

Treatment Intervention Advisory Committee Review and Determination

Date: October 28, 2016

To: DHS/DLTC

From: Wisconsin Department of Health Services Autism and other Developmental Disabilities
Treatment Intervention Advisory Committee: Lana Collet-Klingenberg, Ph.D. (chairperson)

RE: Determination of Auditory Verbal Therapy as a proven and effective treatment for individuals with autism spectrum disorder and/or other developmental disabilities

This is an initial review

This is a re-review. The initial review was July 31, 2015

Section One: Overview and Determination

Please find below a statement of our determination as to whether or not the committee views Auditory Verbal Therapy as a proven and effective treatment for children with autism spectrum disorder and/or other developmental disabilities. In subsequent sections you will find documentation of our review process including a description of the proposed treatment, a synopsis of review findings, the treatment review evidence checklist, and a listing of the literature considered. In reviewing treatments presented to us by DHS/DLTC, we implement a review process that carefully and fully considers all available information regarding a proposed treatment. Our determination is limited to a statement regarding how established a practice is in regard to quality research. We do not make funding decisions.

Description of proposed treatment

Auditory-Verbal Therapy (AVT) uses an individual's residual hearing to teach deaf or hearing impaired children to listen and speak. Amplification devices such as FM devices, cochlear implants and hearing aids are used in conjunction with AVT. Auditory Verbal therapy (AVT) aims to develop children's spoken language through listening. It is delivered by a certified Auditory Verbal Therapist in partnership with the child's parent or carer. The Auditory Verbal Therapist is a qualified teacher of the hearing-impaired, an audiologist, and/or speech and language therapist who has received specialised AV instruction and holds a certificate to practise AV therapy. The aim of AVT is to close the gap between the child's chronological age and language abilities in order that they may enter mainstream school with age-appropriate language. The Alexander Graham Bell (AG Bell) Academy for Listening and Spoken Language, based in Washington, DC, governs the certification of Listening and Spoken Language Specialists (LSLS), the practitioners qualified to provide Auditory-Verbal Therapy. The Academy defines the practice of Auditory-Verbal Therapy as:

“Auditory-Verbal Therapy facilitates optimal acquisition of spoken language through listening by newborns, infants, toddlers, and young children who are deaf or hard of hearing. Auditory-Verbal Therapy promotes early diagnosis, one-on-one therapy, and state-of-the-art audiologic management and technology. Parents and caregivers actively participate in therapy. Through guidance, coaching, and demonstration, parents become the primary facilitators of their child's spoken language development. Ultimately, parents and caregivers gain confidence that their child can have access to a full range of

academic, social, and occupational choices. Auditory-Verbal Therapy must be conducted in adherence to the Principles LSLs of Auditory-Verbal Therapy” (AG Bell Academy, 2012)

Synopsis of review

In the case of Auditory Verbal Therapy (AVT), please refer to the attached reference listing that details the reviewed research. The committee’s conclusions regarding Auditory Verbal Therapy include that there are no new peer-reviewed, experimental studies since the last review.

Congenital or early-acquired hearing impairment poses a significant barrier to the development of spoken language and communication. AVT is a rehabilitative approach aimed at children with hearing impairments with a long history of use but limited methodological rigor relative to evaluation. As a stand alone treatment for individuals with autism who do not have a hearing impairment there is no evidence to date of its usefulness for this disorder, absent a hearing impairment. The data suggest that approximately 1% to 6% of children with autism also have co-occurring hearing loss.

The comprehensive literature review of AVT published in 2014 by the Cochrane Database, which is a part of the Cochrane Library, a collection of databases that contain high-quality, independent evidence to inform healthcare decision making. The conclusion of the database review was that there were no articles that met inclusion criteria relative to the research design (the top 13 included were neither randomized nor quasi-randomized controlled trials) or because treatment duration was less than 6 months (4 reviews). The report concluded that there was a lack of methodological rigor and well-controlled studies evaluating AVT for persons with permanent hearing impairments. While the review did not focus on AVT with individuals with autism, no additional studies with AVT evaluating children with autism without hearing impairments was found for review for the July 2015 reivev nor for this current re-review. No other systematic reviews of AVT have been conducted, however a previous narrative review was completed by Eric-Brophy in 2004 and also concluded that there was a lack of high quality research evaluating the effectiveness of AVT for those with hearing impairments.

In sum, it is the decision of the committee that Auditory Verbal Therapy remain as a Level 4 - Insufficient Evidence (Experimental Treatment).

Section Two: Rationale for Focus on Research Specific to Comprehensive Treatment Packages (CTP) or Models

In the professional literature, there are two classifications of interventions for individuals with Autism Spectrum Disorder (National Research Council, 2001; Odom et al., 2003; Rogers & Vismara, 2008):

- (a) **Focused intervention techniques** are individual practices or strategies (such as positive reinforcement) designed to produce a specific behavioral or developmental outcome, and
- (b) **Comprehensive treatment models** are “packages” or programs that consist of a set of practices or multiple techniques designed to achieve a broader learning or developmental impact.

To determine whether a treatment package is proven and effective, the Treatment Intervention Advisory Committee (TIAC) will adopt the following perspective as recommended by Odom et al. (2010):

The individual, focused intervention techniques that make up a comprehensive treatment model may be evidence-based. The research supporting the effectiveness of separate, individual components, however, does *not* constitute an evaluation of the comprehensive treatment model or “package.” The TIAC will consider and review only research that has evaluated the efficacy of implementing the comprehensive treatment *as a package*. Such packages are most often identifiable in the literature by a consistently used name or label.

National Research Council. (2001). *Educating children with autism*. Washington, DC: National Academy Press.

Odom, S. L., Brown, W. H., Frey, T., Karusu, N., Smith-Carter, L., & Strain, P. (2003) Evidence-based practices for young children with autism: Evidence from single-subject research design. *Focus on Autism and Other Developmental Disabilities, 18*, 176-181.

Odom, S. L., Boyd, B. A., Hall, L. J., & Hume, K. (2010). Evaluation of comprehensive treatment models for individuals with Autism Spectrum Disorders. *Journal of Autism and Developmental Disorders, 40*, 425-436.

Rogers, S., & Vismara, L. (2008). Evidence-based comprehensive treatments for early autism. *Journal of Clinical Child and Adolescent Psychology, 37*, 8-38.

Section Three: DLTC-TIAC Treatment Review Evidence Checklist

Name of Treatment: Auditory Verbal Therapy

Level 1- Well Established or Strong Evidence (DHS 107 - Proven & Effective Treatment)

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, National Professional Development Center) have approved of or rated the treatment package as having a strong evidence base; authorities are in agreement about the level of evidence.
- There exist ample high quality studies that demonstrate experimental control and favorable outcomes of treatment package.
 - Minimum of two group studies or five single subject studies or a combination of the two.
 - Studies were conducted across at least two independent research groups.
 - Studies were published in peer reviewed journals.
- There is a published procedures manual for the treatment, or treatment implementation is clearly defined (i.e., replicable) within the studies.
- Participants (i.e., N) are clearly identified as individuals with autism spectrum disorders or developmental disabilities.

Notes:

Level 2 – Established or Moderate Evidence (DHS 107 - Proven & Effective Treatment)

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, NPDC) have approved of or rated the treatment package as having at least a minimal evidence base; authorities may not be in agreement about the level of evidence.
- There exist at least two high quality studies that demonstrate experimental control and favorable outcomes of treatment package.
 - Minimum of one group study or two single subject studies or a combination of the two.
 - Studies were conducted by someone other than the creator/provider of the treatment.
 - Studies were published in peer reviewed journals.
- Participants (i.e., N) are clearly identified as individuals with autism spectrum disorders or developmental disabilities.

Notes: At this level, include ages of participants and disabilities identified in body of research

Level 3 – Emerging Evidence (DHS 107 – Promising as a Proven & Effective Treatment)

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, NPDC) have recognized the treatment package as having an emerging evidence base; authorities may not be in agreement about the level of evidence.
- There exists at least one high quality study that demonstrates experimental control and favorable outcomes of treatment package.
 - May be one group study or single subject study.
 - Study was conducted by someone other than the creator/provider of the treatment.
 - Study was published in peer reviewed journal.
- Participants (i.e., N) are clearly identified as individuals with autism spectrum disorders or developmental disabilities.

Notes: At this level, include ages of participants and disabilities identified in body of research

Level 4 – Insufficient Evidence (Experimental Treatment)

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, NPDC) have not recognized the treatment package as having an emerging evidence base; authorities are in agreement about the level of evidence.
- There is not at least one high quality study that demonstrates experimental control and favorable outcomes of treatment package.
 - Study was conducted by the creator/provider of the treatment.
 - Study was not published in a peer reviewed journal.
- Participants (i.e., N) are not clearly identified as individuals with autism spectrum disorders or developmental disabilities.

Notes:

Level 5 – Untested (Experimental Treatment) &/or Potentially Harmful

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, NPDC) have not recognized the treatment package as having an emerging evidence base; authorities are in agreement about the level of evidence.
- There are no published studies supporting the proposed treatment package.
- There exists evidence that the treatment package is potentially harmful.**
 - Authoritative bodies have expressed concern regarding safety/outcomes.
 - Professional bodies (i.e., organizations or certifying bodies) have created statements regarding safety/outcomes.

Notes: At this level, please specify if the treatment is reported to be potentially harmful, providing documentation

Date: October 28, 2016

Committee Members Completing Initial Review of Research Base: Jenny Asmus, Brooke Winchell
Committee Members Completing Re-Review of the Research Base: Jenny Asmus, Lana Collett-Klingenberg

Committee Decision on Level of Evidence to Suggest the Proposed Treatment is Proven and Effective:
Level 4 - Insufficient Evidence (Experimental Treatment.)

References Supporting Identification of Evidence Levels:

- Chambless, D.L., Hollon, S.D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, 66(1) 7-18.
- Chorpita, B.F. (2003). The frontier of evidence-based practice. In A.E. Kazdin & J.R. Weisz (Eds.). *Evidence-based psychotherapies for children and adolescents* (pp. 42-59). New York: The Guilford Press.
- Odom, S. L., Collett-Klingenberg, L., Rogers, S. J., & Hatton, D. (2010). Evidence-based practices in interventions for children and youth with autism spectrum disorders. *Preventing School Failure*, 54(4), 275-282.

Section Four: Literature Review

Brennan-Jones, C.G., White, J., Rush, R.W., & Law, J. Auditory-verbal therapy for promoting spoken language development in children with permanent hearing impairments. Cochrane Database of Systematic Reviews 2014 Issue 3 doi: 10.1002/14651858.CD010100.pub2

Eriks-Brophy A. Outcomes of auditory-verbal therapy: a review of the evidence and a call for action. The Volta Review 2004;104(1):21–35.