



Equine-assisted therapy for behavioral health

Clinical Policy ID: CCP.1399

Recent review date: 7/2020

Next review date: 11/2021

Policy contains: Equine-assisted therapy, hippotherapy, horseback therapy.

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Coverage policy

Equine-assisted therapy for mental and behavioral disorders is investigational/not clinically proven and, therefore, not medically necessary.

Equine therapy: Three sessions per year with prior authorization, the member must be in a case management or disease management program, and have a substance use disorder diagnosis or a chronic condition diagnosis. Hippotherapy is a physical therapy, occupational therapy, and speech-language pathology treatment strategy that uses the multidimensional movement of horses to improve neuromuscular function and sensory processing in children and adults with movement dysfunction. The term "hippotherapy" is literally defined as "treatment with the help of the horse" from the Greek word *hippos*, meaning horse. It is part of an integrated treatment strategy performed by health care professionals, including specially trained physical and occupational therapists. Hippotherapy is considered a distinct subspecialty of the broad, umbrella term "therapeutic riding." Therapeutic riding refers to the use of horses and equine-oriented activities to achieve a variety of therapeutic goals, including physical, emotional, social, cognitive, behavioral, and educational goals. Therapeutic riding generally encompasses both leisure and therapeutic activities, and may be conducted by nontherapist riding instructors and assistants. In contrast, hippotherapy is specialized and is always directed by a licensed health care professional. Functional riding and horsemanship skills are not taught during hippotherapy. Rather, the emphasis is on the achievement of specific therapeutic goals facilitated by the movement of the horse. Despite the unusual nature of hippotherapy, its rationale is based on current theories of motor development and control and established neurophysiologic treatment principles. Hippotherapy has been used for a wide variety of conditions and medical disorders since the 1950s. Conditions that may be improved through hippotherapy include abnormal

muscle tone; impaired balance responses; impaired coordination; impaired communication; impaired sensorimotor function; postural asymmetry; poor postural control; decreased mobility; and limbic system issues related to arousal, motivation, and attention. Hippotherapy has been used in patients with amputations, autism, back pain, cerebral palsy, developmental disorders, Down syndrome, hemiplegia, genetic syndromes, learning disabilities, multiple sclerosis, muscular dystrophy, post-traumatic stress syndrome, sensory integration disorders, speech-language disorders, spinal cord injury, spina bifida, stroke, and traumatic brain injury.

Hippotherapy has been used in patients varying in age from toddler to adult.

Hippotherapy or equine therapy is a covered benefit for a member who:

- Has received clearance from their primary care provider.
- Participates in a case or disease management program.
- Has a diagnosis of a substance use disorder.
- Is an adult in a nonacute inpatient treatment setting (e.g., residential treatment center).
- Has a diagnosis of a chronic condition:
 - An eating disorder.
 - Cerebral palsy.
 - Emotional abuse within the past two years.
 - Post-traumatic stress disorder.
 - Other chronic medical conditions.

Note: There is a three session per year limit, prior authorization is required, and a treatment plan will be initiated and managed by the pet therapist.

Note: Member must be able to tolerate animals and groups.

HCPCS Level II Code

S8940 Equestrian/hippotherapy, per session.

ICD-10-PCD Codes — No applicable codes.

ICD-10CM Diagnosis Codes — This list may not be all-inclusive.

F43.10 - F43.12 — Post-traumatic stress disorder.

F50.81 — Binge-eating disorder.

F50.89 — Other specified eating disorder.

F50.9 — Eating disorder, unspecified.

G80.0 – G80.9 — Cerebral palsy.

T74.31 — Adult psychological abuse, confirmed.

Limitations

No limitations were identified during the writing of this policy.

Alternative covered services

Various therapies for mental and behavioral conditions.

Background

Therapy involving horses to help treat disease has long been used by health providers. Hippotherapy, which may help improve physical abilities, has been used for over half a century (see policy number CCP.1096 for more on hippotherapy).

The understanding of how psychological processes can be relevant to human-animal relations continues to expand (Amiot, 2015). Since the 1990s, equine-assisted therapy has also been suggested for persons with mental and behavioral disorders as a means of controlling and reducing their symptoms.

For example, some experts believe that persons with autism, a condition with a rapidly rising prevalence, could benefit from equine-related therapy. The difficulties that autistic children have in emotional bonding with others due to limited abilities to communicate verbally, might be reduced through brushing, hugging, and patting horses, along with riding them, leading to social and communication skill production with other people. Motor, emotional, and sensory sensations that riding a horse involves may account for the improvement in autism symptoms (Autism Spectrum Disorder Foundation, 2020).

Staff and parents of autistic children who have undergone equine therapy have stated horses “open up” autistic children and make possible interactions that seemed impossible before. Horses can improve social behaviors, including eye contact, pointing, and speech. Explanations for success include the sensorial, embodied experience of riding the horse; the specific movements and rhythms of the horse; and the “personality” of the horse (Malcolm, 2018).

Attention-deficit/hyperactivity disorder is another behavioral disorder where prevalence is rising rapidly. As of the writing of this policy, no systematic reviews of research have been conducted on equine-assisted therapy for this condition, and only a few small and non-randomized trials have been attempted. Effects of equine therapy on depression, anxiety, and post-traumatic stress disorder also have been largely unstudied.

Findings

No guidelines from any professional organization governing behavioral health disorders with equine-assisted therapy exist as of July 2020. Autism treatment guidelines also do not specifically address endorsement of equine-assisted therapy. The Professional Association of Therapeutic Horsemanship International group has published one guideline on care of horses used in equine-assisted therapy (Professional Association of Therapeutic Horsemanship, 2012), and another on equine-assisted learning (Professional Association of Therapeutic Horsemanship, 2015). The professional literature on equine-assisted therapy for mental and behavioral conditions is often handicapped by a limited number of studies, small sample sizes, frequent omission of control groups, a lack of standardization between studies, and other data quality problems, making conclusions elusive. In addition, almost all studies are restricted to children age 18 and under, and thus virtually nothing is known on the impact of equine therapy on adults.

Autism

The rapid growth of autism has prompted the testing of equine therapy to improve symptoms commonly observed in persons with the condition. A systematic review on animal-assisted intervention (including horses) for autism spectrum disorder included 14 studies. Functional areas most often assessed were social interaction and communication, problem behaviors, autistic severity, and stress. Outcomes were all positive, but usually limited by methodological issues (O’Haire, 2013).

A review of 47 studies concluded that equine-facilitated psychotherapy is a useful modality for treating children and adolescents. The most-studied populations were those with autism spectrum disorder (Lentini, 2015).

A systematic review assessed 25 studies of equine-assisted activities used to aid children and adolescents with autism. Various types of activities were linked with improvements in behavior, social interaction, communication,

motor control, and self-care. Authors contended that results offered “broad proof” that equine-assisted interventions can aid young people with autism (McDaniel-Peters, 2017).

A systematic review of 15 studies of autistic children age 3 – 16 (n = 390) participants showed improvement in socialization, engagement, maladaptive behaviors, and shorter reaction time in problem-solving situations after equine-assisted activities and therapies, compared to controls. The meta-analysis revealed no statistically significant differences for the investigated effects (Trzmiel, 2019).

A systematic review of 15 studies (n = 428) of effects of equine-assisted therapy on persons with autism spectrum disorders concluded the therapy has a positive impact on behavioral skills and to some extent on social communication, but data on effects on perceptuo-motor, cognitive, and functional skills limited (Srinivasan, 2018).

A systematic review of 24 studies on animal-assisted therapies for children with mental health disorders included 11 (n = 620) involving horses. Seven of these studies addressed children with autism spectrum disorder and the other four addressed those with other behavioral and emotional conditions. Ten of 11 studies observed improvements in behavior, which included social functioning, sensory seeking, distraction, adaptive and motor skills, irritability, hyperactivity, social cognition, and verbal communication. Tools used were equine facilitated psychotherapy, equine-assisted counseling, and equine-facilitated learning. However, only two of the 11 studies were randomized controlled trials, and only three included more than 42 subjects (Hoagwood, 2017).

A systematic review of 13 studies of the impact of exercise interventions, including horseback riding, on children with autism spectrum disorder, found improvements to numerous behavioral outcomes, including stereotypic behaviors, social-emotional functioning, cognition, and attention. Horseback riding and martial arts interventions may produce the greatest results. Authors recommend future research with well-controlled designs, standardized assessments, larger sample sizes, and longitudinal follow ups, in addition to a greater focus on young children ages birth – five and adolescents ages 12 – 16 (Bremer, 2016).

Conditions other than autism spectrum disorder

One of the first systematic reviews of the impact of equine therapy for behavioral disorders included 14 studies assessing various conditions and treatments. Substandard data prevented high-quality findings, and there were no consistent patterns that equine therapy outcomes are superior to control groups for behavioral disorders (Anestis, 2014).

A review of the literature concluded that while equine-assisted therapies are promising, the topic was under-researched, and was largely based on anecdotal data with little empirical evidence on efficacy (Kendall, 2015).

A meta-analysis of seven studies of at-risk children and adolescents concluded the efficacy of equine therapy before and after therapy was significant at $P < .0001$, despite lack of consistently reported study variables (Willkie, 2016).

A systematic review of 14 non-randomized studies identified typically a moderate level of evidence for effectiveness (two studies) or statistically significant positive effects (nine studies), which authors call “promising” (Selby, 2013).

A systematic review of four articles and 20 master’s degree theses or doctoral dissertations provided evidence that equine-assisted psychotherapy enhanced children’s and adolescents’ emotional, social and behavioral

functioning. Firm conclusions on effectiveness could not be drawn due to various methodological limitations in the literature (Lee, 2016).

A systematic review of eight articles (all randomized) on hippotherapy and horse riding simulation in healthy older adults included 15 – 60 minute sessions, 2 – 5 times a week, for 8 – 12 weeks. Authors concluded that hippotherapy might improve balance, mobility, gait ability, and muscle strength, as well as could induce hormonal and cerebral activity changes in healthy older adults. Benefits of horse riding simulation could be limited to physical fitness and muscular activity (Hilliere, 2018).

Schizophrenia is another behavioral health disorder that has been the subject of equine-assisted therapy. A systematic review of six articles (n = 137) assessed effects of equine therapy for schizophrenic adults. Quality of the data was medium to high. The study concluded that equine interventions could be beneficial for individuals with severe mental illness such as schizophrenia (Jormfeldt, 2018).

Cerebral palsy is a neuromuscular condition, but a relatively large proportion that have this disease have mental disorders. A systematic review of eight studies (n = 1,771) of children and adolescents with cerebral palsy stated that 28% to 57% of subjects were considered to have at least one mental health condition (Downs, 2018). The same is true for multiple sclerosis, a brain/central nervous system disease.

References

On April 16, 2020, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were “equine assisted therapy,” “equine interventions,” and “equine related treatment.” We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

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Policy updates

7/2018: initial review date and clinical policy effective date: 8/2018

8/2019: Policy references updated. Policy ID changed to CCP.1399.

7/2020: Policy references updated.