Treatment Intervention Advisory Committee Review and Determination

Date: October 30, 2015

To: DHS/DLTC

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

RE: Determination of Cognitive Behavior 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

Section One: Overview and Determination

Please find below a statement of our determination as to whether or not the committee views Cognitive Behavior Therapy (CBT) 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

Cognitive Behavior Therapy (CBT) has been widely used in persons with anxiety and depressive disorders. Typically CBT consists of techniques to help persons identify maladaptive thoughts and emotions and then provides techniques for addressing those problems. In addition CBT can include exposure techniques where persons are given in vivo training with problematic contexts, imagery procedures to use (often before moving to in vivo techniques), and video modeling procedures where typically functioning people are observed and emulated.

Most CBT clinical research has not included autism spectrum disorder (ASD) or other disability groups. That trend is changing and procedures are emerging for those populations, including procedures that bear strikingly similar characteristics to traditionally used CBT. Perhaps one reason for slow CBT application with such groups was the low verbal skills often inherent to many disabilities. That perhaps explains why CBT is now being used primarily with high-functioning ASD clients. As some of the reviewed research indicates, verbal performance (often measured as IQ) is a predictor of CBT efficacy.

CBT is often provided in groups, sometimes individually, and sometimes with parents and children. Therapy is being standardized in manuals and often consists of several weeks of training on several topics that can vary from what anxiety/depression etc. is to how to recognize its severity, tactics for selecting what to do when intense negative emotions and thoughts are prevalent, and how to not just avoid negative affect but how to increase the number of positive emotions.

It is fair to state that much of the "cognitive" training in CBT entails rule-governed behavior that helps the client become his/her own therapist. These mediational interpretations are designed to not just identify appropriate techniques to address difficult situations, but to reinterpret negative emotions and thoughts so that any counter-conditioning becomes automatic. Hence there is often an educational as well as a clinical component to CBT.

Synopsis of review

In the case of Cognitive Behavior Therapy, please refer to the attached reference listing that details the reviewed research. The committee's conclusions regarding Cognitive Behavior Therapy include:

- CBT is a well-established procedure that has recently been extended to include ASD and other handicapping conditions.
- The procedures established as effective in non-ASD domains have efficacy with ASD populations and others. Consequently this review addresses a sampling of ASD research as well as other handicapping conditions.
- The CBT studies with ASD populations has been shown to be effective across ages but with most work involving adolescent clients with anxiety and depression problems.
- The CBT studies with non-ASD populations addresses a wide range of presenting problems including chronic pain, single-instance causes of clinical anxiety and stress, post-traumatic stress disorder (PTSD) for children forced to serve as child soldiers in the Congo, social skills, and more.
- The CBT literature within and outside the areas of ASD has developed to the point that specific variables predicting success have been identified, that approaches focusing on those variables can be identified (e.g., Acceptance and Commitment Therapy), and that pre-therapy assessments can predict the chances of client success. In short, CBT for ASD is well defined, well understood, and stands on a large empirical base that guides its use.

In sum, it is the decision of the committee that Cognitive Behavior Therapy is a Level 1 treatment, with well-established/strong evidence (DHS 107 - Proven & Effective 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: Cognitive Behavior 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: CBT is most clearly effective for individuals who (a) have developed verbal skills (70^{th} percentile), (b) have anxiety, depression or social skills problems, and (c) are ages 9-adult. Other populations include those cited above (chronic pain, PTSD, thought disorders involving irrational interpretations, and related clinical disorders that have verbal components. Exposure therapy with less emphasis on verbal mediators has also been effective with stress and social skills concerns.

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

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Date: October 30, 2015

Committee Members Completing Initial Review of Research Base: Roger Bass, Jeff Tiger

Committee Decision on Level of Evidence to Suggest the Proposed Treatment is Proven and Effective: Level 1 - Proven and Effective 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., 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

Cite all literature reviewed here and note month of most recent article reviewed for future reviewers:

ASD Studies

Jennifer L. Hudson, Ronald M. Rapee, Heidi J. Lyneham, Lauren F. McLellan, Viviana M. Wuthrich, & Carolyn A. Schniering. (2015). Comparing outcomes for children with different anxiety disorders following cognitive behavioural therapy. *Behavior Research and Therapy, 72*, 30-37.

Athena Lickel , William E. MacLean Jr., Audrey Blakeley-Smith & Susan Hepburn. (2012). Assessment of the Prerequisite Skills for Cognitive Behavioral Therapy in Children with and Without Autism SpectrumDisorders. J Autism Dev Disord, 42:992–1000.DOI 10.1007/s10803-011-1330-x

Judy Reaven, Audrey Blakeley-Smith, Kathy Culhane-Shelburne, & Susan Hepburn (2012). Group Cognitive Behavior Therapy for Children with High-Functioning Autism Spectrum Disorders and Anxiety: A Randomized Trial *J Child Psychol Psychiatry*, April; 53(4): 410–419

Annelies A. Spek, Nadia C. van Hama &, Ivan Nyklı´cˇek. (2013). Mindfulness-based therapy in adults with an autism spectrum disorder: A randomized controlled trial. *Research in Developmental Disabilities 34*, 246–253

Kate Sofronoff, Tony Attwood, Sharon Hinton, Irina Levin (2007). A Randomized Controlled Trial of a Cognitive Behavioural Intervention for Anger Management in Children Diagnosed with Asperger Syndrome. *J Autism Dev Disord*, 37:1203–1214. DOI 10.1007/s10803-006-0262-3

F. J. A. van Steensel and S. M. Bögels (2015) CBT for Anxiety Disorders in Children With and Without AutismSpectrum Disorders. *Journal of Consulting and Clinical Psychology*, Vol. 83, No. 3, 512–523 0022-006X/15/. http://dx.doi.org/10.1037/a0039108

Min Sung • Yoon Phaik Ooi • Tze Jui Goh Pavarthy Pathy • Daniel S. S. Fung • Rebecca P. Ang • Alina Chua • Chee Meng Lam (2011). Effects of Cognitive-Behavioral Therapy on Anxiety in Children with Autism Spectrum Disorders: A Randomized Controlled Trial *Child Psychiatry Hum Dev*, 42:634–649 DOI 10.1007/s10578-011-0238-1

Shin-Yi Wang *, Ying Cui, Rauno Parrila (2011) Examining the effectiveness of peer-mediated and video-modeling socialskills interventions for children with autism spectrum disorders: A meta-analysis in single-case research using HLM Research in Autism Spectrum Disorders, *Research in Autism Spectrum Disorders, 5* 562–569

Non-ASD Studies

Samantha Lloyd, Trudie Chalder, & Katharine A. Rimes. (2012). Family-focused cognitive behaviour therapy versus psycho-education foradolescents with chronic fatigue syndrome: Long-term follow-up of an RCT. *Behaviour Research and Therapy*, 50, 719-725. www.elsevier.com/locate/brat

John McMullen, Paul O'Callaghan, Ciaran Shannon, Alastair Black, & John Eakin (2013), Group trauma-focused cognitive-behavioural therapy with former child soldiers and other war-affected

boys in the DR Congo: a randomised controlled trial. *Journal of Child Psychology and Psychiatry 54:11* pp 1231–1241 doi:10.1111/jcpp.12094

Thomas H. Ollendick, Lars-Go¨ran O, Lena Reuterskio, Natalie Costa, & Virginia TechRio. (2009). One-Session Treatment of Specific Phobias in Youth: A Randomized Clinical Trial in the United States and Sweden. *Journal of Consulting and Clinical Psychology, Vol. 77, No. 3,* 504–516. 0022-006X/09/$12.00 DOI: 10.1037/a0015158

Shelley M.C. van der Veek, Bert H.F. Derkx, Marc A. Benninga, Frits Boer, & Else de Haan (2013). Cognitive Behavior Therapy for Pediatric Functional Abdominal Pain: A Randomized Controlled Trial. *Pediatrics, Volume 132, Number* 5, 1163-1172.

Spence, S.H., Donovan. C., & Brachman-Toussaini, M. (2000). The treatment of childhood social phobia: the effectiveness of a social skills training-based cognitive behavioral intervention, with and without parental involvement. *Journal of Child Psychiatry, 44(6),* 713-726.

Reginald David, Vandervord Nixon, Jisca Sterk & Amanda Pearce. (2012). A Randomized Trial of Cognitive Behaviour Therapy and Cognitive Therapy for Children with Posttraumatic Stress Disorder Following Single-Incident Trauma. *J Abnorm Child Psychol, 40*:327–337. DOI 10.1007/s10802-011-9566-

Rikard K. Wicksell, Gunnar L. Olsson, &Steven C. Hayes. (2011) Mediators of change in Acceptance and Commitment Therapy for pediatric chronic pain. *Pain, 152,* 2792–2801