Technical Assistance Brief
Assistive Technology in Early Intervention

This technical assistance brief gives an overview of the use of Assistive Technology (AT) devices and services for infants and toddlers receiving early intervention services in Colorado. It provides information on:

- The legal definition of AT devices and services
- Examples of AT devices
- Legal rights and responsibilities regarding AT
- Determining the need for AT services
- Delivery of AT services
- Funding AT devices and services
- Documenting AT on the IFSP
- Resources related to AT

This brief was developed by Assistive Technology Partners' Tech for Tykes Program, University of Colorado Denver, School of Medicine, Anschutz Campus, in collaboration with Early Intervention Colorado. Early Intervention Colorado contracts with Assistive Technology Partners to provide a statewide Early Intervention Assistive Technology Technical Assistance and Training infrastructure for the state.

What are AT devices and services?

AT Services are defined in the Early Intervention Colorado State Plan as, "Services that directly assist an infant or toddler with a disability or the family, other caregivers or other service providers in the selection, acquisition or use of assistive technology." AT Devices are defined as, "Items or pieces of equipment that are used to increase, maintain or improve the functional capabilities of an infant or toddler with a disability in his or her usual environment".

AT services include:

1. The functional evaluation of the needs of an infant or toddler with a developmental delay or disability, in his or her usual environment.
2. The selection, acquisition, modification or customization and maintenance of assistive technology.
3. Training or technical assistance for an infant or toddler with a developmental delay or disability, the family, other caregivers or other service providers on the use of assistive technology determined to be appropriate.
4. Collaboration with the family and other early intervention service providers identified on an infant or toddler's Individualized Family Service Plan (IFSP).

AT for young children includes a broad range of devices and services which assist children in interacting within their natural environment. It includes adaptations made in the environment in order to support the ability to participate actively in the home, childcare program, or other community settings. This includes participation in the daily routines of the family. For example, AT services and devices can assist a child and their family by increasing a child's ability to play successfully with toys or communicate their needs and ideas, make choices, or move independently.

AT devices range from simple modifications and accommodations such as adapted spoons, simple toys operated by a button, and picture communication systems to more sophisticated solutions such as computers and power wheelchairs. An AT device can be thought of as any tool that helps children (even babies) participate in their world. AT can offer opportunities for young children to learn, interact, play and communicate.

There are literally hundreds of devices with numerous different features available. For young children, age birth through two , the IFSP team often starts with an AT device that is available in the everyday setting, also referred to as "no tech", or one that is a low tech AT device. No tech, low tech, and high tech are terms often used to describe the range of assistive technology devices from no adaptation (no tech), less sophisticated (low tech) to more complex (high tech). It is important to understand that each category is not exclusive, and a child with significant needs often uses a combination of no tech, low tech, and high tech strategies.

No Tech AT

No Tech means modifying the environment or changing the way that the child interacts with the environment. For example, no tech communication strategies might include use of gestures, eye gaze, or sign language. No tech strategies for mobility might include adapting the environment for better access through rearranging furniture, putting toys in more easily reached places, etc.

Low Tech AT

Low Tech is the use of external materials ranging from simple switches to more moderately sophisticated electronic devices. One type of low-tech AT for communication is a communication board. When pictures are placed together on a board, they are called low tech augmentative and alternative communication boards. They are not difficult to create and can provide children with a way to make their needs known. An example of low tech for positioning and access could include a rolled up towel positioned next to the child in their high chair to help

them sit more independently. Low tech strategies for play could include a built-up handle on a toy.

High Tech AT
High Tech is the use of more sophisticated computer-based devices that have a variety of capabilities. They typically are more mechanically or electronically complex devices and can be more expensive. High Tech AT is typically considered following a comprehensive evaluation by an AT specialist. When children are not progressing toward developmental milestones or are unable to do what they want to do due to developmental challenges, a high tech AT evaluation may be warranted. Some families worry that utilizing AT will delay or prevent a child from learning the skill themselves. In fact, research shows that the opposite is true. AT can actually encourage typical development.

AT devices are often organized into the categories they affect. These categories include access, communication, mobility, play, learning, positioning, environmental control, computer access, self-help, vision, and hearing.

Below are some examples of AT Devices within each category for young children:

Access

- Adapted handles, surfaces, Dycem (a thin sticky mat to keep things temporarily affixed in place) or shelf liner

Communication

- Picture communication symbols and boards, electronic devices, single switch communicators, etc.

Mobility

- Walkers, adapted strollers, ride-on toys, wheelchairs

Play

- Switch-adapted toys, adapted off the shelf toys, toys with lights and sounds

Learning

- Adapted scissors, pencils, crayons and markers; grips for writing, slantboards, easels, adapted computer software

Positioning

- Boppy pillows, standers, supported seating, seats for feeding, floor seats, corner seats, bath chairs, seats made from PVC and/or Triwall

Environmental Controls

- Adaptations to turn lights, TV, and household electronic devices on and off

Computer Access

- Modified keyboards, adapted software, adapted computer mice, switch interfaces

Self-Help

- Adaptations for dressing, adapted feeding utensils

Vision and Hearing

- Magnifiers, visual aids, light boxes, amplifiers

Which children need AT services?

Once a child is identified as needing Early Intervention (EI) services, AT can and should be considered as an allowable service under the system of early intervention. EI funding resources (see section below on funding) can help support the AT needs of children birth through age two. As with all EI services, the need for AT should be driven by the needs of the individual child and priorities of the family. However, many family members have never heard of AT and may not understand that the service may help meet their child's outcome(s). The service providers and IFSP team must keep in mind how AT could address the child's functional skills and family's concerns, especially as they relate to daily routines. For example, a family may express concern that their child is unable to sit up in their chair for family mealtimes. Although the family has not thought about AT as an early intervention service directly, they have indicated that there is a need for some adaptation in seating and positioning which requires AT. It might require low-tech AT such as adding support to their high chair or a more sophisticated high-tech seating system.

Under the Colorado Early Intervention State Plan, when determining whether or not an AT device or service is an allowable early intervention service, it is important to ask this question: "If the AT device or service was removed, would it have an impact on the infant's or toddler's **development** and not on a **medical condition?"** EI funding does not support AT devices for medical conditions. For example, EI funds cannot be used to pay for equipment prescribed by a physician that is medical in nature such as heart monitors, feeding pumps, etc. Early intervention would also not typically support items which children without a disability would

use, such as diapers, strollers, and typical toys. An allowable AT device or service must be directly related to the child's development and the IFSP outcomes and strategies. For example, if the IFSP has an outcome related to the child being able to move around in their environment during the activities of their day, the IFSP may include as assistive technology an orthotic device that will assist the infant or toddler in learning to walk. Once the infant or toddler is walking and has met the outcome on the IFSP, the physician may recommend a similar orthotic device to maintain the structure of the foot. That would be related to the infant or toddler's medical condition and would not be an allowable early intervention service.

Who provides AT services?

The EI Colorado State Plan defines personnel qualified to provide early intervention services. For AT services, this includes all disciplines described under other services, as well as an Assistive Technology Practitioner (ATP) or Rehab Engineer. Minimum standards require degree/discipline specific licensure/certification AND either additional professional development in assistive technology or a certificate of advanced training in assistive technology through Assistive Technology Partners.

Any early intervention provider working with the child and family can provide AT services if it falls within their level of expertise and scope of practice. For example, a speech pathologist should be comfortable exploring the use of simple picture communication low-tech systems while a physical therapist should be comfortable exploring simple modifications to a highchair for seating. In some cases, if an early intervention provider does not have the expertise needed, a consult from another provider may be needed.

The provision of more sophisticated AT requires a specialized skill set. Many early intervention providers may not have the specialized training to evaluate and implement sophisticated AT systems. For example, if the provider has been exploring low-tech communication systems and, these have not been successful or they feel the child is ready for a more complex AT device, this should be discussed with the IFSP team and an AT specialist should be consulted.

A network of AT providers is available within the state. This includes professionals who have gone through advanced training with Assistive Technology Partners' Tech for Tykes Program. These providers are known as Early Intervention Assistive Technology Consultants. Professionals in this network are existing EI providers, but also have extra knowledge regarding AT evaluation, acquiring AT devices, loan bank use, funding and documentation. If they are not able to meet all of the AT needs of the child and family, they know how to find additional resources for AT.

How are AT services delivered?

As with any EI service, AT services must be provided in a timely manner. In Colorado, this means that once the IFSP has been developed and the parent consents to the recommended services on the plan, services for that child must begin within 28 calendar days. Once a service is documented as necessary on the IFSP, the service should not be delayed because of difficulty accessing funding. In this case, interim funding sources should be used.

The process is typically as follows:

1. During the development of the IFSP, the team determines that AT services or devices are considered necessary to implement the strategies for an outcome on the IFSP.
2. The IFSP team determines if an additional AT assessment is required (if yes, proceed to c, if no document the details of the AT device or service that is required on the IFSP).
3. If evaluation is needed, identify the AT evaluator who will be a part of the IFSP team. The AT evaluator may be a current member of the team with AT qualifications, may be one of the state AT Consultants, or may be a clinician from an outside agency with advanced skills in AT.
4. Document specifics of the AT services on the IFSP.
5. If assessment is recommended, complete the details of the AT assessment process, including low tech options if applicable and trial periods with recommended AT devices.
6. Identify funding resources for AT devices and services following the funding hierarchy as outlined in state regulations.
7. After completion of assessment, reconvene IFSP team to discuss final recommendations and document on the IFSP.

It is essential that services are provided by a professional with adequate expertise and qualifications. A proper evaluation will include a thorough evaluation of the child's abilities and needs, and the needs and desires of the family and caretakers before any consideration is given to the type of AT device needed. Use of the statewide AT Loan Bank is also a valuable tool for trialing AT devices prior to their prescription or purchase. Following these steps helps to assure a good match between the child, the family, and the device in order to avoid abandonment of AT devices.

How are AT services and devices funded?

EI funding can help support the purchase of AT devices and services for children who qualify for EI services. All allowable funding sources must be considered for payment of the service or device. Funding sources may include family cost participation, private insurance, public insurance programs, charitable or private sources of funding, or other community or state

funding possibilities. Federal Part C dollars can only be used if the family has exhausted all other possible sources of funding. However, no eligible child can be denied the timely provision of a necessary service on an IFSP, including AT services or devices, because of a family's inability to pay.

If AT devices and services documented on an IFSP cannot be purchased through alternate funding sources (community organizations, insurance, Medicaid, etc) the EI program is still responsible for the provision of this service. It is important to note that technology purchased by EI resources remains the property of the EI program and must be returned when the child exits the program or no longer needs the equipment. Funding for AT devices also includes repair and replacement costs.

How are AT services and devices documented on the IFSP?

If AT is a necessary service to accomplish an outcome on the child's IFSP, then AT should be documented as a service on the supports & services page of the IFSP (not as an "other" service). This applies regardless of who is providing the AT service, including the primary provider, other IFSP team members, or an outside consultant. If AT services are being provided as part of the existing occupational therapy, physical therapy, speech therapy or developmental intervention services, then the AT adaptations are documented as strategies on the outcomes page of the IFSP.

When AT is listed as an early intervention Service on an IFSP, each column (activities/location, method, frequency & intensity, projected start & end dates, and funding source) needs to be completed. AT should be documented on the IFSP as a service if a separate evaluation is required, or a consultation is needed by a provider with specialized skills. If AT is identified as a device or service necessary for the child to make progress toward an outcome on the IFSP, written documentation on the IFSP will ensure that those needs are addressed. It will also ensure consistency of the use of AT between providers should services transition from one provider or program to another.

The IFSP should contain the following information at a minimum:

Plan of Action

1. A description of the outcomes identified by the family and strategies related to this outcome. Include how the AT device or services will help the child make progress toward the outcome. Note that AT is not the outcome but a means to help the child achieve the outcome. Outcomes should be functional and meaningful and reflect the priority of the family. For example, a goal may indicate: "Emily will participate in reading books with her

family at bedtime." A strategy for that outcome might be; "Adapt a favorite book of Emily's so that she can turn the pages using a switch."

2. If an AT device is required, the IFSP document will include a full description of the AT device(s) needed by the child, and how and when it will be acquired. It should also include;
    a. How the device will help to increase, or improve the child's functional capabilities as related to the IFSP outcome.
    b. The individuals (including parents, other caregivers and family members, and qualified personnel) who will be assisting the child in using the device.
    c. Who will provide training, modification or troubleshooting for an AT device, should that be needed.
    d. The settings in which the device is to be used, including the qualified personnel who will be providing the AT services and the frequency, intensity and method of delivery recommended.

Supports and Services

1. EI Service: Document the AT device or services necessary to meet the unique needs of the child and family on the supports and services page. Services may be provided by an AT consultant, or in some cases, a current early intervention provider who is qualified to provide AT.
2. Activity/Location: Describe the location within the family's daily routine or activity where the device and services will be integrated. (e.g. bath time in child's home, lunch time at childcare center, play time in the park, etc.)
3. Method: Describe the method or how the service will be provided. (Evaluation, consultation versus direct intervention).
4. Frequency & Intensity: Indicate how often the service will occur and the length of the sessions. For AT devices, indicate how and when the device will be used. For example, the adapted high chair will be used daily during meal times with the family.
5. Start and End Dates: indicate when services will start and end, including the month/date/year.
6. Funding Source: Indicate who will pay for the service or device (Private insurance, Medicaid, CHP+, CCB Part C funding).

Whether or not to document AT on an IFSP can be unclear at times. It may not always be necessary, and can feel burdensome to providers and service coordinators. The following guidelines can help clarify when and when not to document AT on an IFSP. These guidelines should be combined with sound clinical judgment, along with input from the entire IFSP team.

AT *services* need to be documented on the IFSP when:

1. Needed for evaluation, selection, purchase, modification, training or consultation related to an AT device.
2. The child may transition to another program or care provider and will need the AT services in order to be achieve the outcomes on the IFSP.
3. Services to support the AT are beyond the scope of the current services the child is receiving.

AT *devices* need to be documented on the IFSP when:

1. The child requires more than simple, temporary adaptations, and will require the assistive technology device(s) for longer than three to six months. If the device is a simple temporary adaptation that needs to be used only for a short period of time such as rolled up towel in a high chair, it does not need to be documented on the IFSP, but should be included in the strategies for the related outcome.
2. The AT device will be purchased specifically for the child as opposed to using or modifying an item that happens to be easily found in the environment and readily available for any child.
3. Without the AT device, the child could not progress toward the functional outcome on the IFSP.
4. The AT device is an over the counter purchase that has been customized or modified specifically for the child. In this case, the purchase of the device and the modification of the device would be documented as an AT device and service, and would be listed on the IFSP separately.
5. The AT device will be used as part of a short term device trial as part of the evaluation process. Note: The AT service would be documented on the IFSP, but the device being tried would not necessarily be documented, since it is in trial use as a potential solution that is still being explored. Once a device is selected for the child, it should be documented on the IFSP.

Additional Resources

Early Intervention Colorado

www.eicolorado.org

Lead agency for early intervention services for the state of Colorado, part of the Division for Developmental Disabilities under Colorado Department of Human Services.

Tech for Tykes

www.TechForTykes.org

Assistive Technology Partners Early Intervention Program. University of Colorado, School of Medicine, Anschutz Campus.

National Early Childhood Technical Assistance Center

www.nectac.org

NECTAC is supported by the U.S. Department of Education's Office of Special Education Programs (OSEP). NECTAC serves all 50 states and 10 jurisdictions with an array of services and supports to improve service systems and outcomes for infants, toddlers, and preschool aged children with special needs and their families.

The Family Center on Technology and Disability (FCTD)

www.fctd.info

A resource designed to support organizations and programs that work with families of children and youth with disabilities.