

## Treatment Intervention Advisory Committee Review and Determination



**Date:** October 26, 2018

**To:** Wisconsin Department of Health Services

**From:** Wisconsin Department of Health Services Treatment Intervention Advisory Committee:  
Shannon Stuart, Ph.D. (chairperson)

**RE:** Determination of Social Communication, Emotional Regulation and Transactional Support (SCERTS) as a proven and effective treatment for children and adults

This is an initial review

This is a re-review. Previously reviewed (rated) on July 25, 2013 (4), April 18, 2014 (4), and April 24, 2015 (4).

No new research located; determination from \_\_\_\_\_ stands (details below)

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### Section One: Overview and Determination

Please find below a statement of our [determination](#) as to whether or not the committee views Social Communication, Emotional Regulation, and Transactional Support (SCERTS) as a proven and effective treatment. 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 the Department of Health Services, 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 treatment is with regards to quality research. The committee does not make decisions regarding funding.

#### Description of proposed treatment

SCERTS is a comprehensive intervention model. The SCERTS Model is an educational approach for individuals of all ages and skill levels with autism spectrum disorders (ASD) and related disabilities and their families, across home, school and community settings. SCERTS was developed by Barry Prizant, PhD, Amy Wetherby, PhD, Emily Rubin and Amy Laurant. SCERTS is founded on the theoretical and conceptual principles based on practices from other approaches including ABA (in the form of PRT), TEACCH, Floortime and RDI. The SCERTS Model differs most from traditional ABA by promoting child-initiated communication in everyday activities aiming to help children learn and spontaneously apply functional skills across materials, partners, and settings. SCERTS is usually provided in a school setting by SCERTS-trained educators (i.e., special education or other health-related professionals).

#### Synopsis of current review (October 2018 )

Committee members completing current review of research base: Brooke Winchell & Amy Van Hecke

Our current review of the literature from 2015 to present found one peer-reviewed study (Morgan, Hooker, Sparapani, Reinhardt, Schatschneider, & Wetherby, 2018). The study was conducted by SCERTS developers, using a CRT design, which includes a comparison group to evaluate Classroom SCERTS Intervention (CSI) in comparison to autism training modules (ATM) for elementary students. The results indicated better outcomes were significant for the CSI group.

Please refer to the reference list ([Section Four](#)) which details the reviewed research.

Our current review of the literature from 2015 to present found one peer-reviewed experimental study (Morgan, Hooker, Sparapani, Reinhardt, Schatschneider, & Wetherby, 2018). The study was conducted by SCERTS developers, using a cluster randomized trial design, which includes a comparison group to evaluate Classroom SCERTS Intervention (CSI) in comparison to autism training modules (ATM) for students nested within general and special education classrooms nested within schools. The CRT design was used to limit possibility of contamination of treatment effect if teacher working in the same school were randomly assigned.

The foundation of CSI is the SCERTS model, is a classroom-based teacher implemented intervention. The participants included sixty schools with 197 students with ASD in 129 classrooms. Schools were matched pairwise on demographic features (i.e., school size, proportion of students receiving free or reduced lunch, and ethnic composition) and one school from each pair was randomly assigned to CSI or ATM. Students had a mean age of 6.79 years and 81.2% were male.

The teachers were trained on CSI and received ongoing, direct coaching throughout the school year on how to effectively implement CSI. The main intervention steps included the teacher condition an initial assessment informed by the SCERTS Assessment Process to determine student language stage and student objectives. The child's profile in SC and ER were used to select priority goals and objectives. Then the SCI Education Planning Grid was utilized to integrate goals into target activities while guided by the CSI coach. Coaching was provided for 25 hours a week across these classroom activities and the SCERTS Practice Principles for Success Checklist was complete for two activities.

Data was collected over a three-year period, in which every year, two waves of data were collected. Baseline and end of treatment assessment were conducted to assess the classroom AE, vocabulary, adaptive behavior, social skills, and executive functioning. Results indicated better outcomes for the CSI group. Significant results for CSI group over the ATM group included observed measures of classroom active engagement with regard to social interaction, adaptive communication, social skills, and executive functioning with Cohen's d effect sizes ranging from 0.31 to 0.45. Implementation fidelity was assessed using SCI Teacher Fidelity Measure. Instructor fidelity was scored for both condition for monthly classroom observation videos what were recorded as part of the larger data collection procedures. Interobserver agreement on the CSI Teacher Fidelity Measure was calculated for 35% of the total observations. Mean agreement was 87% and ranged from 75% to 95%. The study reports that research on teacher-implemented interventions for students with ASD similar in structure to SCERTS have reported fidelity averages ranging from 48% to 73% (Mandell et al., 2013; Strain & Bovey, 2011; Young et al., 2016).

Overall, this study provides evidence of the effectiveness of the CSI model, a teacher implemented, classroom-based intervention for elementary students with ASD when compared with ATM, students with ASD showed more growth on several educationally relevant variables.

Limitations of this study include the following:

- Limited size of between group differences
- 81.2% of sample were male ( although this is consistent with ASD demographics)
- Data were not collected on the access and usage rates of the training modules provided for the ATM condition. This prevents a full reporting of what training teachers in ATM actually received and how that training may have impacted classroom practice
- Lack of information on class size prevents analysis of how this variable may relate to levels of teacher implementation and treatment effects
- Rates of interrater reliability were low for the Social Interaction composite of measure of AE. This reflects the presence of noise in the measure and maybe related to the modesty of treatment effects observed.
- Measured outcomes at the end of treatment only. Lack of student assessment at additional time points following treatment, limits ability to evaluate long-term effects of the intervention as well as sustainability of model implementation

**Committee’s Determination:** After reviewing the research and applying the criteria from the [Treatment Review Evidence Checklist](#), it is the decision of the committee that SCERTS receive an efficacy rating of Level 3-Emerging Evidence (DHS 107-Promising as a Proven & Effective Treatment).

#### Review history

(April 2015 - Brooke Winchell & Amy Van Hecke)

- There have not been any additional, peer-reviewed, experimental studies since the last review.
- A literature search was conducted for years 2014 and 2015 in order to find updates on empirical evidence on the SCERTS Model published since the last review. There have not been any additional, peer-reviewed, experimental studies since the last review of the SCERTS Model.
- The previous review found one descriptive study “observed” raw score gains in joint attention, symbol use, mutual regulation, and self-regulation among four students (ages not provided) attending a primary special school for children with ASD (O’Neill et al., 2010).
- Additionally, one published descriptive review of comprehensive treatment models determined there are neither published outcome data for SCERTS or peer-reviewed journal articles supporting the efficacy of SCERTS (Odom, Boyd, Hall, & Hume, 2010).
- SCERTS developers ( Prizant, Wetherby, Rubin, and Laurent) have authored manuals and publications on the SCERTS Model. To date, the committee has not been able to locate any published reports of independent, empirical evaluations of the SCERTS Model.
- The previous review cited a 4-year grant, awarded to Florida State University in 2010, to test the effectiveness of implementing a SCERTS curriculum for children with ASD. The study, which involves 40 schools with a focus on kindergarten to second-grade classrooms and will test the implementation of

the SCERTS Model vs. the typical special education classroom. Anticipated completion of the study was 2014. Outcomes have yet to be published.

In sum, it is the decision of the committee that SCERTS, based on the lack of other well-controlled studies in peer-reviewed journals examining the efficacy of this therapy for children with ASD, remain at a rating of Level 4-Insufficient Evidence (Experimental Treatment).

(April 2014 - Roger Bass & Maribeth Gettinger)

At this time, the TIAC has been unable to identify any scientific studies of the effectiveness of the SCERTS Model published in peer-reviewed journals. As such, it is the committee's conclusion that the SCERTS Model has achieved a Level 4 rating: Insufficient Evidence (Experimental Treatment).

(July 2013 - Maribeth Gettinger & Lana Collet-Klingenberg)

With few exceptions (cited below), the SCERTS developers (Prizant, Wetherby, Rubin, and Laurent) have authored or co-authored the extant resources, manuals, and publications relating to the SCERTS model. The developers state that the research support for SCERTS rests on empirical evidence for the individual intervention strategies or methods embedded within the comprehensive model (Prizant, Wetherby, Rubin, & Laurent, 2010). To date, the committee has been unable to locate any published reports of independent, empirical evaluations of the comprehensive SCERTS approach.

One descriptive study (conducted in the UK and published in Good Autism Practices) reported "observed" (not tested for statistical significance) raw score gains in joint attention, symbol use, mutual regulation, and self-regulation (as measured by a SCERTS assessment procedure) among four students (ages not provided) attending a primary-level special school for children with ASD (O'Neill et al., 2010).

The committee's conclusion that SCERTS lacks sufficient evidence at this time is further supported by (a) findings of at least one authoritative body which determined there is insufficient evidence for SCERTS (Children's Services Evidence-Based Practice Advisory Committee, 2009), and (b) findings of at least one published descriptive review of comprehensive treatment models which determined that there are neither published outcome data for SCERTS nor peer-reviewed journal articles supporting the efficacy of SCERTS (Odom, Boyd, Hall, & Hume, 2010).

It should be noted that in March, 2010, Wetherby (one of the SCERTS developers) was awarded a four-year grant from the Institute of Education Sciences (U.S. Department of Education) to conduct a randomized control trial of SCERTS in 40 schools (320 children in Grades K-2) in Florida and California. This study (called Classroom SCERTS Intervention, or CSI) is currently underway; it is expected that results will be forthcoming in the next 1-2 years.

## 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: TIAC Treatment Review Evidence Checklist

Name of Treatment: Social Communication, Emotional Regulation, and Transactional Support (SCERTS)

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

#### 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:* Participants were elementary school students with the average age of 6.79 years old, 81.2% male, and diagnosed with ASD.

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:* The National Standards Project, an organization that reviews the scientific literature to test the effectiveness of behavioral treatments for ASD, failed to include the SCERTS Model within their publication.

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

**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., Collet-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

### Literature reviewed for current determination:

Morgan, L., Hooker, J. L., Sparapani, N., Reinhardt, V. P., Schatschneider, C., & Wetherby, A. M. (2018). Cluster randomized trial of the classroom SCERTS intervention for elementary students with autism spectrum disorder. *Journal of Consulting and Clinical Psychology*, 86 (7), 631-644.

### Literature reviewed for previous determinations:

Children's Services Evidence-Based Practice Advisory Committee (CSEBPAC). (2009). *Interventions for autism spectrum disorders: State of the evidence*. Augusta, ME: Department of Health and Human Services and Department of Education.

Odom, S. I., 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.

O'Neill, Bergstrand, L., Bowman, K., Elliott, K., Mavin, L., Stephenson, S., & Wayman, C. (2010). The SCERTS model: Implementation and evaluation in a primary special school. *Good Autism Practices*, 11(1), 7-16.

Prizant, B. M., Wetherby, A. M., Rubin, E., & Laurent, A. C. (2003). The SCERTS model: A transactional, family-centered approach to enhancing communication and socio-emotional abilities of children with autism spectrum disorder. *Infants and Young Children*, 16, 296-316.

Prizant, B. M., Wetherby, A. M., Rubin, E., Laurent, A. C., & Rydell, P. J. (2002). The SCERTS model: Enhancing communication and socio-emotional ability of children with autism spectrum disorders. *Jenison Autism Journal*, 14(4), 2-19.

Prizant, B. M., Wetherby, A. M., Rubin, E., & Laurent, A. C. (2010). The SCERTS model and evidence-based practice. Retrieved from [http://www.scerts.com/docs/SCERTS\\_EBP%20090810%20v1.pdf](http://www.scerts.com/docs/SCERTS_EBP%20090810%20v1.pdf)

Wetherby, A. M., Rubin, E., Laurent, A. C., Prizant, B. M., & Rydell, P. J. (2006). Summary of research supporting the SCERTS model. Retrieved from [http://www.scerts.com/ResearchSupportingtheSCERTSModel\\_10-7-06.pdf](http://www.scerts.com/ResearchSupportingtheSCERTSModel_10-7-06.pdf)