.

The professionals in this group who have done a lot of teacher training came up with more specific recommendations related to traumatic brain injury. We know that it has to relate in practical ways to everyday functioning in the classroom. Specific strategies educators can walk away with and use in their classroom. We know it has to be ongoing and start out but then every couple months or weeks have additional opportunities to increase their knowledge. We also know that it is very beneficial to have opportunities for coaching. So the educators are provided with workshop-type training. They walk away with homework assignments but then also when they're out there practicing in the field, that somebody is there to provide some kinds of coaching to say yes, this is an effective way you're doing it or to look at different kinds of ideas, too. It also needs to be broadly consistent with the school's climate. We know every school district has a little different climate. Sometimes it varies from building to building. So there is no one size fits all type of training.

So we have to be very cognizant of the fact that we need to look at what are the kinds of staff resources, what is the support in the building or the district, and mold that kind of

training to best meet their needs. Ultimately we know that the teacher training has to result in improvements in actual student performance.

HEATHER CROWN: Recognizing training as an important issue a number of years ago the federal TBI program invested a significant amount of resource into the TBI resource team model. This model is a multi-dimensional statewide approach to training educators. The federal TBI program funded Dr. Glang to write a report which describes the model, building capacity of educators to serve students with TBI, a regional team approach. The report was included among the handouts for the webcast. The program also funded Dr. Glang to work with Hawaii as they implemented this model. Dr. Glang will now describe the resource team model and address the resources needed to implement and maintain this model.

ANN GLANG: This model does try to incorporate the recommendations that were outlined in Mark Ylvisaker's article from a few years ago. And Janet and I are going to share our experiences from our two states, Kansas and Oregon, also Bess Tanabe from Hawaii and Jean Doster from Tennessee will be sharing with you their experiences using this same basic model in their states. As Heather just said this is a multi-dimensional model that tries to build capacity of a state to serve these students. It is one that has been -- is quite different from the traditional approach to staff development which Janet just mentioned that typically with a low incidents disability, apparent low incident disability a state would perhaps offer trainings or maybe have a coordinator at the state level who could answer questions and provide resources for school folks needing information and having

questions about serving these students. What this model does, however, is to really build a statewide system to increase the capacity of all educators within the state to serve kids. It is done by training teams of consultants who then provide support for local schools. The goal then is that any teacher within a state would have one place to go to get information about brain injuries, to access training, resources, consultation. The model is a blueprint and as Heather referenced, the document that you can download on this webcast gives you some specifics. I'm going to just touch on them and you can read further about them and obviously you can contact the TBI Technical Assistance Center for more information.

Team membership, starting there. This really varies according to regional needs in each state and it's slightly different. The structure of the state service delivery system is going to make a difference in how the team membership ends up occurring. In our two states, we have all members based in schools and really includes members from all the following disciplines on the next slide. Having a broad representation of disciplines has been very effective because, as Janet mentioned, these students have often very complex needs. They are served by a variety of professionals in the schools. So having, for example, a student who has some particular communication and language issues is very helpful for that speech/language pathologist who works with them on a daily basis to have someone who knows about brain injury on the team who they can contact. Also, we found in Oregon that is really helpful to have this broad representation. When our team members go out and do trainings, they can bring the perspectives of the different disciplines. For example, a few years back we had regional service system in our state ask for a training on brain injury, the basics about brain injury because they were noticing they had lots of kids with

brain injuries providing lots of problems for their staff. And we had a school nurse, a special education teacher, a speech/language pathologist and school psychologist provided training in addition to a family member who went along with them and shared her perspective supporting her child at home.

This presentation was maybe one of the best received I had ever seen. Because each of these people could speak from their direct experience working with children rather than somebody from a hospital, someone like myself from a university coming and talking to them. It made a lot more sense to them and it was really grounded in their reality, the constraints under which they operate in the school system. So in terms of numbers of team members, to give you an idea, in Oregon where the team member -- team model has been operating since 1993, we've trained 130 interdisciplinary team members. Some of them have retired, some of them have taken new jobs. We still have about 40 people who are active team members upon whom we call on a regular basis scattered throughout the state. So we really do have that one number, one phone number to call for a school district whether they be in the eastern part of the state, very rural area or in the Portland area, very metropolitan area where they can just call and say I need some help with this student. There is one of those 40 people within, you know, a few hours drive at least who could come and provide support. In Kansas, I don't know if you want to speak about that.

JANET TYLER: Currently in the State of Kansas ours is a little different. Oregon along with some other states kind of have neat representation of regional areas and so you have nine regional areas. We don't have anything quite that concise in Kansas so we have

many team members in districts and sometimes service centers and sometimes in co-ops but we have currently 291 functioning TBI mini team members. We've been doing the training for TBI mini-team members since 1990 and we have trained many more TBI mini team members but like Ann said, some have retired, some have left the state. So these we constantly are doing updates or new training to train replacement mini-team members, we call them. But we currently have 291 at last count of our TBI mini team members.

ROBERTA DePOMPEI: In Ohio while we aren't on the list because we don't have a Department of Education supported program in our state, we did have some money from our HRSA grant and did one county, Summit County where I live. We have 32 individuals who are trained throughout the county and service a couple other counties surrounding ours as well. And funding always becomes an issue. One of the things that we were worried about, what happens to the team when the money goes away? We have had a different solution in that area. Our Akron Children's Hospital has actually taken over the education team and provided a home and some additional support for our team. We are just a baby state getting started and have a little different twist on what we're doing as well.

ANN GLANG: So in terms of expectations for team members it's a two-part training process. There is an intensive training period first. Every state has done it differently. In Arizona where we've been involved most recently and Oregon it is a 12 to 18 month period that team members attended 8 to 10 full days of training and that happens as a phase one. Phase two, which is really in some respects more important, is once our team

members are trained they provide consultation and training to others, while at the same time being mentored by experienced team members and consultants at the state level. So the next slide shows the current training content. It is broad based and quite focused on strategies. And then as -- after folks have had that training in all of these different areas, they are, as I said, provided with technical assistance. If we can go to the next slide, that is really essential that because of the variability in functioning of these students, because they change over time, that day-to-day, week to week, you just really can't develop a cohesive plan at one point in time and have it work for a long time.

It is very, very important that ongoing tracking happens and technical assistance happens with the person working in the school, working with the student as well as the team member providing consultation. Things will come up in that child's education program that are difficult to deal with and people need to put their heads together. The ongoing technical assistance is really critical. Just want to go back a moment to how I believe this model really incorporates best practices in staff development. In terms of training our team members, it really is practical, specific. It incorporates assignments. Lots of feedback. It is not a one-shot deal. It's really a commitment to building the capacity of these consultants to become TBI experts.

Secondly in the consultation that our team members provide to school districts it is also on-site, collaborative, ongoing and intensive. Our team members go in, gather the information, sit in the classroom with the student and staff who are working with that student and go back and problem solve. This is especially important with the variability

that we see because you might go in one day and see one thing and you really need to come back another day and go to another context to see other manifestations of the problems. So I want to talk now about the impact. You might all be wondering what difference does this make?

Going to provide you with some information about two different states, Arizona and Kansas and just briefly want to say something about Arizona. Arizona has been working for the past four years, after having had HRSA funding with Chrystal Snyder through the spinal cord -- correct me on the name of that. The Arizona council on spinal cord and brain injury. Sorry forgetting that wrong. They had done excellent ground work for their MCH projects working with children in the healthcare system and really connected with their state Department of education, Steve and now Joann Phillips and realized they needed to work in the school system more and that kids were falling through the cracks there in terms of identification and in terms of their teachers' awareness of the issues. Have worked for the past four years implementing this model. You see here in the southern part of the state, which is the data it reflects only the southern area of the state, last year, 2004, 2005 our team members there provided 90 trainings to over 2,000 educators and family members.

In Kansas, where Janet's team has been operating since 1990, 52 trainings were offered for over 1,000 participants. So we're giving these two states' data because they collected data in similar ways and, other states do it differently. The point here is in terms of the

numbers of students being served by these consultants, the number of educators being touched by the trainings, it's really significant. The next slide refers to--

JANET TYLER: I wanted to put in my asterisk there that I forgot to put in about the numbers of students served in Kansas. We were talking about the way that Arizona is currently a new state doing this. They have lots of grant money right now to do lots of formal plans for the mini team members and they have a very accurate counts of the number of students they're serving and the number of trainings they're doing. In Kansas we've been doing this for quite a while and with funds the way they are, our data collection right now is emailing at the end of the school year and asking them to provide documentation on the number of students that they served and the number of trainings. So I would have to say that those numbers on the last two slides are pretty significantly underreported of what our mini team members are actually doing. I think some of our mini team members have been around for quite a while are actually in such a routine of naturally providing these services that they don't sometimes think about reporting them. So this is maybe probably about half of our traumatic brain injury mini team members reporting what they're providing. And so this is probably an underreporting of actual services provided.

ROBERTA DePOMPEI: I think that's a good thing. If we really are talking about taking research and making it best practice and a required practice, if you do this over time it does become a standard of care in your state and it is not something that is so unique or

different that you have to keep statistics on it any longer because it is just what you're all doing. That's a good thing.

ANN GLANG: So I want to share some more information about Arizona where we're so proud of the work that Valerie Luks, the TBI coordinator there, as well as the state department have done and their team members, obviously. This next graph is a representation of the number of students who are on our team members' caseloads and who are not on their caseloads. We see that many, many students are being served who are not on our team members' caseloads. Those are kids who ordinarily would not have been seen. These are kids who have been seen because our team members are stepping out of their district. Have the permission of their supervisor to do so, and are going out and providing training and consultation. In terms of the types of support provided, that's the next slide. We see that most of the work our team members do involves onsite consultation or phone consultation, they also provide resources and sometimes get involved with assisting with direct services but that is pretty infrequent. The frequency of consultation activities, we have said several times about the need for ongoing and intensive follow-up with these students and with our consultation activities. I think this graph reflects that that is, in fact, what is happening in Arizona. That the average number of consultation visits is about five. That a student gets observed, the team gets met with and there is follow-up. And you can read the graph there to see the breakdown of that.

Talk briefly about the nuts and bolts needed to start up a model like this in your state. Clearly you need funding and we've been lucky in Oregon, Kansas also had this. Arizona

had this and some of the other states have had this as well. Federal funding through the Office of Special Education Programs or Maternal and Child Health Bureau HRSA funding to make it operational. We need Department of education support. I just want to point out how excellent it is that the states that we're speaking about here, the Department of Education has stepped up from both a fiscal and leadership position to create this model in their states. In Oregon that has been Steve Johnson and now Jake Genz and Nancy Latini who stepped up and said we want the kids on our radar screen. They're falling through the cracks. That's really critical. You need a resource team coordinator, the role Janet and I play in our states. You need someone in charge of organizing activities. Obviously need a training budget and then funds to support release time for team members who need that to attend training or provide consultations. In terms of maintaining the models, we have felt that it's very important to have ongoing evaluation of team activities to be able to show the difference we're making. Continued Department of education support and coordination at the state level and then having our team members get together regularly has been really critical to keeping their enthusiasm up and their commitment up. Janet will talk a little bit about advantages and challenges.

JANET TYLER: Briefly some of the advantages that we see with this team model, this is when you have local capacity, then those experts are easily accessed by local educators. It isn't someone sitting from the state Department of Education having to run from Topeka to western Kansas which is a seven or eight hour drives. They have persons in their districts that know the system in the district to provide that support. It helps to build the local capacity. Those educators in the district are training educators in their district. They

also -- the professional development this is providing to the educators, while it's specifically on traumatic brain injury, you certainly do know it is best practice information on educational strategies, on programming. Not only is it good for students with traumatic brain injury but it also goes across all the disability groups when we're looking at identifying student needs and matching them with particular strategies, that is what we should be doing for all students with traumatic brain injury and it raises the awareness of traumatic brain injury. So it is getting educators to look at that student that had a concussion in the football game over the weekend, making sure that they are monitoring him so when he comes back to school on Monday we look at see if there are any kinds of educational problems. If we need to put any temporary modifications in place and it also looks at making sure that people are aware of the student's history when they enter the school system. Is there a history of traumatic brain injury in the past?

There are also challenges with every model. The workload of the team members. We do know that, you know, teachers and school psychologists and therapists are asked to do so much, see so many more kids these days. That is always an issue trying to make sure that they have the time to provide the services. Also, there are some variabilities in the school climate. We need to look at providing something that will be best for that particular school because sometimes some schools don't have as much support as other schools. We know administrative support in all of this is very important. Another challenge we face is that sometimes, especially in the rural area, that we have many team members that may have to travel pretty good distances to provide the services. Some of that can be helped with distance education kind of things. Conferencing. But those are all still

challenges, too. And also states face fluctuations in training dollars from year to year. Sometimes the state may start up and have some good support and then the next year be cut in funding so the activities can't continue at perhaps the level that they would like them to continue.

HEATHER CROWN: As we mentioned, two states have implemented this model, Tennessee and Hawaii are on the line. First we'll hear from Bess in Hawaii.

BETH: Some of the lessons learned and challenges for the Hawaii TBI team are, number one, getting to administration on board regarding traumatic brain injury and Dr. Savage and Dr. DePompei came to Hawaii and did a great job in getting our administration on board. Number two, Dr. Ann Glang helped plant the seeds for the TBI consulting team. Number three, starting up the team. The forms and structures of the TBI model were provided by Dr. Ann Glang. Because our team members come from a wide variety of geographical areas and disciplines, we did a lot of team building activities to build relationships and to develop the team. Regular meeting time and places were established and there was ongoing consultation and support by Dr. Ann Glang. Four, training. Training topics needed to be developed. We used local resources and we tried to include our team members and their expertise to facilitate these trainings. We provided a TBI overview manual to our team members so that the information going out would be a consistent form of information and we also developed a website.

Number five. The sustainability of the team. People are constantly leaving and joining our team, which also means that we have varying levels of knowledge for our team. Teleconferencing is currently being explored to address some of the distance issues that we have here in Hawaii. Keeping motivation up is an important area. We find that the relationship between the team members are important as well as making sure that the trainings are of value to our team members. We have also given them books and other resources. We try to recognize our team members as resources within their district by using newsletters and recognizing team members at conferences and meetings. To keep in touch we use email, phone, we are looking at trying to do a web-based system and it is important as far as the ongoing development of our professional, the team for that professionalism we're trying to see if we can get ABIS certification. That's some of the lessons we've learned and challenges we've had in Hawaii.

HEATHER CROWN: Great. Thanks. Next Jean in Tennessee.

JEAN: First, hello to everyone. I want to thank you for inviting Tennessee to participate and to thank Ann Glang for all the support she's provided us over the years. I feel we have had a lot of accomplishments but plenty of challenges. I think you'll hear some are similar to the ones you all have faced. I talked with my project trainer today, Jennifer Jones and we identified number of challenges. I've listed them in the general category of teachers, supports and money. In the category of teachers, teachers don't have a basic understanding of brain injury, either the nature of the injury or how it manifests differently in each individual and they don't always get it in a two-hour training. There is often

someone in the group with a strong desire to learning more and apply what they learn in the daily experiences. For many they are still confused and overwhelmed you can see they're praying they won't get a kid with a TBI in the classroom. The other part of the challenge is training the teachers make that step from knowing about a resource to actively accessing the resource.

The brain trainer will introduce a teacher to a team member from their system but the teacher won't ask for assistance or consultation. Teachers have already so much on their plates and they may feel overwhelm. The task of learning how to teach a child with having a brain injury. Teachers need to understand there is no quick fix. In trainings you can really sense the urgency about getting to the part about strategies. It can be hard for teachers to hear that strategies need to be developed and may take time to implement successfully. In the category of support for a student to be successful they need ongoing support from educators upon returning to school and the teachers need ongoing support particularly in teachers in systems where there isn't a brain resource team. In addition to the education aspects, there needs to be more of a focus on the social reentry for these students. Typically the approach is gentle will for the first couple of weeks and months and then is dropped. Socialization upon return to school is just as important sometimes as the educational expectation for the student to reintegrate and have a positive experience. Ongoing communication between the student's family and the school are imperative to maintain the student's improvement. Money is needed for additional supports such as more training for teachers, to pay for classroom aides. Neuro-psych evaluations should be available but usually in a tug-of-war between payers. We feel fortunate we have had the

opportunity to develop an outstanding training program, have such strong support from the Department of education. Despite the challenges I've listed the training has greatly increased the awareness of brain injury and that means there are people there to help teachers and students along the way. I appreciate your interest.

ANN GLANG: That really segues nicely into the next slide. How providing training in traumatic brain injury really can break the cycle that I introduced a little while back at the beginning. That once training is provided, especially we've seen this in southern Arizona where our team members have been working so hard, we start to see identification rates increase and more accurate incidence rates being reflected. Also the increased awareness. As a result. We're all connected with this is funding, as you mentioned. We've seen in the State of Arizona all of these pieces start to fall into place and then the funding in the form of long-term commitment to having a TBI coordinator, that is Valerie in Arizona. Her position will be sustained by the department. This wasn't the fact four years ago when we began. So really feel like this model has the potential to impact this cycle and to start making some changes for kids in all the states where it is being implemented.

ROBERTA DePOMPEI: As Ann mentioned, those -- her whole -- the whole summary of how to go about this is available on PDF form on this website. The other thing she made very clear is that every state will be different and that's what you've been hearing from all these individuals so far. So taking that model and applying the pieces and parts of it, as best you can in your state, is what we hope will happen from this webcast today. I don't think every state would ever consider replicating it exactly the same way but whatever

pieces and parts you can take and use would be a good -- make Ann and Janet very happy at this point in time and hopefully that's what happens.

The next issue that we're going to spend a few minutes with because we want to get to your questions, is remember issue one was we need to train people. Well, then issue two, when the task forces get together and you read the articles and the reports that have come out over the past five years, another issue that always comes up is we need to get the information out. And so some recommendations that have come there are use the websites. So in just a few minutes we'll list for you a bunch of websites where we think there is good information that you might be able to use to help with your teacher training, to access additional information. Another one is place credit bearing courses on the Internet. I think you're seeing more and more universities and continuing education facilities who are actually providing C.E.U.s and college credit courses online and so that's really helping with this issue, especially in rural areas. One that is very critical. Search out materials that already exist. For about ten years now, the HRSA funds have gone to states and many states have developed wonderful materials, training materials about pediatric traumatic brain injury.

So we're actually at the point of recommending that you not fund anybody who comes to you and says gee, we want some money to do a tip card or a brochure or a manual, until you have already checked out what already exists today. Certainly we recommend that those of you who know about kids and traumatic brain injury get out and talk about these issues at other conferences, public health nurses, school nurses, school psychologists,

etc. So we get the word out. Finally, we're all being made more and more accountable. It is not enough to count how many hits are on your website but we're now being asked to say well, how was it utilized? If I came to your website and I got some information, did I find it helpful and did I use it? That consumer feedback is becoming more and more important in our research and actually in just best practice so we actually know what is really working and what isn't working with our kids.

The first resource that I'm going to mention to you, which is the one that is downloadable on the next screen came from one of the HRSA grants to the Ohio protection and advocacy, Ohio legal rights where they did a manual which will show up later under resources but there is also a state by state guide of resources for educators that we all put together. And we'll tell you that every state did not respond when we asked for information. So of course only the states who responded have information. In that resource guide you can find a person in a state and how to contact them. That's the TBI consultant we were talking about and you can also find manuals, CD's, videotapes that are available and the resources in how to get them.

What will follow now are some additional materials that have been put together by us just simply asking experts to tell us if you had to do a training, what would you use? It is not an all inclusive list. If you have materials in your state that we have -- that we don't have, TBI TAC would like to hear from you so we can include it in the resource list. Let me just quickly tell you that I'm going to -- what is coming up next does not have addresses and access, where to find this information. That is in the PDF file that you should be able to

download from this telecast. We do have some brochures. The road to rehabilitation series is from the brain injury association. The other ones available right now was a brain injury association of America's publications, it is out of print. Slash & Associates does have a few copies left and they would be willing to send you those for free.

The other slides that are coming up are simply some CD's, many of them available through the HRSA grantees and the HRSA funding. Available through TBI/TAC. The next slide shows you some manuals. Some are downloadable as well. The slide after that, there are many on this one as well, Thriving Beyond Injury, resource and planning guide, just a lot of manuals that we feel would be very helpful to you. There are some textbooks. We listed some textbooks that we thought might be helpful to you and I've actually been able to see a couple of the questions that have come in and I'll answer one of them right now. Someone asked where could we find a list of pre-service teacher competencies or where is there a list if I was going to train a group of teachers, where would that be? A colleague of mine, Jean Blosser, and I have a textbook out. In that textbook, which is on the screen now, pediatric -- that's not it. The one in the appendix, there is a full listing of teacher competencies. That would be one place. There is also an article in the Journal of head trauma rehabilitation that addresses it as well. There are some additional tip cards, some references for how to get a hold of some of the tip cards. There are video CASSETTE, and finally a listing of web-sites that we feel has information that is beneficial to you so at least that is a start, materials that we think would be good for you to adapt and use should you want to do some of your teacher training.

HEATHER CROWN: Great, thank you. That concludes the discussion portion. Now we'll take some questions. We have a few on here. The first question, anyone who wants to answer, jump in. What types of strategies can be used in the general education classroom that can help someone who could have a TBI but has not been identified?

JANET TYLER: I think we really need to look at the particular student's needs and then look at what strategies, what is the best practice in traumatic brain injury? Unfortunately there is not a lot of empirical research that says this strategy is good for students with traumatic brain injury. We need to look at what are the student's needs and pair those with effective teaching practices. To give a list would be difficult without knowing what the student's particular needs are.

ROBERTA DePOMPEI: On that resource list that we just looked through rather rapidly there are manuals that have teaching strategies that would be good regardless of whether it would be a special education classroom or a regular education classroom. One that comes to mind is the brain stars reference that's on there. It was done by the Colorado group headed by Jean Dise Lewis. So within those references that we just gave you are many, many teaching strategies that would be very helpful and actually would make a really good basis for a second webcast.

HEATHER CROWN: A few people have asked questions involving V.R. counselors and if they should be involved during this process. With the schools.

ROBERTA DePOMPEI: I will speak from my experience in Ohio. And actually as I've gone across the nation I've also had that experience in other states as well. I would have to say that V.R. counselors are extremely valuable. We did a small study in Ohio where we looked at high school students and paired them with VR counselors, students with brain injury to help them get in the workforce and it was an excellent result and experiences. Certainly I'm sure that -- I can speak for myself but I'm sure they would say that V.R. counselors on the team would be an excellent addition and speak to the other side of that. I've been in locations where V.R. counselors have been asked to attend these types of trainings and to be on these types of teams and the answer has been we are too busy, we're not really interested in the 14 to 16-year-olds because they change their minds too quickly. Our caseloads are too large. Get a hold of us when they're 18. So the pressure on some of the systems don't allow people to do what the optimum is but certainly voc rehab is an excellent addition to the team.

ANN GLANG: We've had nice experiences where we've partnered with VR to offer training in best practices in transition services. We have not had voc rehab counselors be part of the team for the reasons Roberta just mentioned but we've involved them in community-based trainings.

HEATHER CROWN: Here is a question. This one is from Jen in Alaska. TBI services coordinator. How do you address the reluctance of educational staff/psychologists to label a child as SED especially when there are no behavioral staff in schools and applicable services may not be seen as available?

ANN GLANG: S.E.D. question or TBI question?

ROBERTA DePOMPEI: Well, maybe we could talk about it from the overall reluctance to label a child with traumatic brain injury. Sometimes in my experience I've heard it said that well, the medical personnel aren't helping because they're reluctant, especially in the case of a mild brain injury to label a child. The answer to that always is, if you want to get special services and supports in the schools, we have to have some information upon which to base our diagnosis and our team interactive assessment team meetings. I personally would hope that nobody would be reluctant either from the medical side or the school side. I do think that parents have the right to advocate for their child. When you can demonstrate behavioral characteristics that Janet talked a little bit about, it seems that this does justify at least following the child through a 504 or some other way. And I think you deal with it by continuing to advocate strongly for your child and for the belief that there are learning challenges to this child. How do you advocate for a child that we said follow them for ten years and we aren't exactly seeing they're having a problem yet? We simply say it needs to be done for the health and education of my child.

HEATHER CROWN: Another question, how are states handling serving students with temporary complications from a TBI? These students are not eligible for an IEP.

JANET TYLER: Sometimes it would be through a 504 plan. Other times schools are very good at providing the accommodations when the student is coming back and they can

show they're monitored and having in place. But that is -- those are the schools that are knowledgeable about traumatic brain injury. That has to be present first so they have to have a system in place, when we have a student coming back with a mild injury or concussion, how do we coordinate that? Does the school nurse, somebody in charge needs to be responsible for doing that. Alerting teachers and making sure teachers are looking for difficulties, providing some temporary accommodations.

HEATHER CROWN: What is the 504?

JANET TYLER: Section 504 of the rehab act and those are through general education dollars and it would list specific accommodations the student would need to participate.

ROBERTA DePOMPEI: I'm also reminded of an article. I can't pull it out exactly. It was published in the journal of head trauma rehabilitation in the late 1990's. Two of the authors were Ylvisaker and Flinney and it was about mild or temporary brain injury. And it is recommendations for school nurses and regular education professionals and how to follow them through and figure out whether the red flag and what should be done to provide information to the school. I'm not sure that's on our reference list but we can get it to TBI/TAC and they'll put it online.

JANET TYLER: It's called school reentry after mild traumatic brain injury and there is an article after severe and I believe it's 1995.

HEATHER CROWN:: Another question, when first introduced to your team as a resource or raising awareness for your team, what do you see as being helpful or most effective?

ANN GLANG: I would say that really varies according to the audience. But in general, I have used the presentation I did today to speak with state departments of education and district folks. So, for example, when I worked with Bess in Hawaii I pretty much showed the same presentation. I think for state folks and school folks who aren't aware of brain injury, because many of the decision makers don't have an understanding of brain injury. If they don't, they also need a little bit of information so some of these resources that we've put on the list for you, particularly some of the short videotapes, I would really recommend because they're very brief and really get to the point quickly with the complexity of needs and why these kids need a little bit of a different approach.

HEATHER CROWN: This is Jennifer from Alaska again. How do you deal from a lack of neuropsychological assessments that may be available for specific guidance? In AK we have only a few neuropsychologists who have long wait lists and often do not take medicaid.

ROBERTA DePOMPEI: I will answer this in a couple of different ways. First of all, I truly value neuropsychologists and what they provide to the educational team. When they know traumatic brain injury and when they know pediatric issues. So in some instances we have had neuropsychologists who primarily work with adults who have given us evaluations that haven't been as valuable as some of the functional assessments that we've gotten from

the school psychologist, the family members and the teachers. And so I guess I would say that testing is extremely valuable when you have that person. When you don't have that person, there are other team members who can give you information that will help educators to move forward. And so if you don't have them, then look in other ways to get them. When you have them, be blessed because they surely help the process along.

JANET TYLER: I'll second that.

ANN GLANG: I would add I think a neuropsychological assessment is one piece of information that's helpful in program development but it is only one piece. There are other ways to get some of that information. The other suggestion I would have when Roberta mentioned understanding children and neuropsychology and understanding school. It is very different to make recommendations for a student who is in a hospital setting or a community-based setting versus in a school setting given the constraints under which schools operates.

JANET TYLER: Certainly in Kansas we don't have a plethora of neuropsychologists so many of our students don't have that kind of testing. So we need to look at multiple other data sources for those students and a lot of it is informal types of testing to know where the student is at.

HEATHER CROWN: Those are all the questions that we have received for right now. I guess we can just conclude by thanking the federal program once again, thanking our

panel. Thanking everyone here at CADE and everyone who is watching. Jean and Beth as well. Thanks a lot.