

The following document shares two reports: 1) the first from July of 2015 assigning a level 3 determination to Multisystemic therapy for children with autism spectrum disorder, and 2) a report from July 2013 assigning a level 2 determination for children with severe emotional disturbance.

Treatment Intervention Advisory Committee Review and Determination

Date: July 31, 2015

To: DHS/DLTC

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

RE: Determination of Multisystemic 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 July 26, 2013

Section One: Overview and Determination

Please find below a statement of our determination as to whether or not the committee views Multisystemic Therapy (MST) 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

Multisystemic Therapy (MST) is an ecological approach aimed at strengthening positive social behavior and, simultaneously, removing reinforcers for anti-social behavior in natural settings (home, school, and community). The goal of MST is to decrease rates of incarceration, reduce youth criminal activity and other types of anti-social behavior such as drug abuse, and minimize out-of-home placement for juvenile offenders. Methodologies in MST include family therapy, behavioral parent training, and cognitive-behavioral therapy. The typical duration of treatment is 3-5 months. MST is carried out by a team of 3-5 therapists and is designed for chronic, violent, and/or substance-abusing juvenile offenders from approximately 10-17 years. Although many studies have excluded individuals with ASD, those studies that did include them suggest that the behavior management and therapeutic procedures of MST generalize to individuals on the autism spectrum. Across evaluation studies, MST treatment effects are measured by behavioral outcomes (e.g., number of institutional placements and arrests, incidence of drug abuse, absence from school) and a range of psychological outcomes (e.g., personal relationships, social skills, self-esteem) assessed via self-reports and parent reports on standardized measures, e.g., *Child Behavior Checklist; Family Adaptability and Cohesion Evaluation Scales; Revised Problem Behavior Checklist*.

Synopsis of review

In the case of Multisystemic Therapy (MST), please refer to the attached reference listing that details the research reviewed. The committee's conclusions regarding MST include that MST has focused primarily on emotionally disturbed individuals, variously categorized as emotionally disturbed, juvenile

delinquents (including adjudicated youths), sexually promiscuous youth, drug addicted, and other disabilities typically making contact with law enforcement. The extension to autism has been made on theoretical, not empirical, grounds. Arguments for the application of MST to autism spectrum disorders (ASD) populations are largely based on analogy - most of it structural, not functional. For example, the most recent article reviewing MST applications to ASD is the Wagner et al (2014) review where such parallels as these are advanced to support MST's application to those with ASD:

- Juvenile delinquency's precursors are correlated with events in early development (page 2, paragraph 1).
- Aggression is common to both juvenile delinquency and autism (though the authors are quick to qualify this by saying that causes of aggression in ASD are not necessarily similar to those of MST's typical clientele).
- Additional correlates include poor mental health, communication disorders, and difficult interactions with caregivers, among other things.

This argument comes to a head with the point that ASD have multiple behavioral outcomes, their context plays an important part in therapy, and some parallels between MST and successful ASD therapies e.g., large-scale programs crossing numerous environments. Of course analogy is no homology and closing that gap requires the data that MST has yet to provide. Therefore the recommendation is that MST specific to the treatment of ASD is “Emerging” with the caveat that this ranking's empirical criterion is far less well met than the demonstrated efficacy with non-ASD populations or in research previously reviewed where ASD participants were aggregated with other populations.

No new studies bearing on ASD were located for 2015. The Wagner et al study (in progress) noted in the July 2014 MST TIAC remains the most recent article bearing on ASD but advances MST as a model of therapy—not as an empirical evaluation of it (see Wagner, D.V., Borduin, C.M., Kanne, S.K., Mazurek, M.O., Farmer, J.E., & Brown, R.M. (2014). Multisystemic therapy for disruptive behavior problems in youths with autism spectrum disorders: a progress report. *Journal of Marital and Family Therapy*, 40(33) ,319-331.)

In sum, it is the decision of the committee that in relation to the treatment of ASD symptoms, MST has retains a Level 3 ranking—Emerging Evidence (DHS 107-promising as a Proven Effective Treatment) status

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: Multisystemic Therapy (MST) for ASD

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:

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

Date: July 31, 2015

Committee Members Completing Initial Review of Research Base: Roger Bass, Jennifer Asmus

Committee Decision on Level of Evidence to Suggest the Proposed Treatment is Proven and Effective: Level 3 – Emerging Evidence (DHS 107 – Promising as a Proven & Effective Treatment) for ASD

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:

Wagner, D.V., Borduin, C.M., Kanne, S.K., Mazurek, M.O., Farmer, J.E., & Brown, R.M. (2014).
Multisystemic therapy for disruptive behavior problems in youths with autism spectrum disorders:
a progress report. *Journal of Marital and Family Therapy*, 40(33), 319-331.

Date: July 26, 2013

To: DHS/DLTC

From: Wisconsin Department of Health Services Autism and other Developmental Disabilities Treatment Intervention Advisory Committee (TIAC); Lana Collet-Klingenberg, Ph.D. (chairperson) 

RE: Multisystemic Therapy

Please find below a statement of our determination as to whether or not the committee views Multisystemic Therapy (MST) as a proven and effective treatment for children with autism spectrum disorders and other developmental disabilities. Following this page you will find documentation of our review process including a description of the proposed treatment, a synopsis of review findings, a listing of literature considered, and the treatment review evidence checklist. 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.

In the case of Multisystemic Therapy the committee's conclusion is as follows:

A review of research evaluating the efficacy of Multisystemic Therapy reveals several well-designed studies (including randomized control trials) which, collectively, document that MST is (a) an effective treatment for juvenile offenders, especially those with a diagnosis of Severe Emotional Disturbance (SED), and (b) a promising treatment for youth with ASD whose primary concerns include severe behavior disorders (and/or have a co-morbid SED diagnosis). Whereas a majority of studies have been carried out by a research team that includes one or more developers of MST, the committee identified nine studies that were completed by independent researchers. Moreover, although most efficacy trials have been conducted with juvenile offenders (many with an SED diagnosis), two studies included juveniles with ASD, and one funded grant project is currently underway that focuses exclusively on disruptive behavior problems in youths with ASD. Given this evidence base, it is the committee's conclusion that MST has achieved a Level 2 rating: Established or Moderate Evidence (DHS 7 – Proven and Effective Treatment).

Supporting documentation follows:

Rationale for Focus on Research Specific to Comprehensive Treatment Packages

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.

(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.

Description of Proposed Treatment

Multisystemic Therapy (MST) is an ecological approach aimed at strengthening positive social behavior (and, simultaneously, removing “reinforcers” for anti-social behavior) in natural settings (home, school, community). The goal of MST is to decrease rates of incarceration, reduce youth criminal activity and other types of anti-social behavior such as drug abuse, and minimize out-of-home placement for juvenile offenders. Methodologies in MST include family therapy, behavioral parent training, and cognitive-behavioral therapy. The typical duration of treatment is 3-5 months. MST is carried out by a team of 3-5 therapists. MST is designed for juveniles from approximately 10-17 years.

MST was developed for chronic, violent, and/or substance-abusing juvenile offenders (10-17 years). Although many studies have excluded individuals with ASD, those studies that did include them suggest that the behavior management and therapeutic procedures of MST generalize to individuals on the autism spectrum.

Across evaluation studies (cited below), MST treatment effects are measured by behavioral outcomes (e.g., number of institutional placements and arrests, incidence of drug abuse, absence from school) and a range of psychological outcomes (e.g., personal relationships, social skills, self-esteem) assessed via self-reports and parent reports on standardized measures, e.g., *Child Behavior Checklist*; *Family Adaptability and Cohesion Evaluation Scales*; *Revised Problem Behavior Checklist*.

Synopsis of Review

The committee reviewed 20 studies published in peer-reviewed journals that fell within acceptable parameters of experimental control. The majority of these studies were conducted by members of the same investigatory team, who are also the developers of MST. Nine studies are highlighted below (see Literature Reviewed) that (a) demonstrate adequate experimental control (random assignment of participants to treatment condition), (b) were conducted by individuals independent of the developers of MST, (c) were published in peer-reviewed journals, and (d) reported significant benefits of MST over a “usual” or “typical” treatment control condition. All of the studies targeted youth with serious emotional and behavioral disorders; however, none focused specifically on youth with ASD. Two studies (indicated by *) expressly included youth with ASD.

We also reviewed authoritative bodies that have reviewed MST within the last 10 years. At least one of these reviews was not in agreement with others about the level of evidence for MST.

One paper, to date, is currently “in press” that reports the use of MST specifically targeting youth with ASD who exhibit disruptive behavior problems. Results of a pilot test of MST with three youths with ASD is reported in this paper, and the progress of an efficacy trial that is currently underway is summarized (based on descriptive, not quantitative data): Wagner, D. V., Borduin, C. M., Kanne, S. M., Mazurek, M. O., Farmer, J. E., & Brown, R. M. A. (in press). Multisystemic therapy for disruptive behavior problems in youths with autism spectrum disorders: A progress report. *Journal of Marital and Family Therapy*.

Literature Reviewed

Literature reviewed is listed below. Bolded studies indicate randomized control studies that were completed by independent researchers (i.e., not associated with the team that developed MST).

1. **Borduin, C. M., Schaeffer, C. M., & Heiblum, N. (2009).** A randomized clinical trial of multisystemic therapy with juvenile sexual offenders: Effects on youth social ecology and criminal activity. *Journal of Consulting and Clinical Psychology*, 77, 26-37.

2. Borduin, C. M., Henggeler, S. W., Blaske, D. M. & Stein, R. (1990). Multisystemic treatment of adolescent sexual offenders. *International Journal of Offender Therapy and Comparative Criminology*, 35, 105-114
3. Brown, T. L., Henggeler, S. W., Schoenwald, S. K., Brondino, M. J., & Pickrel, S. G. (1999). Multisystemic treatment of substance abusing and dependent juvenile delinquents: Effects on school attendance at post-treatment and 6-month follow-up. *Children's Services: Social Policy, Research, and Practice*, 2, 81-93.
4. Butler, S., Baruch, G., Hickley, N., & Fonagy, P. (2011). A randomized controlled trial of MST a statutory therapeutic intervention for young offenders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 12, 1220-1235.
5. Dekovic, M., Asscher, J. J., Manders, W. A., Prins, P. J. M., & van der Laan, P. (2012). Within-intervention change: Mediators of intervention effects during multisystemic therapy. *Journal of Consulting and Clinical Psychology*, 80, 574-587
6. Glisson, C., Schoenwald, S. K., Hemmelgarn, A., Green, P., Dukes, D., Armstrong, K. S., & Chapman, J. E. (2010). Randomized trial of MST and ARC in a two-level EBT implementation strategy. *Journal of Consulting and Clinical Psychology*, 78, 537-550.
7. Henggeler, S. W., Clingempeel, W. G., Brondino, M. J., & Pickrel, S. G. (2002). Four-year follow-up of multisystemic therapy with substance abusing and dependent juvenile offenders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41, 868-874.
8. Henggeler, S. W., Melton, G. B., Brondino, M. J., Scherer, D. G., & Hanley, J. H. (1997). Multisystemic therapy with violent and chronic juvenile offenders and their families: The role of treatment fidelity in successful dissemination. *Journal of Consulting and Clinical Psychology*, 65, 821-833.
9. Henggeler, S. W., Melton, G. B., Smith, L. A., Schoenwald, S. K., & Hanley, J. H. (1993). Family preservation using multisystemic treatment: Long-term follow-up to a clinical trial with serious juvenile offenders. *Journal of Child and Family Studies*, 2, 283-293.
10. Henggeler, S. W., Rowland, M. D., Halliday-Boykins, C., Sheidow, A. J., Ward, D. M., Randall, J., Pickrel, S. G., Cunningham, P. B., & Edwards, J. (2003). One-year follow-up of multisystemic therapy as an alternative to the hospitalization of youths in psychiatric crisis. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, 543-551.
11. Letourneau, E. J., Henggeler, S. W., Borduin, C. M., Schewe, P. A., McCart, M. R., Chapman, J. E., & Saldana, L. (2009). Multisystemic therapy for juvenile sexual offenders: 1-year results from a randomized effectiveness trial. *Journal of Family Psychology*, 23, 89-102.

12. Ogden, T., & Halliday-Boykins, C. A. (2004). Multisystemic treatment of antisocial adolescents in Norway: Replication of clinical outcomes outside of the US. *Child and Adolescent Mental Health, 9*(2), 77-83.
13. Ogden, T., & Hagen, K. A. (2006). Multisystemic therapy of serious behaviour problems in youth: Sustainability of therapy effectiveness two years after intake. *Journal of Child and Adolescent Mental Health, 11*, 142-149.
14. Olsson, T. M. (2010). MST with conduct disordered youth in Sweden: Costs and benefits after 2 years. *Research on Social Work Practice, 20*, 5610571
15. Sawyer, A.M., & Borduin, C.M. (2011). Effects of MST through midlife: A 21.9-year follow-up to a randomized clinical trial with serious and violent juvenile offenders. *Journal of Consulting and Clinical Psychology, 79*, 643-652.
16. Schaeffer, C. M., & Borduin, C. M. (2005). Long-term follow-up to a randomized clinical trial of multisystemic therapy with serious and violent juvenile offenders. *Journal of Consulting and Clinical Psychology, 73*, 445-453.
17. Stambaugh, L. F., Mustillo, S. A., Burns, B. J., Stephens, R. L., Baxter, B., Edwards, D., & DeKraai, M. (2007). Outcomes from wrap-around and multisystemic therapy in a center for mental health services system-of-care demonstration site. *Journal of Emotional and Behavioral Disorders, 15*, 143-155.
18. Sundell, K., Hansson, K., Lofholm, C. A., Olsson, T., Gustle, L. H., & Kadesjo, C. (2008). The transportability of MST to Sweden: Short-term results from a randomized trial of conduct disordered youth. *Journal of Family Psychology, 22*, 550-560.
19. Swenson, C. C., Schaeffer, C., Henggeler, S. W., Faldowski, R., & Mayhew, A. M. (2010). Multisystemic therapy for child abuse and neglect: A randomized effectiveness trial. *Journal of Family Psychology, 24*, 497-507
20. Timmons-Mitchell, J., Bender, M. B., Kishna, M. A., & Mitchell, C. C. (2006). An independent effectiveness trial of multisystemic therapy with juvenile justice youth. *Journal of Clinical Child and Adolescent Psychology, 35*, 227-236.

DLTC-TIAC Treatment Review Evidence Checklist
Name of Proposed Treatment: Multisystemic 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, NPDC) 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 (see note below)
- 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: Two studies included autistic juveniles; most targeted juvenile offenders and youth with SED (see note below).

Notes:

Participants ranged in age from 10-17 years. Participants included: (a) chronic juvenile offenders; (b) youth with substance-abuse problems; (c) juvenile sexual offenders; (d)

youth with SED; (e) youth with antisocial behaviors. Samples for two studies were described as specifically including youth with ASD.

The following authoritative bodies have recognized MST as effective:

The United Nations Office on Drugs and Crime

(<http://www.unodc.org/unodc/en/prevention/familyskillstraining.html>.)

Public Safety Canada (<http://www.publicsafety.gc.ca/serv/srch/index-eng.aspx?q=Multisystemic+Therapy>)

Centers for Surgeon General (<http://www.ncbi.nlm.nih.gov/books/NBK44295/>)

The following authoritative body has not recognized MST as effective:

Littell, J., Popa, M., & Forsythe, B. (2005). *Multisystemic Therapy for Social, Emotional and Behavioral Problems in Youth*. Oslo, Norway: Campbell Corporation (international volunteer network of policymakers, researchers, practitioners, and consumers who prepare, maintain, and disseminate systematic reviews of studies of interventions in the social and behavioral science).

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 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):

Date: July 26, 2013

Committee Members Completing Initial Review of Research Base: Roger Bass and Maribeth Gettinger

Committee Decision on Level of Evidence to Suggest the Proposed Treatment is Proven and Effective: **Level 2 – Established or Moderate Evidence (DHS 107 - Proven & Effective Treatment) for children and youth with SED.**