

MEDICAL POLICY		Sensory Integration Therapy	
Effective Date: 3/1/2020		Section: MED	Policy No: 396
 3/1/2020		Medical Policy Committee Approved Date: 8/17; 12/17; 12/18; 2/19; 2/2020	
Medical Officer	Date		

See Policy CPT CODE section below for any prior authorization requirements

## SCOPE:

Providence Health Plan, Providence Health Assurance, Providence Plan Partners, and Ayn Health Solutions as applicable (referred to individually as “Company” and collectively as “Companies”).

## APPLIES TO:

All lines of business

## BENEFIT APPLICATION

### Medicaid Members

*Oregon:* Services requested for Oregon Health Plan (OHP) members follow the OHP Prioritized List and Oregon Administrative Rules (OARs) as the primary resource for coverage determinations. Medical policy criteria below may be applied when there are no criteria available in the OARs and the OHP Prioritized List.

### **POLICY CRITERIA**

Note: The Optum® Coverage Determination Guideline for Neurodevelopmental Disorders ([BH727ND 012017](#)) address sensory integration therapy in patients with autism spectrum disorder. Therefore, this policy only pertains to sensory integration therapy in non-autistic patients.

Sensory integration therapy is considered **not medically necessary and is not covered** as a treatment of any condition.

Link to [Policy Summary](#)

**CPT/HCPCS CODES**

All Lines of Business	
Not Covered	
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**

“Sensory integration is a psychological concept proposed in the 1970s by Dr. Jean Ayres and refers to the process by which people use visual, auditory, gustatory (taste), olfactory (smell), tactile (touch), proprioceptive (position sense), and vestibular (balance and movement) sensory information to produce purposeful, adaptive behaviors.”<sup>1</sup> Deficits in these sensory functions can occur when sensory neurons do not function properly, which can limit a child’s ability to perform novel tasks and develop social relationships. Sensory integration therapy (SIT), “is designed to enhance sensory information processing by changing underlying neurological processing through the use of activities that challenge a child to gradually engage in more challenging tasks, thus producing more complex and adaptive responses.”<sup>1</sup>

**REVIEW OF EVIDENCE**

A review of the ECRI, Hayes, Cochrane, and PubMed databases was conducted regarding the use of sensory integration therapy of non-autistic developmental behavioral disorders. Below is a summary of the available evidence identified through January 2020.

Systematic Reviews

In 2014 (updated 2018), Hayes conducted an evidence review evaluating sensory integration therapy (SIT) for non-autistic children.<sup>2</sup> The review included 11 studies (8 randomized controlled trials and 2 prospective nonrandomized studies) that examined SIT over time or compared with control groups. Patients were followed-up with until the end of treatment, except for one study that followed patients for 2 years. Sample sizes ranged from 20 to 120 patients, and outcomes of interest measured cognitive and behavioral constructs (e.g., movement/activity, motor function, academic performance, and sensory integration).

The Hayes evidence review found inconclusive evidence and no clear benefit of SIT over time or compared to other alternative treatments. Inconsistent findings were found for studies reporting pre-versus post-SIT, neurodevelopmental training versus SIT, motor training versus SIT, and exercise versus SIT. No significant differences were found between groups when SIT was compared to no treatment, vestibular stimuli training plus SIT, or academic intervention. Due to heterogeneous patient populations, there was not enough evidence to determine appropriate patient selection criteria for SIT in non-autistic children.

The quality of evidence was rated as low due to significant methodological limitations, including, but not limited to, small sample sizes, lack of follow-up data, and differences in patient populations across studies. Ultimately, Hayes gave a “D2 rating for SIT for non-autistic children with sensory processing difficulties when examined alone or when compared with alternative treatments.”<sup>2</sup>

#### Randomized Controlled Trials (RCTs)

The evidence review identified three RCTs evaluating sensory integration therapy for non-autistic developmental behavioral disorders.<sup>3-5</sup> These studies were included in the Hayes evidence review described above so they will not be discussed here.

## CLINICAL PRACTICE GUIDELINES

#### American Academy of Pediatrics (AAP)

The 2012 AAP evidence-based policy statement on sensory integration therapies for children with developmental and behavioral disorders concluded, “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 amount of research regarding the effectiveness of sensory integration therapy is limited and inconclusive.”<sup>1</sup>

The 2004 AAP Committee on Children with Disabilities concluded, “scientific legitimacy has not been established for sensory integration intervention for children with motor disabilities.”<sup>6</sup>

## CENTERS FOR MEDICARE & MEDICAID

As of 1/27/2020, no Centers for Medicare & Medicaid (CMS) coverage guidance was identified which addresses sensory integration therapy for the treatment of any condition.

## POLICY SUMMARY

There is insufficient evidence to conclude sensory integration therapy (SIT) improves long-term functioning for non-autistic children. Also, the evidence does not indicate SIT is superior to no treatment at all or other alternative interventions. Further good-quality studies with well-defined patient populations are required in order to establish the effectiveness of SIT for non-autistic developmental behavioral disorders.

## INSTRUCTIONS FOR USE

Company Medical Policies serve as guidance for the administration of plan benefits. Medical policies do not constitute medical advice nor a guarantee of coverage. Company Medical Policies are reviewed annually and are based upon published, peer-reviewed scientific evidence and evidence-based clinical practice guidelines that are available as of the last policy update. The Companies reserve the right to determine the application of Medical Policies and make revisions to Medical Policies at any time. Providers will be given at least 60-days notice of policy changes that are restrictive in nature.

The scope and availability of all plan benefits are determined in accordance with the applicable coverage agreement. Any conflict or variance between the terms of the coverage agreement and Company Medical Policy will be resolved in favor of the coverage agreement.

## REGULATORY STATUS

### Mental Health Parity Statement

Coverage decisions are made on the basis of individualized determinations of medical necessity and the experimental or investigational character of the treatment in the individual case.

## REFERENCES

1. Zimmer M, Desch L. Sensory integration therapies for children with developmental and behavioral disorders. *Pediatrics*. 2012;129(6):1186-1189.
2. Hayes Inc. *Sensory Integration Therapy for Non-Autistic Children*. 2018. <https://www.hayesinc.com/subscribers/displaySubscriberArticle.do?articleId=16374&&sectionSelector=ExecutiveSummary>. Accessed 01/08/2019.
3. Lin CL, Min YF, Chou LW, Lin CK. Effectiveness of sensory processing strategies on activity level in inclusive preschool classrooms. *Neuropsychiatric disease and treatment*. 2012;8:475-481.
4. Wang YP, Wang CC, Huang MH, Su CY. Prospective study of the effect of sensory integration, neurodevelopmental treatment, and perceptual-motor therapy on the sensorimotor performance in children with mild mental retardation. *The American journal of occupational therapy : official publication of the American Occupational Therapy Association*. 2009;63(4):441-452.
5. Shamsoddini A. Comparison between the effect of neurodevelopmental treatment and sensory integration therapy on gross motor function in children with cerebral palsy. *Iranian Journal of Child Neurology*. 2010;4(1):31-38.
6. Michaud LJ. Prescribing therapy services for children with motor disabilities. *Pediatrics*. 2004;113(6):1836-1838.