SENSORY INTEGRATION THERAPY AND AUDITORY INTEGRATION TRAINING

Policy Number: 2018T0314R **Effective Date**: December 1, 2018

Instructions for Use

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Community Plan Policy

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Medicare Advantage Coverage Summary

- Rehabilitation: Medical Rehabilitation (OT, PT and ST, including Cognitive Rehabilitation)

COVERAGE RATIONALE

The following are unproven and not medically necessary for treating any condition due to insufficient evidence of efficacy:

- Sensory integration therapy (SIT)
- Auditory integration training (AIT)

APPLICABLE CODES

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Coverage Determination Guidelines may apply.

CPT Code	Description
97533	Sensory integrative techniques to enhance sensory processing and promote adaptive responses to environmental demands, direct (one-on-one) patient contact, each 15 minutes

DESCRIPTION OF SERVICES

Sensory Integration Therapy (SIT)

Sensory integration involves perceiving, modulating, organizing, and interpreting these sensations to optimize occupational performance and participation. Deficits in sensory integration can pose challenges in performing activities of daily living (ADLs), in addition to development, learning, playing, working, socializing, and exhibiting appropriate behavior. Sensory integration and modulation disorders are thought to lead people to have extreme over reactions to what others consider mild stimuli, or to completely shut down and disengage. Differences in interpretation of stimuli can impact motor skills and coordination, further limiting engagement and participation (Baltazar, 2015).

SIT seeks to improve perception and integration of sensory information and thereby help children with learning disabilities improve their sensorimotor skills. In theory, this will result in improved behavior and academic performance. Therapy is usually provided by an occupational therapist (OT), and combines primitive forms of sensation with motor activity during an individual therapy session that typically lasts 60 to 90 minutes. The therapist provides vestibular, proprioceptive, and tactile stimulation during activities designed to elicit appropriate adaptive motor responses. Sensory integration techniques include the use of textured mitts, carpets, scooter boards, ramps,

swings, bounce pads, suspended equipment, and weighted vests and blankets to encourage a noncognitive, creative, and explorative process. Therapy is usually given in 1 to 3 sessions per week over several months or a few years and it does not involve tutoring, the more traditional approach to treatment of learning disabilities (Salokorpi, 2002; Uyanik, 2003).

Different types of sensory integration therapy have been proposed to treat sensory integration-related disorders, including Snoezelen®, multi-sensory environments and products designed for relaxation, stimulation, and to encourage communication (Snoezelen, 2018).

Auditory Integration Training

AIT was developed as a technique for improving abnormal sound sensitivity in individuals with behavioral disorders including autism spectrum disorders (Sinya et al., 2011). The Berard AIT protocol requires that a participant listen to modulated music on a specific device using high quality headphones for a total of 10 hours, over 10 or 12 consecutive days under the supervision of a professionally trained AIT practitioner (AIT Institute, 2018).

CLINICAL EVIDENCE

Sensory Integration Therapy (SIT)

Kashefimehr et al. (2018) studied the effect of SIT on different aspects of occupational performance in children with ASD. The study was conducted on an intervention group (n = 16) receiving SIT and a control group (n = 15) with 3- to 8-year-old children with ASD. The Short Child Occupational Profile (SCOPE) was used to compare the two groups in terms of the changes in their occupational performance and the Sensory Profile (SP) was used to assess sensory problems. The intervention group showed significantly greater improvement in all the SCOPE domains, as well as in all the SP domains, except for the "emotional reactions" and "emotional/social responses" domains, ($p < .05$). The authors concluded that the effectiveness of SIT in improving occupational performance in children with ASD as a health-related factor is supported by their findings. Limitations of this study include small patient population and lack of long-term follow-up.

In a non-randomized controlled trial, Lecuona et al. (2017) investigated the effect of Ayres Sensory Integration® (ASI) on the development of premature infants in the first 12 months of life. A pre-/post-test experimental design was used to randomly divide 24 premature infants from a low socioeconomic setting. Developmental status was determined with the Bayley III Scales of Infant and Toddler Development, the Test of Sensory Functions in Infants and the Infant/Toddler Sensory Profile. Infants were divided into a control and experimental group. The experimental group received 10 weeks of ASI intervention. The authors reported that ASI intervention had a positive effect on the sensory processing and development of premature infants, especially in terms of cognitive, language and motor development. This study is limited by small sample size, lack of long-term follow-up and non-randomization.

In a small case series, Koller et al. (2018) examined autonomic physiological responses and observational data on five children and adolescents with motor and verbal deficits (n=5) in complex continuing care within a large rehabilitation hospital. Responses to Snoezelen and watching television were compared against baseline data collected during pre-intervention phases. This preliminary study found that individual participant responses varied considerably. Four of the five participants were reported to exhibit significant changes between sessions on one or two distinct physiological measures. The authors call on additional studies that apply unique and multiple methods capable of accessing the preferences of children and adolescent in rehabilitative care. Study limitations include small patient population and non-randomization.

A systematic review was conducted by Weitlauf et al. (2017) to evaluate the effectiveness and safety of interventions targeting sensory challenges in autism spectrum disorder (ASD). Twenty-four studies were identified including 20 randomized controlled trials (RCTs), 1 nonrandomized trial and 3 retrospective cohort studies. The included studies compared interventions incorporating sensory-focused modalities with alternative treatments or no treatment. The authors concluded that sensory-related outcomes improved in children receiving a sensory integration (SI)-based intervention compared with those receiving usual care or other treatment (low strength of evidence). Motor skills outcomes were improved in children receiving SI-based treatment compared with those receiving usual care or other treatment (low strength of evidence). Studies in the review had small sample sizes and typically limited duration of intervention and follow-up after intervention.

A Hayes medical technology report reviewed eleven peer-reviewed, prospective studies (8 randomized controlled trials) examining sensory integration therapy (SIT) compared with control groups. The studies included children with intellectual disabilities (3 studies), cerebral palsy (2 studies), motor coordination difficulties (1 study), Down syndrome (1 study), and sensory integration difficulties/sensory processing disorder (4 studies). SIT treatment duration ranged from 8 weeks to 1 year, with a frequency of 2 to 5 times per week for 50 minutes to 2 hours in duration per visit. The following outcomes were measured: movement/activity, motor function, general cognitive/academic performance, sensory integration, vestibular function, and physiological function. Most of the

reviewed studies (9 of 11) found no clear benefit of SIT over time compared with control groups (no treatment or active interventions) across a range of outcomes for non-autistic children. None of the reviewed studies reported safety-related concerns associated with SIT or reported complications. Overall, the quality of the evidence was low due to limitations of individual studies, including small sample size and absence of follow-up data, and differences across studies in patient populations and outcome measures. The report concludes that the existing body of literature provides little evidence that sensory integration therapy (SIT) improves functioning for non-autistic children across time, or compared with no treatment or alternative interventions. Only 2 of 11 studies reported clear, beneficial effects of SIT over time or compared with a control comparison on a subset of outcomes (Hayes, 2018).

Bodison and Parham (2018) conducted a systematic review to examine the effectiveness of specific sensory techniques and sensory environmental modifications to improve participation of children with sensory integration (SI) difficulties. Abstracts of 11,436 articles were examined. Studies were included if designs reflected high levels of evidence, participants demonstrated SI difficulties, and outcome measures addressed function or participation. Eight studies met inclusion criteria. Seven studies evaluated effects of specific sensory techniques for children with ASD or attention deficit hyperactivity disorder: Qigong massage, weighted vests, slow swinging, and incorporation of multisensory activities into preschool routines. One study of sensory environmental modifications examined adaptations to a dental clinic for children with ASD. Strong evidence supported Qigong massage, moderate evidence supported sensory modifications to the dental care environment, and limited evidence supported weighted vests. The evidence is insufficient to draw conclusions regarding slow linear swinging and incorporation of multisensory activities into preschool settings. Pfeiffer et al. (2018) drew similar conclusions in their systematic review.

In a systematic review of 3 randomized controlled trials, 1 retrospective review, and 1 single-subject ABA design, Schaaf et al. (2018) studied the effects of ASI in children with autism. The authors reported that the evidence is strong that ASI intervention demonstrates positive outcomes for improving individually generated goals of functioning and participation as measured by Goal Attainment Scaling for children with autism. Moderate evidence supported improvements in impairment-level outcomes of improvement in autistic behaviors and skills-based outcomes of reduction in caregiver assistance with self-care activities. Child outcomes in play, sensory-motor, and language skills and reduced caregiver assistance with social skills had emerging but insufficient evidence. This review is limited by the small number of studies, and unknown long-term follow-up.

A systematic review which examined the research evidence for SIT and sensory-based intervention (SBI), for children with ASD and sensory processing disorders was conducted by Case-Smith et al (2015). A total of 19 studies were reviewed; 5 examined the effects of sensory integration therapy and 14 examined sensory-based intervention. Two of the five SIT studies were randomized controlled trials (RCTs); one RCT compared SIT to usual care, one compared SIT to a fine motor activity protocol, and one was a case report. Two RCTs found positive effects for SIT on child performance using Goal Attainment Scaling (effect sizes ranging from .72 to 1.62); other studies (Levels III-IV) found positive effects on reducing behaviors linked to sensory problems. Sensory-based interventions are characterized as classroom-based interventions that use single-sensory strategies (weighted vests or therapy balls), to influence a child's state of arousal. The authors concluded that although small RCTs resulted in positive effects for SIT, additional rigorous trials using manualized protocols for SIT are needed to evaluate effects for children with ASDs and sensory processing problems. The studies were small samples, did not use blinded evaluation, examined short-term interventions, and did not examine retention of intervention gains.

Leong et al. (2015) conducted a systematic analysis on the outcomes of 17 single case design studies on SIT for people with, or at-risk of, a developmental or learning disability, disorder or delay. The authors noted that SIT is a controversial intervention that is widely used for people with disabilities. An assessment of the quality of methodology of the studies found most used weak designs and poor methodology. The authors concluded that based on limited comparative evidence, functional analysis-based interventions for challenging behavior were more effective that SIT. They further stated that the studies did not provide convincing evidence for the efficacy of SIT and advise that the use of SIT be limited to experimental contexts.

In a systematic review, Watling and Hauer (2015) evaluated the effectiveness of Ayres Sensory Integration (ASI) and sensory-based interventions (SBIs) for individuals with ASD. The authors describe ASI as a play-based method that uses active engagement in sensory activities to draw out the individual’s adaptive responses and improve their ability to successfully meet environmental challenges. Twenty-three abstracts met the inclusion criteria, 3 of which were systematic reviews and 5 of which were randomized control trials (RCTs). The authors concluded that moderate evidence was found to support the use of ASI and the results for sensory-based methods were mixed. The authors recommended that higher level studies with larger samples, using the fidelity measure in studies of ASI, and using systematic methods in examination of SBIs should be performed.

Pfeiffer et al. (2011) evaluated the effectiveness of sensory integration (SI) interventions in children with ASD. Thirty-seven children (ages 6-12) with ASD were randomly assigned to a fine motor or SI treatment group. Significant improvements were observed, including goal attainment (sensory processing and regulation, functional motor skills,

and social-emotional skills), although the effect size was small when rated by parents (0.125) and moderate when rated by teachers (0.360). Autistic mannerisms, measured by a subscale of the Social Responsiveness Scale (SRS), also significantly improved compared with controls, with a small effect size (0.131). No other significant differences were reported in other behavioral measures, such as the Sensory Processing Measure (SPM) or the Vineland Adaptive Behavior Scales, 2nd Edition (VABS-2). No follow-up assessments beyond the study endpoint were conducted. The significance of this study is limited by small sample size and short follow-up period.

A randomized controlled trial conducted by Fazlioglu et al. (2008) examined the effects of a sensory integration (SI) protocol on low-functioning children (ages 7 to 11) with autism. Study participants were randomized to a treatment group (n=15) and a control group (n=15). The control group patients did not participate in SI program, but attended regularly scheduled special education classes. The intervention program used in this study was based on "The Sensory Diet" and included a prescribed schedule of somatosensory stimulation activities targeting 13 behaviors across sensory modalities and motor skills development and conducted in a specially arranged sensory room. The results from the study suggested that sensory integration programs have positive effects on behaviors of children with autism. Study limitations include lack of power analysis to determine if study had enough power to accurately detect differences between treatment and controls and lack of a follow up period.

In a pilot randomized controlled trial by Miller et al. (2007) the effectiveness of occupational therapy using a sensory integration approach was conducted with children who had sensory modulation disorders. Twenty-four children were randomly assigned to one of three treatment groups: occupational therapy using a sensory integration, activity protocol, and no treatment. Pretest and post-test measures of behavior, sensory and adaptive functioning, and physiology were evaluated. Comparisons among the 3 groups showed that the occupational therapy using a sensory integration group made significant gains on goal attainment scaling and on the Attention subtest and the Cognitive/Social composite of the Leiter International Performance Scale-Revised. The occupational therapy using a sensory integration group showed improvement trends in the hypothesized direction on the Short Sensory Profile, Child Behavior Checklist, and electrodermal reactivity. These findings suggest that occupational therapy using a sensory integration may be effective in ameliorating difficulties of children with sensory modulation disorders; however, larger randomized controlled studies are needed to determine whether occupational therapy using sensory integration is an effective intervention.

Twenty-seven studies were systematically reviewed to identify, evaluate, and synthesize the research literature on the effectiveness of sensory integration (SI) intervention on the ability of children with difficulty processing and integrating sensory information to engage in desired occupations and to apply these findings to occupational therapy practice. Results suggest the SI approach may result in positive outcomes in sensorimotor skills and motor planning; socialization, attention, and behavioral regulation; reading-related skills; participation in active play; and achievement of individualized goals. Gross motor skills, self-esteem, and reading gains may be sustained from 3 months to 2 years. Findings may be limited by Type II error because of small sample sizes, variable intervention dosage, lack of fidelity to intervention, and selection of outcomes that may not be meaningful to clients and families or may not change with amount of treatment provided. According to the authors, replication of findings with methodologically and theoretically sound studies is needed to support current findings (May-Benson 2010).

Chan et al. (2010) systematically reviewed studies that investigated the effects of multisensory environment in relation to outcomes. One hundred and thirty-two studies were identified from database search of which 17 met the inclusion criteria for review. The evidence supports that participants' had displayed more positive behavior after multisensory therapy sessions. There is no strong evidence supporting that multisensory therapy could help in reducing challenging behavior or stereotypic self-stimulating behavior. According to the authors, this systematic review demonstrates a beneficial effect of multisensory therapy in promoting participants' positive emotions. While the authors acknowledge the difficulty in carrying out randomized controlled trial in people with developmental disabilities and challenging behavior, the lack of trial-derived evidence makes it difficult to arrive at a conclusion of the effectiveness of the multisensory therapy.

Lotan et al. (2009) evaluated the therapeutic influence of the Snoezelen approach which is a multisensory intervention approach. Twenty-eight relevant articles relating to individual (one-to-one) Snoezelen intervention with individuals with intellectual and developmental disabilities (IDD) were reviewed. A meta-analysis regarding the significance of the reduction of maladaptive behavior and the enhancement of adaptive behavior was implemented. The authors concluded that weaknesses in the examined research methodologies, the heterogeneity between research designs, the small number of available research projects, and the small number of participants in each research project, prevent a confirmation of this method as a valid therapeutic intervention at this time.

Smith et al. (2005) conducted a study to compare the effects of occupational therapy, using a sensory integration approach along with a control intervention of tabletop activities, on the frequency of self-stimulating behaviors in 7 children, ranging in age from 8-19, with pervasive developmental delay and mental retardation. During the 4 week study period, daily 15-min videotape segments were recorded before, immediately after, and 1 hour after either

sensory integration or control interventions were performed. Results indicated no change in self-stimulating behaviors occurred immediately following sensory integration intervention or tabletop activity intervention; however, the frequency of self-stimulating behaviors significantly declined one hour after therapy. Limitations with the study included the small sample size and short-term follow-up. Continued research is needed to examine the long-term effects of more extensive intervention.

Wuang et al. (2009) compared the effect of sensory integrative (SI) therapy, neurodevelopmental treatment (NDT), and perceptual-motor (PM) approach on children with mild mental retardation. A total of 120 children were randomly assigned to intervention with SI, NDT, or PM; another 40 children served as control participants. All children were assessed with measures of sensorimotor function. After intervention, the treatment groups significantly outperformed the control group on almost all measures. The SI group demonstrated a greater pretest-posttest change on fine motor, upper-limb coordination, and SI functioning. The PM group showed significant gains in gross motor skills, whereas the NDT group had the smallest change in most measures. Confidence in the conclusions about the efficacy of SI for improvements in sensorimotor function among children with mild mental retardation was reduced by the restricted age range (ages 7 to 8) of the study sample, a nonequivalent control group, differences in the intensity and frequency of home practice sessions, and a lack of long-term follow-up.

Smania et al. (2008) evaluated whether balance exercises performed under various sensory input manipulations can improve postural stability and/or walking ability in patients with stroke in 7 patients. Patient performance was assessed before, immediately after and one week after treatment (consisting of 20 one-hour daily sessions of several balance exercises) by means of the Sensory Organization Balance Test and the Ten Metre Walking Test. Before treatment, all patients showed balance impairment with difficulty integrating somatosensory information from the lower extremities and excessive reliance upon visual input in standing balance control. After treatment, balance and walking speed significantly increased and this improvement was maintained for one week. The study design (case series) did not allow for any generalizable conclusions about efficacy. Statistical methodologies were limited by the small sample size. Conclusions about relative benefit/risk could not be reached due to the lack of a control and/or a comparative group. The follow-up at one week post-treatment did not allow for assessment of intermediate and long-term outcomes.

Collins et al. (2011) evaluated the effectiveness of a weighted vest for children with difficulty attending to tasks. Ten participants were randomly assigned to an intervention or a control group to compare participants' percentage of time on task with and without a vest. Control group participants wore a non-weighted vest. Participants, classroom teachers, and research assistants who coded the data were blind as to the group to which the participants were assigned. The results of the study indicated that the weighted vests were not effective in increasing time on task. According to the authors, these results should be generalized cautiously owing to the small sample size and participant selection process.

Hodgetts et al. (2010) conducted a small, randomized and blinded study measuring the effects of wearing a weighted vest on stereotyped behaviors and heart rate for six children with autism in the classroom. Weighted vests did not decrease motoric stereotyped behaviors in any participant. Verbal stereotyped behaviors decreased in one participant. Weighted vests did not decrease heart rate. Heart rate increased in one participant. According to the investigators, based on this study, the use of weighted vests to decrease stereotyped behaviors or arousal in children with autism in the classroom was not supported.

Stephenson et al. (2009) reviewed 7 studies examining weighted vests. The investigators concluded that while there is only a limited body of research and a number of methodological weaknesses, on balance, indications are that weighted vests are ineffective.

In practice guidelines for therapies in children with autism spectrum disorders, the Agency for Healthcare Research and Quality (AHRQ) describes sensory integration and sensory-based interventions as one of several interventions in which autistic children may participate. According to the report, data from studies were insufficient to rate the strength of evidence related to sensory and auditory integration training for improving language skills, challenging behaviors, or cognitive ability in low functioning children with autism (Warren et al., 2011).

Professional Societies

American Academy of Pediatrics (AAP)

The AAP Section on Complementary and Integrative Medicine; Council on Children with Disabilities released a policy statement for sensory integration therapies for children with developmental and behavioral disorders. They state that it is unclear whether children who present with sensory-based problems have an actual "disorder" of the sensory pathways or whether these deficits are associated with other developmental and behavioral disorders. The AAP notes that because there is no universally accepted framework for diagnosis, sensory processing disorder generally should not be diagnosed. According to the report, occupational therapy with the use of sensory-based therapies may be acceptable as one of the components of a comprehensive treatment plan. However, parents should be informed that

the research regarding the effectiveness of sensory integration therapy is limited and inconclusive. Important roles for pediatricians and other clinicians may include discussing with families about a trial period of sensory integration therapy and teaching families how to evaluate the effectiveness of this therapy (Zimmer et al., 2012).

The AAP Committee on Children with Disabilities has stated that the scientific legitimacy of sensory integration therapy has not been established for children with motor disabilities. The AAP also states that successful therapy programs are individually tailored to meet the child's functional needs and should be comprehensive, coordinated, and integrated with educational and medical treatment plans, with consideration of the needs of parents and siblings. This can be facilitated by primary care pediatricians and tertiary care centers working cooperatively to provide care coordination in the context of a medical home (AAP, 2004; reaffirmed 2016). A statement of reaffirmation for this policy was published on September 1, 2007.

The AAP Council on Children with Disabilities published guidelines for the management of children with autism spectrum disorders (ASDs). Regarding sensory integration therapy, the guidelines state that sensory integration (SI) therapy is used alone or as part of a broader program of occupational therapy for children with ASDs. Unusual sensory responses are common in children with ASDs, but there is not good evidence that these symptoms differentiate ASDs from other developmental disorders, and the efficacy of SI therapy has not been demonstrated objectively. Available studies are plagued by methodologic limitations, but proponents of SI note that higher-quality SI research is forthcoming (Myers et al., 2007; reaffirmed 2014).

American Occupational Therapy Association (AOTA)

In an updated practice guideline for individuals with autism spectrum disorder (Tomchek et al., 2016), the AOTA includes the following as interventions for sensory integration:

- Ayres Sensory Integration (ASI)® to address individualized goal areas with measurement by Goal Attainment Scaling (B-moderate evidence)
- Multisensory activities to improve occupational performance and behavior regulation (B-moderate evidence)
- ASI to improve sleep, adaptive skills, autism features, and sensory processing (C–I-weak/insufficient evidence)
- Multisensory center and non-customized sensory diets to improve occupational performance and behavioral regulation (I-insufficient evidence)
- Sound therapies to improve behavioral regulation (I-insufficient evidence)
- Dynamic seating to improve in-seat and on-task behavior and engagement (I- insufficient evidence)
- Linear movement or tactile input (via surgical brush) to improve learning or behavior (I- insufficient evidence)
- Environmental modifications (i.e., sound-absorbing walls and ceiling with additional halogen lighting) to improve attention behaviors, emotional control, and classroom performance (I- insufficient evidence)
- Weighted vests to support improved behavior or performance in daily life activities (D-not recommended due to ineffectiveness and/or potential harm outweighs the benefits)

Auditory Integration Training (AIT)

Sokhadze et al. (2016) conducted a study using Berard's technique of auditory integration training (AIT) to improve sound integration in children with autism. It was proposed that exposure to twenty 30-min AIT sessions (total 10 h of training) would result in improved behavioral evaluation scores, improve profile of cardiorespiratory activity, and positively affect both early [N1, mismatch negativity (MMN)] and late (P3) components of evoked potentials in auditory oddball task. Eighteen children with autism spectrum disorder (ASD) participated in the study. A group of 16 typically developing children served as a contrast group in the auditory oddball task. The study reflected a linear increase of heart rate variability measures and respiration rate. Comparison of evoked potential characteristics of children with ASD versus typically developing children revealed several group difference findings, more specifically, a delayed latency of N1 to rare and frequent stimuli, larger MMN; higher P3a to frequent stimuli, and at the same time delayed latency of P3b to rare stimuli in the autism group. Parental questionnaires demonstrated improvements in behavioral symptoms such as irritability, hyperactivity, repetitive behaviors and other important behavioral domains. The authors concluded that the results of the study propose that more controlled research is necessary to document behavioral and psychophysiological changes resulting from Berard AIT and to provide explanation of the neural mechanisms of how auditory integration training may affect behavior and psychophysiological responses of children with ASD. The findings of this study need to be validated by larger, well-designed studies.

The Agency for Healthcare Research and Quality (AHRQ) published an updated comparative review on interventions targeting sensory challenges in children with autism spectrum disorder (ASD). Inclusion criteria were studies comparing interventions incorporating sensory-focused modalities with alternative treatments or no treatment, and inclusion of at least 10 children with ASD ages 2–12 years. The authors extracted and summarized data qualitatively because of the significant heterogeneity, as well as the strength of evidence (SOE). In regard to auditory integration–based approaches which included evidence in 4 small RCTs (2 moderate and 2 high risk of bias), they concluded that these did not improve language outcomes (low SOE) (Weitlauf et al., 2017).

Sinha et al. (2011) conducted a systematic review to evaluate AIT and included 6 randomized controlled trials (RTCs) with 171 autistic individuals. Three RTCs did not demonstrate the benefit of AIT over control conditions. The remaining trials identified improvements at 3 months for the AIT group based on improvements of total mean scores for the Aberrant Behavior Checklist, which is of questionable validity. There were no reported significant adverse effects of AIT. The reviewers concluded that more research is needed to determine the effectiveness of AIT for autism.

Professional Societies

American Academy of Pediatrics (AAP)

The AAP retired its publication on AIT and facilitated communication in July 2017. No similar AAP publications on this topic were identified.

American Academy of Audiology (AAA)

A 2010 position statement by the AAA Task Force on Auditory Integration Training (AIT) concludes that AIT (by any name) is investigational. The Academy believes that prospective, systematic research of this technique is needed to demonstrate its efficacy (Spangler et al., 2010).

American Speech-Language-Hearing Association (ASHA)

The ASHA prepared an evidenced-based technical report regarding AIT (ASHA, 2004). They noted that, despite approximately one decade of practice, this method has not met scientific standards for efficacy and safety that would justify its inclusion as a mainstream treatment for a variety of communication, behavioral, emotional and learning disorders.

U.S. FOOD AND DRUG ADMINISTRATION (FDA)

The equipment used for sensory integration therapy and auditory integration training is not considered medical in nature, and therefore not regulated by the FDA.

CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS)

Medicare does not have a National Coverage Determination (NCD) for sensory integration therapy (SIT) or auditory integration training (AIT). Local Coverage Determinations (LCDs) exist; see the LCDs for Home Health Occupational Therapy, Home Health Physical Therapy, Home Health Speech-Language Pathology, Medicine: Occupational Therapy – Outpatient, Medicine: Physical Therapy – Outpatient, Outpatient Occupational Therapy, Outpatient Physical and Occupational Therapy Services, Outpatient Physical Therapy, Outpatient Speech Language Pathology, Physical Therapy - Home Health, Speech - Language Pathology (SLP) Services: Communication Disorders, Speech-Language Pathology and Therapy and Rehabilitation Services (PT, OT).
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POLICY HISTORY/REVISION INFORMATION

Date	Action/Description

12/01/2018	• Reorganized policy template:
	  ○ Simplified and relocated *Instructions for Use*
	  ○ Removed *Benefit Considerations* section
	• Simplified coverage rationale (no change to guidelines)
	• Archived previous policy version 2018T0314Q

INSTRUCTIONS FOR USE

This Medical Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plan may differ from the standard plan. In the event of a conflict, the member specific benefit plan document governs. Before using this policy, please check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

UnitedHealthcare may also use tools developed by third parties, such as the MCG™ Care Guidelines, to assist us in administering health benefits. UnitedHealthcare Medical Policies are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.