Prior Authorization Review Panel
MCO Policy Submission

A separate copy of this form must accompany each policy submitted for review.
Policies submitted without this form will not be considered for review.

Plan: Keystone First	**Submission Date**: 8/1/2024
Policy Number: ccp.1518	**Effective Date:** 8/2022 **Revision Date:** July 1, 2024
Policy Name: Equine-assisted therapy	

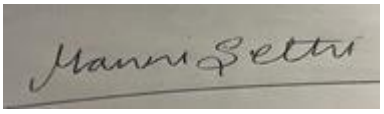
Type of Submission – Check all that apply:

- **New Policy**
- **x Revised Policy***
- **Annual Review – No Revisions**
- **Statewide PDL**

***All revisions to the policy must be highlighted using track changes throughout the document.**

Please provide any clarifying information for the policy below:

See tracked changes below.

Name of Authorized Individual (Please type or print): Manni Sethi, MD, MBA, CHCQM	**Signature of Authorized Individual:** 

Keystone First
Family of Health Plans

Equine-assisted therapy

Clinical Policy ID: CCP.1518

Recent review date: 7/2024

Next review date: 11/2025

Policy contains: Equine-assisted therapy, hippotherapy, occupational therapy, physical therapy, psychotherapy, speech-language therapy, therapeutic riding.

Keystone First has developed clinical policies to assist with making coverage determinations. Keystone First's 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 Keystone First, on a case by case basis, 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. Keystone First's 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. Keystone First's clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, Keystone First will update its clinical policies as necessary. Keystone First's clinical policies are not guarantees of payment.

Coverage policy

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

Limitations

No other limitations were identified during the writing of this policy.

Alternative covered services

Standard of care for physical therapy, occupational therapy, speech-language pathology, and behavioral/mental health practitioners.

Background

Horses have long been used as therapeutic interventions that aim to improve physical, cognitive, and social-emotional functioning and to serve as complements or alternatives to more traditional approaches deemed insufficient, partially effective, or unsuitable to the unique needs of an individual. Specially trained, licensed therapy professionals may incorporate the horse into a treatment plan in various ways to achieve plan objectives within their respective disciplines (Wood, 2021).

Therapy incorporating equine movement (also broadly called "hippotherapy") refers to how occupational therapy, physical therapy, and speech-language pathology professionals apply "the purposeful manipulation of equine movement as a therapy tool to engage sensory, neuromotor, and cognitive systems to promote functional outcomes." It may require a horse handler, side-walkers, and specialized equipment to ensure safety, but

functional riding and horsemanship skills are not taught during hippotherapy (American Hippotherapy Association, 2022).

Understanding how psychological processes can be relevant to human-animal relations supports the potential use of equine-assisted interventions in psychosocial treatment (Amiot, 2015). Integrating the horse or equine environment in occupational therapy and incorporating human-equine interaction in psychotherapy and mental health counseling are means of improving overall function, health, and wellness (Equus Foundation, 2022).

Terminology

The terminology for referring to equine-assisted services is often inconsistent and confusing, presenting barriers to scientific advancement and misinforming policies. Researchers in the field have called for partnering with providers to better understand the complex integration of the horse into many therapy areas. While there is no consensus among scientists on the ways to measure the impact of equine-assisted therapy objectively, there is agreement that a clearer distinction between hippotherapy, therapeutic riding, and other equine-assisted therapy is needed, as the uses of each intervention expand to other populations, including adults (Santos de Assis, 2022; Wood, 2019).

A multidisciplinary consortium of individuals and representatives of relevant national U.S. organizations sought to clarify the terminology for referring to services that incorporate horses and other equines in therapy, learning, and horsemanship. For instance, the often-used term “hippotherapy” has been defined in at least 60 ways in the literature, posing obstacles to understanding and evaluating the service (Wood, 2021).

For therapy incorporating horses, the consortium recommended using therapy-first language with precise equine-related descriptors to more accurately reflect the type of treatment options available to that licensed therapist. An example is using “physical therapy incorporating equine movement,” rather than the more generic term “hippotherapy” (Wood, 2021).

Findings

The evidence in this policy confirms that hippotherapy is the term most often used to describe physical therapy and occupational therapy incorporating equine movement into an overall treatment plan. The focus of other studies included a broader spectrum of equine-assisted therapies or animal-assisted therapies with variation in therapy protocols, reinforcing the need to more clearly define equine-assisted interventions and their therapeutic purpose.

No specific clinical guidelines on equine-assisted therapy for neuromuscular or behavioral health conditions exist from professional medical societies. Explanations for this may be because equine-assisted therapy exists in several forms, is provided by different areas of expertise, and is considered only one of several tools available in a given treatment plan (Wood, 2021). However, the Professional Association of Therapeutic Horsemanship International (2023), the American Hippotherapy Association (2021), and the Equus Foundation (2022) have published best practices addressing safety, training, and credentialing for equine-assisted services, including therapy.

Most providers are physical therapists, and children with cerebral palsy of various subtypes and severity are the most-studied users of physical therapy incorporating equine movement (hippotherapy) (Wood, 2019). For equine-facilitated psychosocial interventions, the most-studied populations are children with autism spectrum disorder (Lentini, 2015). Other indications studied included multiple sclerosis, spinal cord injury, hip arthritis, back pain, intellectual disability, and serious mental illness.

The evidence from individual studies examined in the systematic reviews and meta-analyses described below generally is of low quality and heterogeneous, which prevents determination of the relative effectiveness of equine-assisted therapy in any form for any purpose. In addition to the variation in descriptions of the study populations and interventions, limitations included small sample size, lack of randomization and blinding of outcome assessment, conflicting results, and insufficient reporting of study design elements required for assessing study validity and comparing results.

Cerebral palsy

- Therapeutic riding was associated with positive short-term effects on lower-limb muscle spasticity measured by the Ashworth scale or modified Ashworth scale, but the long-term effects using repeated sessions require further study (Hyun, 2022; seven studies).
- Both physical therapy with hippotherapy and physical therapy alone presented similar effects on the Gross Motor Function Measure scores, cadence, stride length, and speed during gait of children and adolescents with cerebral palsy; future studies should include larger sample sizes and with low risk of bias (Santos de Assis, 2022; six studies; n = 315).
- There was moderate quality evidence from four systematic reviews and meta-analyses supporting a benefit of equine-assisted therapy on gross motor function and postural control, but insufficient evidence supporting improvement in quality of life or spasticity outcomes (Heussen, 2022, n = 755; Obrero-Gaitán, 2022, n = 343; Pantera, 2022; Peia, 2023, n = 264).
- Equine-assisted therapy, the Horseback Riding Simulator, and therapeutic horseback riding significantly improved gross motor function (Gross Motor Function Measure standard mean difference = 0.19, 95% confidence interval 0.02 to 0.36, $P = .031$), and along several individual dimensions. The intervention period ranged from eight to 12 weeks, with session durations of 30 to 45 minutes, two to three times per week. In subgroup analyses, factors affecting treatment outcomes were treatment approaches and protocols and types of cerebral palsy (Qin, 2024).

Other neuromuscular conditions

- Hippotherapy for adults with acquired brain injury revealed no significant short-term improvements in balance ($P = .10$) or gait ($P = .92$) when compared with controls; long-term effects are unknown (Marquez, 2020; nine studies; n = 256).
- In patients with chronic low back pain, horse-riding simulators significantly reduced pain levels ($P = .03$) (Collado-Mateo, 2020; five studies; n = 208). In another study, horse-riding simulators produced superior outcomes in pain improvement using two measures (both $P < .001$) compared to physical therapy alone (Ren, 2021; 11 randomized trials; n = 543).

Autism spectrum disorder

- Three systematic reviews/meta-analyses found moderate quality evidence suggesting equine-assisted therapy/activity or therapeutic horseback riding can improve their social behaviors and communication skills, but the results among individual subdomains were inconsistent across analyses. Use of wait-list controls, short follow up, lack of blinding, and underpowered studies limited the conclusions (Sissons, 2022, total n = 400; Chen, 2022, n = 240; Xiao, 2023, n = 623).
- In a meta-analysis, equine-assisted service types (such as therapy, horsemanship, or learning) had a significant beneficial impact on social skills based on the total social responsiveness scale score and

measures of social communication and social cognition, but not on autistic mannerisms. (Madigand, 2023; five randomized controlled trials; n = 240).

- A systematic review found various equine-assisted service types (such as therapy, horsemanship, or learning) resulted in significant improvements in various motor outcomes such as coordination, strength, balance, posture, and overall motor skills (Meera, 2024; 12 studies; n = 214).

Other behavioral and mental health conditions

Early literature reviews of equine-assisted therapy found largely non-randomized studies of equine-assisted interventions for treating behavioral conditions in populations with a variety of chronic illnesses or health challenges. While significant positive effects were often reported, the quality of the data was low, with no consistent patterns indicating equine therapy outcomes were superior to control groups for behavioral disorders (Anestis, 2014; Kendall, 2015; Selby, 2013).

More recent systematic reviews report similar findings:

- In adults with schizophrenia, equine interventions could be beneficial if the challenge of patient motivation is overcome. Reported benefits were improvement in confidence, self-esteem, and social skills; increased activity; enhanced enjoyment; reduction in negative symptoms; improvement in pharmacological compliance; and a decrease in violent behavior and need for hospitalization (Jormfeldt, 2018; six studies; n = 137).
- In children with attention-deficit hyperactivity disorder, equine-assisted therapy improved behavioral, psychological, and physical outcome measures. Authors cited methodological constraints when assessing findings; for example, only five of the studies were randomized (White, 2020; 10 studies; n = 179). Equine-assisted therapy administered between 15 and 40 minutes of riding horses, eight to 32 total sessions, for four to 32 weeks, appeared to reduce symptoms of the disorder, but methodological limits precluded a determination on treatment effectiveness (Perez-Gomez, 2021; nine studies).
- In individuals with post-traumatic stress disorder, a systematic review showed that equine-assisted services comprising psychotherapy and occupational therapy involving horses resulted in short-term, post-traumatic symptom improvement across different measurement scales. A meta-analysis of five studies of only veterans found an improvement in symptoms between and 0.73 and 1.23 score points (standard mean difference -0.98, $P < .05$) using a random effects model. The majority of intervention programs consisted of six weeks of treatment (four studies); the remainder ranged from eight or 10 weeks to six months (Palomar-Ciria, 2023; 10 studies).
- For individuals with mild to moderate dementia or Alzheimer's disease, equine-assisted services had a positive impact on social, emotional, and behavioral outcomes, as well as improved physical health. Equine-assisted services were safe and acceptable to participants. The systematic review comprised four quantitative studies and two qualitative studies of mixed quality and heterogeneous designs (Sebalj, 2024, six studies).

In 2023, we added several systematic reviews and meta-analyses addressing equine-assisted therapy for children with cerebral palsy, autism spectrum disorder, and attention deficit hyperactivity disorder, and for older adults. These analyses focused on the highest level of evidence from randomized controlled trials and quasi-experimental designs. Most of the equine-assisted interventions comprised equine-assisted physical or occupational therapy using living or artificial horses and therapeutic horseback riding. Desired program goals targeted motor, functional, and psychosocial outcomes. Heterogeneous study designs and intervention protocols

and the limited the number of studies available for distinct analyses prevent establishing a clear clinical role for equine-assisted therapy. No policy changes are warranted.

In 2024, we deleted several older references and added several updated systematic reviews and meta-analyses. The new information confirms the previous findings. No policy changes are warranted.

References

On June 7, 2024, 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” (MeSH), “hippotherapy,” “therapeutic riding,” “equine,” and “equine-assisted.” 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

7/2022: initial review date and clinical policy effective date: 8/2022

7/2023: Policy references updated.

7/2024: Policy references updated.