Treatment Intervention Advisory Committee Review and Determination

Date: June 29, 2018

To: Wisconsin Department of Health Services

From: Wisconsin Department of Health Services Treatment Intervention Advisory Committee:

Lana Collet-Klingenberg, Ph.D. (chairperson) LCK

RE: Determination of Telehealth for Behavioral Treatment as a proven and effective treatment for children and adults

☒ This is an initial review

☐ This is a re-review. Previously reviewed (rated) on date (rating), date (rating) and date (rating).

☐ No new research located; determination from month, year stands (details below)

Section One: Overview and Determination

Please find below a statement of our determination as to whether or not the committee views Telehealth for Behavioral Treatment 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

The move to "Telehealth" e.g., real-time videoconferencing, training, and assessment is an outgrowth of clinical psychologists providing such services with adults in talk-therapy. This term is the forerunner of "telepractice", "telepsychology", "telemental health", that entailed the provision of remote psychological services via, e.g., email, telephone, and videoconferencing.

The APA has tracked the growth of Telehealth since about 2000 and found that between 2000 and 2008, about 10% of practicing psychologists used Telehealth technology. The APA notes that Telehealth's support is growing and has responded with APA collaboration with State and Provincial Psychology Boards to create guidelines for Telehealth practice.

Although a key case for Telehealth practices is the need for services, the pace of adoption is slowed in part by:

(a) Licensing, especially the issue of treating people across state lines.
(b) Privacy risks.
(c) Reimbursement concerns.
(d) Training for Telehealth practice is not well established, including special clinical skills needed and related issues such as privacy concerns.

The growing need for ASD practitioners in unserved areas and the ease of establishing teleconferencing infrastructure will likely lead to a fast adoption of Telehealth procedures.

A key issue for the TIAC is whether Telehealth is a treatment intervention or a treatment delivery system. It seems to this reviewer that Telehealth delivery should be evaluated according to whether and how ASD treatment practices have been empirically demonstrated to be safe and effectively provided via teleconferencing. Therefore Telehealth delivery of an approved procedure should not be approved contingent on the procedure's proven efficacy, but whether it is successfully delivered via Telehealth technology.

Synopsis of current review (June 2018)

Committee members completing current review of research base: Jenny Asmus and Roger Bass

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

The studies overall demonstrated that (a) parents and teachers can be taught assessment skills (both direct observation and standardized measures), (b) program fidelity can be achieved with accompanying improved behavior, and (c) Telehealth is generally less expensive and satisfies consumers.

The Lindgren et al. (2016) study is exemplary: parents learned assessment procedures, delivered therapy methods with fidelity, and reported high consumer satisfaction. More importantly, the program achieved more than 90% reductions in problem behaviors.

The Vismara et al (2016) study used videoconferencing to teach the Early Start Denver Model during 12, 1.5 hour sessions. Although the ESDM children scored higher than controls, the controls had only monthly videoconferencing whereas ESDM had weekly discussions. Interestingly, the dependent variable of "joint attention" was performed equally by clients across these conditions. Clearly better control comparisons are needed and the lack of clear effects across these conditions suggests that the differences obtained are not very robust.

The Bearss et al (2018) study was more typical: a quasi-experimental design was used where feasibility (consumer satisfaction) and program fidelity were emphasized. Parent ratings were the primary measure of children's improvement and no direct observation took place.

Knutson et al. (2016) reviewed 36 Telemedicine studies that met selection criteria and found that overall they describe the three studies summarized above: consumer satisfaction was emphasized, efficacy of parents trained in vivo and via teleconferencing was about equal, and cost-effectiveness was a strong argument for Teleconferencing.

Additional materials submitted by the American Telehealth Association were reviewed including scores of abstracts, CalABA guidelines for Telehealth procedures, guidelines for Telehealth service providers, and the financial consequences of not providing services. My comments there suggest that Telehealth shows promise that, in this reviewer' opinion, are not yet empirically grounded, the skill sets needed for successful videoconferencing are not widely taught or known, the range of ASD methods studied are limited (FCT and ESDM are common but not more involved procedures requiring strong behavior analysis skills).

And then there's the question "Is Telehealth a therapy method or therapy delivery mechanism?" If approval is given to "Telehealth" what exactly is being approved? Telehealth to teach parents FCT and ESDM seems promising as is FBAs and some standardized measure, but what about, say, a behavior controlled by a concurrent schedule of reinforcement where the Matching Law is needed to affect "choice" but reinforcers are influenced by delay discounting? In this reviewer's opinion Telehealth isn't ready for that kind of challenge which is not to say it never will be but, it seems to me, there's a great deal of research between then and now.

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 Telehealth as a method for delivering evidence-based behavioral assessment and treatment receive an efficacy rating of Level 2: Established or Moderate Evidence for the following practices: assessment, parent training, P-ESDM, supervision of therapists in the field, functional communication training, discrete trial training, and teacher support.

Review history
Initial review - no review history

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: Telehealth for Behavioral Treatment

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: The data address primarily children with ASD who received therapy or underwent assessments mediated by their parents acting under the direction of therapists providing instruction remotely.

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

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:

Bearss, K., Burrell, T.L., Saankari, A.C., Potorino, V., Gillespie, S.E., Crooks, C., & Schail, L. (2018). Feasibility of parent training via telehealth for children with autism spectrum disorder and disruptive behavior: A demonstration pilot. Journal fo Autism and Developmental Disorder, 48(4), 1020-1030.

Knutson, J., Wolfe, A., Burke, B.L., Hepburn, S., Lindgren, S., Coury, D. A= (2016) A systematic review of Telemedicine in Autism Spectrum Disorders. Journal of Autism and Developmental Disorders, 3:330-344. DOI10.1007/s40489-016-0086-9.

Lindgren, S., Wacker, D., Suess, A., Schieltz, K., Pelzel, K., Kopelman, T., Lee, J., Romani, P., and Waldron, D. (2016). Telehealth and autism: Treating challenging behavior at lower cost. Pediatrics, 137,mS167. DOI: 10.1542/Peds.2015-2851O.

Vismara, L.A., McCormick, E.B., Wagner, A.L., Monlux, K., Nadhan, A., Young, G.S. (2016). Telehealth parent training in the Early Start Denver Model: Results from a randomized control study. Focus on Autism and Other Developmental Disabilities. DOI: 10.1177/1088357616651064.

A catalog of abstracts submitted by ATA for review that includes Guidelines for Telehealth delivery and CalABA's guidelines for Telehealth. A narrative evaluation of thse materials is included as an addendum to this memo.

Literature reviewed for previous determinations:

Initial review - no previous references

Telehealth for Behavioral Treatment - Addendum

To: TIAC Committee
From: Roger Bass
Date: 6-20-2018

Re: Telehealth supporting materials

A number of materials were submitted in support of Telehealth that are neither original research nor literature reviews are reviewed including:

*A catalog of abstracts from articles supporting Telehealth delivery.
*Guidelines for Telehealth practice.
*CalABA's guidelines for Telehealth service delivery.

I will remark on them in turn.

Telehealth Abstracts

The preponderance of Telehealth abstracts submitted address these areas:

1. Assessment. Parents, teachers, and providers are taught to assess behaviors or assessments themselves are done remotely by behavior therapists. These assessments include FAs, preferences, standardized measures e.g., ADOS, and evaluations of behaviors specific to a client's program.

2. Providing services to remote areas. These include intercontinental therapy sessions, and ABA OT, and SP/L in classrooms and homes. The argument that Telemedicine can reach underserved clients is repeatedly made in support of the procedure.

3. Cost effectiveness. Along with easily reaching rural and remote areas is the argument that not serving children is more expensive in the long run than Telemedicine. This position is supported with Southern California's Consortium for Behavior Analysis report (2012) "The Adverse Effects of Societal Costs of Denying, Delaying, or Inadequately Providing EIBI for Children with Autism."

4. Therapist training. The argument that parents can be trained to assess and deliver ASD methods complements the argument, often made, that Telemedicine can be used to train therapists more economically and efficiently than traditional brick and mortar programs. Programs delivering instruction on ABA, ESDM, OT, and SP/L are cited.

5. Range of ASD Therapies provided. The range of ASD therapies that have been applied with Telemedicine procedures is, it seems to this reviewer, unexpectedly small. FCT, Natural Language Programs, DTT, and ESDM are nearly all that were reported in the data received. One Cognitive Behavior Therapy application was cited, some procedures to encourage verbal behavior are reported and a review of computer-based interventions for teaching emotional recognition to children with ASD found inconsistent data with some trending toward promising outcomes.

6. Consumer satisfaction and Program Delivery Feasibility. Many studies pivoted on the question of consumer satisfaction, especially parent satisfaction was generally high. This reviewer

concluded that in practice, "feasibility" meant "unanticipated logistical issues." That topic was the focus of numerous studies where researchers agreed that feasibility was high, and that, consequently, Telehealth made sense if its scale recouped start-up technology costs.

Guidelines for Telehealth Practice

The "Practice Guidelines for Telemental Health with Children and Adolescents" provides specifics for those proposing Telehealth practices to agencies, state legislators, and insurance companies among others who will make funding and regulatory decisions regarding Telehealth practice. It is well organized and written by those who know what regulators will ask.

In my opinion, the guidelines suggest practices that were not mentioned in the empirical record provided. For example, "Due to the small but emerging child literature, lessons are often drawn as a downward extension from the adult literature" (page 6) i.e., in this reviewer's opinion, "there's a lot we don't know." Again "There was indication of improvement in symptomology and quality of life among patients across a broad range of demographic and diagnostic groups" (page 6). Yet the review provided to TIAC stated that 33 of 36 studies "are pilot studies, single-case designs, or case studies/case reports. Three surveys and one randomized controlled trial were also included (see the Knutson et al. review). Again, in this reviewer's opinion this means "there's a lot we don't know."

Assessment, one of the most reported functions for Telehealth in ASD service delivery, again requires extrapolation from adult practice: "Information regarding psychological assessment over videoconferencing is largely a downward extension from adult findings which reflect that such testing is feasible and accurate across a variety of adult populations and disorders" (page 14). Again, a "downward extension from adult findings" appears to this reviewer to mean "adult practices are validly generalized to children." In short, Telemedicine advocates may be getting ahead of themselves.

A second document "ATA [American Telehealth Association] Operating Procedures for Pediatric Telehealth" includes OBM-related nuts and bolts guidelines for operating a Telehealth practice and includes the BACB's statement on criteria for remote assessment, instruction, and coaching. In this reviewer's opinion, these documents pave the way for a Telehealth niche within ASD service delivery that is perhaps ahead of where the data would take us.

CalABA's Guidelines

CalABA cites the ESDM data that were summarized for this review and discusses how parent stress and sense of competence are improved, also reviewed here. Note that the entire CalABA statement makes no mention of other ABA procedures that are specifically recommended for use with Telemedicine.