

Treatment Intervention Advisory Committee Review and Determination

Date: April 29, 2016

To: DHS/DLTC

ACK

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

RE: Determination of Masgutova Neurosensorimotor Reflex Integration 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 in July 2014, re-reviewed in April 2015.

Section One: Overview and Determination

Please find below a statement of our determination as to whether or not the committee views Masgutova Neurosensorimotor Reflex Integration (MNRI) 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

The website associated with MNRI states the Masgutova Neurosensorimotor Reflex Integration (MNRI) Method is comprised of a number of integration programs, each designed to reinforce and optimize the integration of primary motor reflex patterns. The following link is to the website promoting the practice: <http://masgutovamethod.com/about-the-method/how-mnri-method-works>

The assumption underlying MNRI is that reflexes are fundamental to virtually all functioning and therefore must be the focus of therapy. The theoretical position described in Masgutova's text "Reflexes: Portal to Neurodevelopment and Learning: A Collective Work" states:

Masgutova Neurosensorimotor Reflex Integration (MNRI) rests on these fundamentals:

1. Genetically given reflexes are (a) component building blocks of composite complex behaviors and (b) remain part of those composites as one's repertoire develops.
2. Component reflexes are assessed to identify those not developing normally and it is they who become the focus of treatment.
3. Reflex norms, i.e., reflexes of "neurotypical children", are a standard against which clients' assessments can be evaluated and therapy' progress judged.
4. Therapy entails manipulating a targeted behavior's underdeveloped component reflexes to strengthen composite behaviors' foundational reflexes.

5. Typically data are (a) pre-post Reflex Development Inventory (RDI) (a test developed for the purpose of assessing reflexes taught with an MNRI program) or (b) RDI data compared to the norms mentioned in #3 above.

In summary, component reflexes are the foundations of more complex behaviors, and dysfunctional component reflexes create dysfunctional composites responsible for a wide range of behavioral and health problems (e.g., bronchial asthma, orthopedic conditions, multiple sclerosis, to name a few), ASD, mental retardation, academic difficulties, etc. Treatment involves deconstructing composite responses into components consisting of poorly functioning reflexes, practicing them in ways prescribed by MNRI (called “restructuring”) to strengthen their neurological underpinnings (neurological explanations for this are offered), and thereby remediating the behavioral or health concerns. In short, MNRI is a developmental approach based on reflexive and neurophysiological explanations of behavioral dysfunction.

Synopsis of review

In the case of MNRI please refer to the attached reference listing that details the reviewed research. The committee’s conclusions regarding MNRI include:

- Correlations between MNRI and clinically significant behaviors are missing.
- Methodology is not described in sufficient detail to replicate.
- Dependent variables are often physiological functions (e.g., averaged evoked potentials) that are assumed to be linked to behavior disabilities so changes produced at that level are said to imply that clinically relevant changes follow.
- Physiological measures often have error bands that suggest questionably small differences (sometimes even overlapping thus indicating statistical insignificance) and data analyses that do not take confidence intervals into account.
- MNRI rests on theoretically tenuous assumptions reflected in the treatment procedures.
- Most of the data provided to this committee was testimonials.

In sum, it is the decision of the committee that for ASD and/or other developmental disabilities, MNRI receives an efficacy rating of Level 4 – Insufficient Evidence (Experimental Treatment) that reflects not the volumes of non-experimental and quasi-experimental reports, but rather the lack of methodological rigor, the lack of proven clinical significance, and alternative explanations that can be given for the data—comparative studies were entirely lacking so MNRI’s superiority to other approaches was never covered.

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: Masgutova Neurosensorimotor Reflex Integration

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: 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: Comparative studies are needed and head-to-head comparisons of MNRI and well-established approaches need to be made. This is not a matter of MNRI being as good as another procedure, it is a question of whether MNRI produced the outcomes claimed and then why—if MNRI does work as well as Masgutova claims, it would require a reordering of our understanding of human behavior and nothing in the text or studies provided to the committee rises to that level.

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:

Date: April 29, 2016

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 4 – Insufficient Evidence/Experimental 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

Masgutova, S. (2015). *Reflexes: Portal to Neurodevelopment and Learning*. Orlando, FL: Svetlana Masgutova Educational Institute.

Pilecki, W., Masgutova, S., Kowalewska, J., Masgutova, D., Akhmatova, N., Poreba, M., Sobioeszczańska, M., Koleda, P., Kalka, D. (2012). The impact of rehabilitation carried out using the Masgutova Neurosensorimotor reflex integration method in children with cerebral palsy on the results of brain stem auditory potential examinations. *Advanced Clinical Experimental Medicine*, 21(3), 363-371.

Masgutova, S., Sadowska, L., Kowalewska, J., Masgutova, D., Akhmatove, N., Filipowski, H., (2015). Use of a neurosensorimotor reflex integration program to improve reflex patterns of children with Down Syndrome. *Journal of Neurology and Neuroscience*, 6(4), 1-8.

Masgutova, S., Sadowska, L., Kowalewska, J., Masgutova, D., Akhmatove, N., Filipowski, H., (2015). Use of a neurosensorimotor reflex integration program to improve reflex patterns of children with Down Syndrome. *Journal of Neurology and Neuroscience*, 6(4), 1-8.

Previously reviewed:

Masgutova, S. (2008). *Masgutova Method of Reflex Integrations for Children with Cerebral Palsy*. (copyright to Svetlana Masgutova).

Rentschler, M. (2008). *The Masgutova method of Neuro-Sensory-Motor and Reflex Integration: Key to Health, Development and Learning*. (copyright to Mary Rentschler).

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