



Technical Assistance Brief Assistive Technology in Early Intervention

This technical assistance brief gives an overview of Assistive Technology (AT) services and devices 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
- Documenting AT on the IFSP
- Delivery of AT services
- Funding AT devices and services
- 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 (EI) Colorado, Colorado Department of Human Services. EI Colorado contracts with Assistive Technology Partners to provide a statewide EI AT technical assistance and training infrastructure.

What are AT devices and services?

AT Services are defined in the Early Intervention Colorado State Plan as, "The direct selection, acquisition or use of assistive technology".

AT services include:

1. The functional evaluation of the developmental needs of the infant or toddler within his or her usual environment.
2. The selection, acquisition, modification or customization and maintenance of assistive technology devices.
3. Coordinating and using other therapies, interventions or services with assistive technology devices, such as those associated with existing intervention plans and programs.

4. Training or technical assistance for professionals providing Early Intervention Services or other individuals identified as providing Early Intervention Services to, or are otherwise substantially involved in the major life functions of, an infant or toddler on the use of assistive technology devices.
5. Training or technical assistance for an infant or toddler receiving Early Intervention Services or, if appropriate, the child's family.

AT Devices are defined as, "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 the functional, developmental capabilities of an infant or toddler with a disability in his or her usual environment".

AT Devices must meet the following criteria:

1. The device must be identified in the Individualized Family Service Plan.
2. Prior to purchase or lease of an assistive technology device, an assessment shall be conducted by a qualified early intervention provider to assure that the device is appropriate to the child and family's needs.

AT for young children includes a broad range of devices and services which assist children in interacting within their natural environment and the daily routines of the family or caregiver. AT may include adaptations made to the environment in order to support the child's ability to participate actively in the home, childcare program, or other community settings as identified by the family. AT services and devices may assist a child and their family by increasing a child's ability to play successfully, 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 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 a very simple 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 includes modifications made without technology. It includes modifying the environment or changing the way 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 or placing toys in locations that are more easily reached by the child.

Low Tech AT

Low tech is the use of materials or items ranging from common materials or simple switches to 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. Low tech AT is also commonly used for positioning and access, such as 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 to allow for greater ease of handling. Low tech AT may be provided by the child's primary provider as a part of their typical intervention service or may be provided by a specialized AT consultant

High Tech AT

High tech is the use of more sophisticated devices that have a variety of capabilities. They typically are mechanically or electronically complex devices and are more expensive. High tech AT is typically considered as a part of a comprehensive evaluation by an AT specialist. When children are not able to participate in their environment due to developmental challenges, and low tech AT is not able to support the child in reaching the outcomes on the IFSP, an AT evaluation may be warranted to determine if the use of a high tech AT device is necessary. Some families worry that utilizing AT will delay or prevent a child from learning a skill themselves. In fact, research shows that the opposite is true. AT can actually encourage development.

Types of AT Devices

AT devices are often organized into functional categories. These categories include motor access, communication, mobility, play, learning, seating/positioning, environmental control, computer access, self-help, vision and hearing.

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

Motor 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 communication devices, single switch communicators

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, electronic books

Positioning

- Boppy pillows, standers, seats for feeding, floor chairs, corner chairs, 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 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 the priorities of the family. However, many family members have never heard of AT and may not understand that the service may help support their child meet the outcomes on the Individualized Family Service Plan (IFSP). The IFSP team must keep in mind how AT could address the child's functional skills and the 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, if low tech adaptations have already been tried, a more sophisticated high tech seating system. These options should be discussed during the development of strategies to support the outcome on the IFSP.

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 used to address 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. EI would also not support items that a typically developing child 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 his or her environment during the activities of the 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. This use of a device is 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 Rehabilitation Engineer. Minimum standards require degree/discipline specific licensure or certification AND additional professional development in assistive technology, such as 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 low tech picture communication 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 implementation of AT strategies can be within the scope of other EI services (such as OT, PT, SLP and Developmental Intervention) or provided as a separate service. The IFSP team determines when AT is needed as a separate service.

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 the use of sophisticated AT systems. For example, if the provider has been exploring low tech communication systems and these have not been successful or the provider feels that the child is ready for a more complex AT device, this should be discussed with the IFSP team, which includes the family, and an AT specialist with expertise in that area 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 with extra knowledge regarding AT evaluation, acquiring AT devices, loan bank use, funding and documentation of AT. If they are not able to meet all of the AT needs of the child and family, they can support the family to access additional resources.

How is the need for AT services determined?

When considering if AT is a necessary and separate service to implement an outcome on a child's IFSP, the following criteria should be met:

1. The necessary service meets the definition of AT Services or an AT Device as described in the Early Intervention Colorado State Plan.
2. The provision of this service or device is necessary for the child to achieve the desired outcome(s).
3. The provision of this service requires a dedicated amount of time to support the implementation of the strategies related to AT.

If the activities involving AT are within the scope of practice of the early intervention provider and do not require additional intervention time specifically dedicated to AT, then the activities would be documented within the strategies on the IFSP. AT as a separate service would NOT be documented on the IFSP Agreement page.

How are AT services documented?

Documentation of AT on the IFSP is essential. If AT is identified as 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 and ensure consistency of the use of AT between providers should services transition between providers or programs. In particular, if a child has the potential to be a long-term user of AT, early identification and documentation of AT services and devices will educate everyone involved in the child's life about the importance of AT for the child and build AT into that child's repertoire of needs and abilities.

The ultimate goal of documenting AT on the IFSP is to assure that anyone who reads an IFSP for a child age birth through two who is using assistive technology (AT) has a clear understanding of:

- what AT the child is using
- why AT is important to that child
- who is evaluating and selecting the AT
- who is helping the child use the AT
- when and where the child is using the AT (activities/daily routines)
- how the AT will improve the child's functional capabilities as related to the IFSP outcome
- how the AT is being funded

Steps for Documenting AT Services on the IFSP:

1. During the development of the IFSP, the team determines that AT services are necessary to implement the strategies related to an outcome on the IFSP.
2. If AT is currently in use by the child and family, document how it is being used in the daily routines of the family within the present levels of development and, if related to an outcome, the strategies on the IFSP.
3. If AT is not currently in use by the child and family and is determined to be a service necessary to implement a strategy on the IFSP and the details of how this service will be used are known at the time of the IFSP meeting, document how the AT service or device will support the family and child in their daily routines within the strategies on the Plan of Action page. Document the specifics of the service on the IFSP Agreement page, including location, method, length, and frequency and intensity.
4. If the details of the use of AT is not known at the time of the IFSP meeting, the IFSP team may recommend a functional evaluation for AT. Document the reason a functional evaluation is being recommended within the strategies on the Plan of Action page. Document the specifics of the AT evaluation on the IFSP Agreement

page, including location, method (eval), length and frequency and intensity. The AT evaluator may be a current member of the team with AT qualifications, one of the state AT Consultants, or a clinician with advanced skills in AT.

5. If additional AT services are recommended as a result of the evaluation, an IFSP review must be conducted. Document how the AT will support the child and family in their daily routines within the strategies on the Plan of Action page. Document the specifics of how AT services will be provided on the IFSP Agreement Page, including method, frequency and duration.
6. Identify and document funding for AT services or devices following the funding hierarchy as outlined in state regulations.

Steps for Documenting an AT Device on the IFSP:

1. During the development of the IFSP, the team determines that an AT device is necessary to implement the strategies related to an outcome on the IFSP.
2. If an AT device is currently in use by the child and family, document how it is being used, including the use of low tech options and trial periods, if applicable. Document how the device is being used in the daily routines of the family within the present levels of development and, if related to an outcome, the strategies on the IFSP.
3. If the details of the AT device needed is not known at the time of the IFSP meeting, the IFSP team may recommend a functional evaluation for AT. Document the reason a functional evaluation is being recommended within the strategies on the Plan of Action page. Document the specifics of the AT evaluation on the IFSP Agreement page, including location, method (eval), length and frequency and intensity. The AT evaluator may be a current member of the team with AT qualifications, one of the state AT Consultants, or a clinician with advanced skills in AT.
4. If an AT device is recommended as a result of the AT evaluation, the IFSP must be reviewed. The specifics of the device are documented within the strategies to meet the outcomes of the IFSP, and the device itself is documented on the IFSP Agreement page. An AT evaluation and device should never be documented on the IFSP agreement page at the same time, as the determination of the appropriate AT device is dependent on the outcome of the evaluation.
5. If a device trial is needed, documentation of the device being trialed and it's use should be in the strategies section of the Plan of Action page, as determination has not been made as to whether the device will be used on a permanent basis
6. Identify and document funding for AT services or devices following the funding hierarchy as outlined in state regulations.
7. If **services** are needed in order to support a device, they are documented on the IFSP agreement page as AT services.

The IFSP should minimally contain information on the use of AT as follows:

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, an outcome 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 a new AT device is required, the IFSP document must include a full description of the AT device(s) needed by the child, and how and when it will be acquired. This can be recorded within the strategies on the Plan of Action, or within the Additional Information section. 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. The individual 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.

Tips for determining when AT services or devices should be documented on the IFSP

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 if they feel like they are “over-documenting”. 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 achieve the outcomes on the IFSP.
3. Services to support the AT are beyond the scope of the current services the child is receiving or require a dedicated instance of service.

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 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 would be documented as an AT device and the modification of the device would be documented as an AT service, and would be listed on the IFSP separately.

AT **services** determined necessary by the IFSP team should be documented on the IFSP regardless of who is providing or funding the service. AT should not be documented as an “other” service.

How are AT services delivered?

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 priorities and concerns 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 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.

The AT Loan Bank is available for use by all providers who are serving children within the state early intervention system. Access to the Loan Bank is through the state EI AT consultants. Items can be checked out for a total of six weeks. Extensions are considered on a case by case basis. The AT consultant who checks an item out from the Loan Bank is responsible for the welfare of the item during daily use. However, Early Intervention Colorado will ultimately cover the cost of items that are lost or damaged when not due to negligence on the part of the AT consultant or provider using the item.

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. Early Intervention dollars can only be used if the family has explored 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 dollars 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.

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 in accessing funding. In this case, interim funding sources may be used.

Additional Resources

Early Intervention Colorado

www.eicolorado.org

Early Intervention program for the state of Colorado, under the Colorado Department of Human Services.

Tech for Tykes

www.TechForTykes.org

Assistive Technology Partners Early Intervention Program. University of Colorado, Denver, Anschutz Medical 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.

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