

Clinical Policy Title: Equine-assisted therapy for behavioral health

Clinical Policy Number: CCP.1399

| Effective Date: | August 1, 2019 | Policy contains: | |
|---|---------------------------|--|--|
| Initial Review Date: | July 3, 2018 | Equine-assisted therapy. | |
| Most Recent Review Date: Next Review Date: | July 3, 2018 July 2019 | Hippotherapy.Horseback therapy. | |

Related policies:

CCP.1096 Hippotherapy

ABOUT THIS POLICY: AmeriHealth Caritas has developed clinical policies to assist with making coverage determinations. AmeriHealth Caritas' clinical policies are based on guidelines from established industry sources, such as the Centers for Medicare & Medicaid Services (CMS), state regulatory agencies, the American Medical Association (AMA), medical specialty professional societies, and peer-reviewed professional literature. These clinical policies along with other sources, such as plan benefits and state and federal laws and regulatory requirements, including any state- or plan-specific definition of "medically necessary," and the specific facts of the particular situation are considered by AmeriHealth Caritas when making coverage determinations. In the event of conflict between this clinical policy and plan benefits and/or state or federal laws and/or regulatory requirements, the plan benefits and/or state and federal laws and/or regulatory requirements shall control. AmeriHealth Caritas' clinical policies are for informational purposes only and not intended as medical advice or to direct treatment. Physicians and other health care providers are solely responsible for the treatment decisions for their patients. AmeriHealth Caritas' clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, AmeriHealth Caritas will update its clinical policies as necessary. AmeriHealth Caritas' clinical policies are not guarantees of payment.

Coverage policy

AmeriHealth Caritas considers the use of equine-assisted therapy for mental and behavioral disorders to be investigational/experimental, 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, speechlanguage 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:

None.

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 AmeriHealth Caritas policy number 15.02.07 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, 2018).

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 equineassisted 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.

No guidelines from any professional organization governing treatment of behavioral health disorders with equine-assisted therapy exist as of June 2018. 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).

Searches

AmeriHealth Caritas searched PubMed and the databases of:

- UK National Health Services Centre for Reviews and Dissemination.
- Agency for Healthcare Research and Quality's National Guideline Clearinghouse and other evidence-based practice centers.
- The Centers for Medicare & Medicaid Services.

We conducted searches on June 19, 2018. Search terms were: "equine assisted therapy," "equine interventions," and "equine related treatment."

We included:

- **Systematic reviews**, which pool results from multiple studies to achieve larger sample sizes and greater precision of effect estimation than in smaller primary studies. Systematic reviews use predetermined transparent methods to minimize bias, effectively treating the review as a scientific endeavor, and are thus rated highest in evidence-grading hierarchies.
- Guidelines based on systematic reviews.
- **Economic analyses**, such as cost-effectiveness, and benefit or utility studies (but not simple cost studies), reporting both costs and outcomes sometimes referred to as efficiency studies which also rank near the top of evidence hierarchies.

Findings

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.

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).

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 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 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 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).

One study of 67 children, ages six to 16 with autism, and who had family pets, were randomized to those receiving a 10-week therapeutic horseback riding intervention versus a no-horse barn activity control group. Caregiver questionnaires showed pre- and post-intervention improvements in caring actions toward family pets were significantly greater for those who rode horses (P =.013). Equine therapy may also enhance caring actions toward family pets in children with autism (Petty, 2017). An early randomized controlled trial of the effects of equine therapy on autism compared outcomes for 34 children, 19 of who rode horses for 12 weeks and 15 who were assigned to a waiting list. Those who rode horses exhibited greater sensory seeking, sensory sensitivity, social motivation, and less inattention, distractibility, and sedentary behaviors after the trial (Bass, 2009).

A relatively large randomized trial of equine-assisted therapy for children with autism (n=116) divided subjects equally into a group that rode horses and a control group assigned to barn activity without riding, for 10 weeks. Outcomes for the intervention group improved significantly for irritability (P=.02), hyperactivity (P = .01), social cognition (P = .05), social communication (P = .003), plus total words (P = .01), and new words (P = .01) spoken during a standardized language sample (Gabriels, 2015).

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).

One of the six studies in Jormfeldt accounted for 90 of the 137 patients in the systematic review. It included psychiatric hospital inpatients (average of 5.4 years), with a recent history of in-hospital violence or regressed behavior. Three-quarters had a diagnosis of schizophrenia. Patients were randomly assigned to a 10-week program of equine-assisted psychotherapy, canine-assisted psychotherapy, enhanced social skills psychotherapy, or regular hospital care. Results after the program showed those with equine-assisted psychotherapy had improvements of borderline significance (P= .082), and that staff could predict which subjects were likely to benefit (P = .01) (Nurenberg, 2015).

A study of six assertive community treatment patients with schizophrenia worked with staff during 10 weekly therapeutic horseback riding sessions. Interviews with patients before and after the sessions showed an improvement, but the small sample size makes results inconclusive (Corring, 2013).

A systematic review of 13 studies of the impact of exercise interventions, including horseback riding, found improvements to numerous behavioral outcomes, including stereotypic behaviors, socialemotional 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 are necessary, in addition to a greater focus on young children ages birth – 5 and adolescents ages 12 – 16 (Bremer, 2016).

One controlled study assigned 19 adolescents with moderate intellectual disabilities to two 30-minute equine exercise sessions per week for 14 weeks (n=10) or controls/no therapy (n=9). Significant (P<.05) improvements were observed for the study group in reaction time, time of maximum muscle activity, and electromyographic activity of rectus femoris and biceps femoris when standing up from a chair in response to audio, visual, and audio with closed eyes stimuli (Giagazoglou, 2013).

A group of 113 children in 5th to 8th grade, with low social competence, were randomly assigned to a study (n = 53) or (waitlisted) control group (n = 60). Children in the study group participated in an 11-week equine learning program of weekly 90-minute sessions of individual and team activities. Ratings determined that the program had a significant effect on social competence (P = .02), and higher levels of attendance predicted observed positive (P = .003) and negative behavior (P < .001) (Pendry, 2014).

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=1771) of children and adolescents with cerebral palsy stated that 28 percent to 57 percent 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. One study found elevated percentages of anxiety disorder and major depressive disorder in persons with multiple sclerosis versus the general population (36.0 versus 25.0; 22.8 versus 16.2) (Chwastiak, 2007). However, this policy will not include cerebral palsy or multiple sclerosis, as it focuses on persons whose primary affliction is a mental health issue, and our hippotherapy policy addresses persons with primary conditions such as cerebral palsy and multiple sclerosis.

Policy updates:

None.

Summary of clinical evidence:

| Citation | Content, Methods, Recommendations | |
|--|---|--|
| Jormfeldt (2018) | Key points: | |
| Equine therapy for adult schizophrenia | Systematic review of six articles (n=137) assessed effects of equine therapy for schizophrenic adults. Quality of the data for each study was medium to high. Each study concluded that equine interventions could be beneficial for individuals with severe mental illness such as schizophrenia. | |
| Hoagwood (2017) | Key points: | |
| Equine therapy for autism and other behavioral disorders in children | Systematic review of 24 studies on animal-assisted therapies for children with mental health disorders. Of the 24 studies, 11 (n=620) involving horses, of which seven had autism. 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. Only two of the 11 studies were randomized controlled trials. Only three of the 11 studies included more than 42 subjects. | |
| Gabriels (2015) | Key points: | |
| Equine therapy for autistic children | Randomized trial of equine-assisted therapy for children with autism (n=116). Subjects divided into a group that rode horses (n = 58) and a control group assigned to barn activity without riding (n = 58), for 10 weeks. Outcomes for the intervention group improved significantly for irritability (P = .02), hyperactivity (P = .01), social cognition (P = .05), social communication (P = .003), plus total words (P = .01), and new words (P = .01) spoken. | |

| Citation | Content, Methods, Recommendations | |
|---|--|--|
| Anestis (2014) | Key points: | |
| Equine therapy for behavioral disorders in children | Systematic review (14 studies) of the impact of equine therapy for behavioral disorders. Various conditions and treatments included. Substandard data prevented high-quality findings, and there were no consistent patterns that equine therapy outcomes are superior to control groups for behavioral disorders. | |

References

Professional society guidelines/other:

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O'Haire ME. Animal-assisted intervention for autism spectrum disorder: a systematic literature review. *J Autism Dev Disord*. 2013; 43(7): 1606 – 22.

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Centers for Medicare & Medicaid Services National Coverage Determinations:

No National Coverage Determinations identified as of the writing of this policy.

Local Coverage Determinations:

No Local Coverage Determinations identified as of the writing of this policy.

Commonly submitted codes

Below are the most commonly submitted codes for the service(s)/item(s) subject to this policy. This is not an exhaustive list of codes. Providers are expected to consult the appropriate coding manuals and bill accordingly.

| CPT Code | Description | Comments |
|----------|--|----------|
| 97139 | Unlisted therapeutic procedure | |
| 97799 | Unlisted physical medicine/rehabilitation service or procedure | |

| ICD-10 Code | Description | Comments |
|---------------|---------------------------------------|----------|
| F43.10-F43.12 | Post-traumatic-stress disorder (PTSD) | |
| F50.81 | Binge eating disorder | |
| F50.89 | Other specified disorder | |
| F50.9 | Eating disorder unspecified | |
| G80.0-G80.9 | Cerebral Palsy | |

| HCPCS Level II Code | Description | Comments |
|------------------------|--------------------------------------|----------|
| S8940 | Equestrian/hippotherapy, per session | |