



PERSONNEL AND  
READINESS

UNDER SECRETARY OF DEFENSE  
4000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-4000

JUN 28 2016

The Honorable John McCain  
Chairman  
Committee on Armed Services  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

The enclosed report is in response to House Report 114-102, page 161, which accompanied H.R. 1735, the National Defense Authorization Act for Fiscal Year 2016, which requests a report on the use of equine therapy to treat members of the Armed Forces. Practitioners recommending this type of therapy include physical therapists, occupational therapists, and speech and language pathologists. In general, equine therapies focus on the improvement of physical and functional status by using the rhythmic movement of the horse's gait to improve hip and trunk stability.

The Department of Defense sponsored research by Hayes, Inc., found an insufficient body of evidence to determine the effectiveness and safety of equine therapy for adults at high risk for Post-Traumatic Stress Disorder, suicide, and other psychological or emotional conditions. Significant methodological limitations in the current literature suggest additional research is necessary to determine the efficacy and effectiveness of equine therapy for all indications evaluated in this report. The Department will continue to review the relevant literature every three years to determine when the research evidence supports the provision of equine therapy under TRICARE. A similar letter is being sent to the other congressional defense committees.

Thank you for your interest in the health and well-being of our Service members, veterans, and their families.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Levine", with a long horizontal flourish extending to the right.

Peter Levine  
Acting

Enclosure:  
As stated

cc:  
The Honorable Jack Reed  
Ranking Member



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JUN 28 2016

The Honorable William M. "Mac" Thornberry  
Chairman  
Committee on Armed Services  
U.S. House of Representatives  
Washington, DC 20515

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Enclosure:  
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cc:  
The Honorable Adam Smith  
Ranking Member



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UNDER SECRETARY OF DEFENSE  
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The Honorable Thad Cochran  
Chairman  
Subcommittee on Defense  
Committee on Appropriations  
United States Senate  
Washington, DC 20510

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As stated

cc:  
The Honorable Richard J. Durbin  
Vice Chairman





PERSONNEL AND  
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UNDER SECRETARY OF DEFENSE  
4000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-4000

The Honorable Rodney P. Frelinghuysen  
Chairman  
Subcommittee on Defense  
Committee on Appropriations  
U.S. House of Representatives  
Washington, DC 20515

JUN 28 2016

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Enclosure:  
As stated

cc:  
The Honorable Peter J. Visclosky  
Ranking Member

# **Report to the Congressional Defense Committees**



## **Equine Therapy to Treat Members of the Armed Forces**

**Requested by: House Report 114-102, page 161**

The estimated cost of this report or study for the Department of Defense (DoD) is approximately \$45,000.00 in Fiscal Years 2015 - 2016. This includes \$42,000.00 in expenses and \$2,810.00 in DoD labor.

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## **EXECUTIVE SUMMARY**

Equine therapy, a form of animal-assisted therapy, is used for various indications and is known by a variety of names (e.g., equine-assisted therapy, equine-assisted or facilitated psychotherapy, therapeutic horseback riding, equine-assisted physical therapy, hippotherapy). Conditions targeted in adults include post-traumatic stress disorder (PTSD), mood disorders, anxiety disorders, dissociative disorders, eating disorders, and addiction disorders. A number of organizations promote the use of equine therapy to treat psychological conditions; however, there is significant variation in the delivery of equine therapy between the various groups even within what seem to be similar interventions. This report reviews the literature of the use of equine therapy to treat members of the Armed Forces in response to House Report 114-102, page 161.

The Department of Defense (DoD) sponsored research by Hayes, Inc., on behalf of KePRO Care Management Solutions (the TRICARE Quality Monitoring Contractor for TRICARE) to assess the effectiveness of using equine therapy to treat members of the Armed Forces. The scope of the report was defined according to the framework for guiding the systematic review process by using established domains or questions for inquiry referred to as the Populations [P]-Interventions[I]-Comparator[C]-Outcomes(O)-Setting[S] (PICOS) framework. The initial literature search was completed on August 12, 2015, and update searches were completed on October 15, 2015. Systematic reviews and select studies were manually searched to identify any additional studies not found by the literature search.

The research and analysis performed found that there is an insufficient body of evidence to determine the effectiveness and safety of equine therapy for adults at high risk for PTSD, suicide, and other psychological or emotional conditions. The search yielded three studies that met inclusion criteria, but no study was identified that evaluated equine therapy in a patient population explicitly defined as high-risk for development of PTSD. No eligible studies were identified that evaluated equine therapy as a technique for suicide prevention. The inconsistency of the results, coupled with the overall low-quality or lack of evidence, does not allow for definitive conclusions on the effect of equine therapy compared with other therapies at this time.

Significant methodological limitations in the current literature suggest additional research is necessary to determine the efficacy and effectiveness of equine therapy for all indications evaluated in this report. In addition, studies evaluating the cost-effectiveness of equine therapy compared with other standard forms of treatment should also be conducted. The Department will continue to review the clinical literature every 3 years to determine if new research evidence supports the provision of equine therapy.

## **INTRODUCTION**

Equine therapy, a form of animal-assisted therapy, is used for various indications and is known by a variety of names (e.g., equine-assisted therapy, equine-assisted or facilitated psychotherapy, therapeutic horseback riding, equine-assisted physical therapy, hippotherapy). Much of the application of equine therapy discussed in the scientific literature involves the use of horses as a physical therapy intervention, particularly in people with disabilities, including those with neurologic conditions (e.g., multiple sclerosis (MS), stroke, spinal cord injury, cerebral palsy), or as a psychotherapy in people with psychological conditions (e.g., PTSD, depression, anxiety). Broadly conceived, equine therapy is a horse-related activity to achieve physical or emotional benefit. There is much heterogeneity in the methods used to administer equine therapy interventions even within the same indication or condition (e.g., feeding, grooming, riding, and training). For consistency, the term equine therapy will be used to refer to any of these horse-related interventions throughout this report. This assessment discusses the use of equine therapy as a psychological intervention and as a form of physical therapy among adults.

## **BACKGROUND**

### **Equine Therapy and Psychological Conditions**

Equine therapy interventions among adults with psychological conditions are referred to by a number of names, including therapeutic horseback riding, therapeutic carriage driving, equine-facilitated experiential learning, interactive vaulting, equine-facilitated psychotherapy, equine-assisted learning, and equine-facilitated mental health. Each approach of equine therapy differs in the methods used to deliver the intervention and in the overall goals of the therapeutic intervention (see Table at page 6). Proponents suggest that an equine therapy session provides the context in which the participant and practitioner can interpret internal experiences. Practitioners of equine therapy vary widely and can include mental health professionals, life coaches, equine specialists, or equestrian instructors. Conditions targeted in adults include PTSD, mood disorders, anxiety disorders, dissociative disorders, eating disorders, and addiction disorders.

A number of organizations promote the use of equine therapy to treat psychological conditions; however, there is significant variation in the delivery of equine therapy between the various groups even within what seem to be similar interventions.

### **Equine Therapy and Physical Therapy**

Equine therapy as a form of physical therapy generally focuses on using the movement of a horse to develop strength in patients with a variety of conditions. Practitioners can include physical therapists, occupational therapists, and speech and language pathologists. In general, equine therapies focus on the improvement of physical and functional status by using the rhythmic movement of the horse's gait to improve hip and trunk stability by disassociation of the pelvis and trunk. Equine therapy as a physical therapy is used for a number of neurologic conditions, including MS, stroke, spinal cord injury, traumatic brain injury, and cerebral palsy.



## Policy Context

The House Report 114-102, page 161, which accompanied H.R. 1735, the National Defense Authorization Act for Fiscal Year 2016, requested a report on the use of equine therapy to treat members of the Armed Forces. The text included in the section is as follows:

*The committee is aware that active duty service members and veterans seek out and use additional forms of therapy, such as equine therapy, which provides physical, psychological, and emotional therapy to individuals through personal interaction with trained service horses in a safe and structured environment. The committee directs the Secretary of Defense to submit a report on the use of equine therapy to treat members of the Armed Forces to the House Committee on Armed Services by June 30, 2016. The report shall include an assessment of the effectiveness of using equine therapy techniques to treat members of the Armed Forces with post-traumatic stress disorder and other psychological or emotional conditions; the effectiveness of using equine therapy techniques to prevent suicide; the effectiveness of using equine therapy as a form of physical therapy; the prevalence of using equine therapy to treat members of the Armed Forces with post-traumatic stress disorder or other psychological or emotional conditions; the prevalence of using equine therapy as a form of physical therapy; and the potential for organizations in the private sector that offer equine therapy and the Department of Defense to form partnerships to treat members of the Armed Forces with physical, psychological, and emotional conditions.*

## METHODS

### Scope

The scope of the report was defined according to the following PICOS framework:

- **Populations:** Adults at risk for PTSD, with PTSD (diagnosis or symptoms), with psychiatric conditions or other emotional conditions, adults at risk for suicide, and adults requiring physical therapy
- **Interventions:** Equine-assisted therapy, equine-assisted or facilitated psychotherapy, equine-facilitated mental health, equine-assisted counseling, equine-assisted coaching, equine-assisted personal development, equine therapy, therapeutic horseback riding, equestrian rehabilitation, equine-assisted physical therapy, hippotherapy, recreational horseback riding therapy, simulated mechanical horseback riding
- **Comparators:** Studies with and without comparisons
- **Outcomes:** All physical, mental, quality of life (QOL), and functional outcomes
- **Setting:** Inpatient and outpatient

## Evidence Quality Assessment

Tools used include internally developed Quality Checklists for evaluating the quality (internal validity) of different types of studies and Hayes Evidence-Grading Guides for evaluating bodies of evidence for different types of technologies. Hayes methodology is in alignment with the GRADE (Grading of Recommendations, Assessment, Development, and Evaluation) system, which was developed by the GRADE Working Group, an international collaborative body. Individual study appraisals were determined by criteria included in table below.

### Summary of Evidence Quality Assessment

Steps Taken	Evaluation of Evidence
<b>Step 1</b>	<p><u>Individual study appraisal</u></p> <p>a. Initial rating according to study design  <i>Good:</i> Randomized controlled trials  <i>Fair:</i> Nonrandomized trial (controlled, parallel-group, quasi-randomized)  <i>Poor:</i> Observational analytic studies (prospective or retrospective trials involving historical controls, pretest-posttest studies [patients legitimately serve as their own controls], case-control, registry/chart/database analysis involving a comparison group)  <i>Very Poor:</i> Descriptive uncontrolled studies (case reports, case series, cross-sectional surveys [individual-level data], correlation studies [group-level data])</p> <p>b. Consider the methodological rigor of study execution according to items in a proprietary Quality Checklist</p> <p>c. Repeat for each study</p>
<b>Step 2</b>	<p><u>Evaluation of each body of evidence by outcome, key question, or application</u></p> <p>a. Initial quality designation according to <i>best</i> study design in a body of evidence</p> <p>b. Downgrade/upgrade  <i>Downgrade factors:</i> Study weaknesses (Quality Checklists), small quantity of evidence, lack of applicability, inconsistency of results, publication bias  <i>Possible upgrade factors:</i> Strong association, dose-response effect, bias favoring no effect</p> <p>c. Assign final rating: High – Moderate – Low – Very Low</p> <p>d. Repeat for each outcome/question/application</p>
<b>Step 3</b>	<p><u>Evaluation of overall evidence</u></p> <p>a. Rank outcomes by clinical importance</p> <p>b. Consider overall quality of evidence for each <i>critical</i> outcome</p> <p>c. Assign overall rating based on lowest-quality evidence: High – Moderate – Low – Very Low</p>
<b>Step 4</b>	<p><u>Evidence-based conclusion</u></p> <p>Overall quality of evidence + balance of benefits and harms</p>

## Literature Search

The initial search was completed on August 12, 2015, and update searches were completed on October 15, 2015. Systematic reviews and relevant included studies were manually searched to identify any studies not found by the literature search. An Internet search for clinical and practice guidelines was also performed. Any information regarding organizations that perform equine therapy identified in eligible studies was also taken into consideration. It should be noted that such information was discovered incidentally and not as the result of systematic searches. The following studies meeting inclusion criteria were selected:

- Adults with PTSD or other psychological or emotional conditions
  - One randomized controlled trial
  - Two pretest-posttest studies
- Equine therapy as a suicide prevention technique
  - Zero studies identified
- Equine therapy as a physical therapy technique
  - Six Randomized Controlled Trials (RCTs), including one crossover
  - Five non-randomized controlled trials
  - Three pretest-posttest studies
  - One case series

## FINDINGS

### PTSD

The search for studies evaluating equine therapy as a treatment for individuals at high risk for PTSD and other psychological or emotional conditions yielded three studies that met inclusion criteria (one RCT and two pretest-posttest studies). It should be noted that no study was identified that evaluated equine therapy in a patient population explicitly defined as high-risk for development of PTSD. Study populations of eligible studies included adult inpatients of a psychiatric hospital who had demonstrated aggressive behavior, adults with schizophrenia, and adults with PTSD symptoms. Sample sizes ranged from 16 to 105.

### *Assessment of the Effectiveness of using Equine Therapy Techniques to Treat PTSD*

The following summarizes the results from three poor-quality studies on equine therapy for adults with PTSD symptoms, adults with aggressive behavior, and adults with schizophrenia.

- One poor quality pretest-posttest study found that equine therapy resulted in statistically significant improvements in depression, anxiety, and trauma symptoms among adults with PTSD symptoms. Significant methodological limitations included a lack of a control group, no randomization, limited follow-up, a lack of power analysis, and small sample. No difference was noted in somatic symptoms.
- One RCT demonstrated significant methodological limitations, including lack of a power analysis and significant baseline differences between study groups on primary outcomes. No attempt was made to determine what might be considered a clinically meaningful reduction in aggressive behavior. Furthermore, the limited follow-up (3 months) may not have been adequate to detect a change in aggression. This study also found no between-group differences in depressive and psychotic symptoms among psychiatric hospital inpatients with aggressive behavior.
- One pretest-posttest study reported a statistically and clinically significant improvement in depression, as well as psychotic, positive, and negative symptoms in adults with schizophrenia. However, significant methodological limitations included the lack of a comparator group, randomization, and blinding of outcome assessors. Furthermore, the study was not sufficiently powered.

### ***Conclusions of the Effect of Equine Therapy on PTSD and other Psychological or Emotional Conditions***

There is an insufficient body of evidence to determine the effectiveness and safety of equine therapy for adults at high risk for PTSD and other psychological or emotional conditions. Both the quality and volume of evidence regarding the efficacy of equine therapy on adults at high risk for PTSD and other psychological or emotional conditions does not allow for conclusions to be drawn.

### **Suicide**

No studies were identified that evaluated equine therapy as a technique for suicide prevention. The lack of evidence regarding the efficacy of equine therapy for the prevention of suicide does not allow for conclusions to be drawn.

### **Physical Therapy**

The search for studies evaluating equine therapy as a form of physical therapy yielded 15 studies (five RCTs, one crossover RCT, five non-randomized controlled trials, three pretest-posttest studies, and one case series). Study populations in these eligible studies included adults who had experienced a stroke, adults with MS, adults with spinal cord injuries, adults with chronic brain disorders, and female breast cancer survivors after mastectomy. Sample sizes ranged from 8 to 67. The summaries below are categorized by indication and then by outcome.

### *Equine Therapy in Adults with Stroke*

- Prevalence of studies: Seven studies evaluated equine therapy in patients who had suffered a stroke. Sample sizes ranged from 20 to 67 adults. Four of seven studies used a mechanical simulator instead of a horse. Three studies used equine therapy in addition to conventional physiotherapy or rehabilitation. The total number of equine therapy sessions ranged from 20 to 64. No study among patients with stroke assessed safety as an outcome.
- Ambulation outcomes: Two poor-quality non-RCTs with active controls found no difference in ambulation outcomes attributed to equine therapy either within or between treatment groups.
- Balance outcomes: One fair-quality RCT, one fair-quality head-to-head non-RCT, two poor-quality non-RCTs with active controls, and one poor-quality pretest-posttest study researched balance outcomes as a result of equine therapy in adults with stroke. Findings across these studies were mixed, ranging from statistically significant improvements favoring equine therapy to no difference between treatment groups.
- Gait parameters: Two fair-quality RCTs, two poor-quality non-RCTs, and one poor-quality pretest-posttest study demonstrate inconsistency in gait parameters, ranging from statistically significant improvements favoring equine therapy to no difference between treatment groups.
- Muscular outcomes: Review of one fair-quality RCT and one poor-quality non-RCT suggest statistically significant improvements favoring equine therapy compared with active controls, although outcomes measured varied greatly.
- QOL outcomes: Review of one fair-quality suggests an improvement in overall QOL favoring equine therapy over the active control.
- Conclusion: Limited results from small trials suggest that equine therapy as a physical therapy for patients with stroke may be equivalent to or better than alternate forms of therapy, but results from the low-quality body of evidence are conflicting. In general, studies were likely not powered to detect differences between groups, were subject to selection bias, did not blind outcome assessors, and provided limited follow-up. The inconsistency of the results, coupled with the overall low-quality or lack of evidence, does not allow for definitive conclusions on the effect of equine therapy compared with other therapies.



## *Equine Therapy in Adults with MS*

- Prevalence of studies: Five studies evaluated equine therapy in adults diagnosed with MS. Sample sizes ranged from 10 to 27 adults. Comparators included an Internet-based home training program, physiotherapy, and a passive control group. The total number of equine therapy sessions ranged from 10 to 24. No study among adults with MS assessed safety as an outcome.
- Ambulation outcomes: Review of one fair-quality RCT and one very poor-quality case series found no difference in ambulation from baseline or between groups.
- Balance outcomes: One fair-quality RCT, two poor-quality non-RCTs, one poor-quality pretest-posttest study, and one very poor-quality case series, demonstrated inconsistency in balance outcomes, ranging from statistically significant improvements favoring equine therapy to no difference between treatment groups.
- Functional status: One fair-quality RCT, one poor-quality non-RCT, one poor-quality pretest-posttest study, and one very poor-quality case series demonstrated inconsistency in changes in functional status from baseline.
- Gait parameters: One fair-quality RCT, one poor-quality non-RCT, one poor-quality pretest-posttest study, and one very poor-quality case series demonstrated inconsistency in changes in gait parameters from baseline, ranging from statistically significant improvements to no difference.
- Muscular outcomes: One fair-quality RCT and one very poor-quality case reported no difference in muscular outcomes.
- QOL outcomes: Review of one fair-quality RCT and one very poor-quality case series demonstrated inconsistency in QOL domains, with few domains showing improvement from baseline, while a majority of domains showed no difference between groups.
- Spasticity outcomes: One poor-quality pretest-posttest and one very poor-quality case series found that equine therapy does not improve spasticity and may cause an increase in spasticity.
- Conclusions: Limited results from small trials suggest that equine therapy as a physical therapy for adults with MS may be equivalent to alternate forms of therapy, but results from the low-quality body of evidence are conflicting. In general, studies were likely not powered to detect differences between groups, were subject to selection bias, did not blind outcome assessors, and provided limited follow-up. The inconsistency of the results, coupled with the overall low-quality or lack of evidence, does not allow for definitive conclusions on the effect of equine therapy compared with other therapies in adults with MS.

### *Equine Therapy in Other Indications*

- Prevalence of studies: Three studies evaluated equine therapy as a physical therapy for indications other than stroke or MS in adults. Sample sizes ranged from 8 to 20 adults. Indications included women who had undergone a mastectomy due to breast cancer, adults with spinal cord injuries, and adults with chronic brain disorders. Comparators included the use of a Bobath roll, rocker board, and a passive control group. The total number of equine therapy sessions ranged from 8 to 32. One study assessed safety as an outcome.
- Adults with spinal cord injury: One poor-quality crossover RCT reported statistically significant improvements in spasticity, favoring equine therapy over all comparisons. No differences were noted in psychiatric symptoms.
- Adults with chronic brain disorders: One poor-quality pretest-posttest study found statistically significant improvements from baseline in balance and gait analyses. No difference was noted in ambulation, psychiatric, or functional outcomes. No accidents, musculoskeletal pain, or adverse effects requiring medical care occurred.
- Women with mastectomy: One poor-quality RCT with a passive control group found statistically significant improvements favoring equine therapy in QOL scores.
- Conclusion: Limited heterogeneous results from small trials do not allow for conclusions of the effect of equine therapy on patients with spinal cord injury, chronic brain disorders, or mastectomy after breast cancer. In general, studies were likely not powered to detect differences between groups, were subject to selection and measurement biases, did not blind outcome assessors, and provided limited follow-up.

### **POTENTIAL FOR PARTNERSHIPS TO TREAT MEMBERS OF THE ARMED FORCES WITH PHYSICAL, PSYCHOLOGICAL, AND EMOTIONAL CONDITIONS**

In order to determine private sector organizations offering equine therapy, a search of the Internet was conducted using the terms equine-assisted therapy, equine-assisted psychotherapy, hippotherapy, equine-facilitated psychotherapy, and equine-assisted physical therapy. Any reference to groups or associations mentioned in the literature for the other sections of this report were further investigated. The evidence did not identify any specific private-public partnerships, but the following ongoing programs/projects were identified.

- American Hippotherapy Association, Inc. (AHA): The AHA, as part of the Professional Association of Therapeutic Horsemanship (PATH) International, provides training and supports research of equine therapy for individuals with disabilities (AHA Web site). Education courses provided by the association include online and in-person hands-on classes and are directed towards practitioners of hippotherapy, including physical therapists, occupational therapists, speech-language pathologists, physical therapy assistants, occupational therapy assistants, and speech-language pathology assistants. Courses target a variety of levels of expertise, from no

experience to mandatory courses necessary to achieve PATH-registered therapist status. Course offerings include an introduction to the concept of hippotherapy, as well as the role of hippotherapy in postural control and core stability, neurological disorders, speech and language pathology, sensory integration, and kinesiology. The AHA Web site provides a detailed listing of courses.

- **Equine Assisted Growth and Learning Association (EAGALA):** The EAGALA, founded in 1999, is an international nonprofit professional association specifically geared to practitioners of equine-assisted psychotherapy and equine-assisted learning (EAGALA Web site). The association also provides training and certification to mental health professionals or equine specialist professionals. EAGALA states that it has over 4,500 members in 50 countries. EAGALA promotes the use of equine-assisted learning and equine-assisted psychotherapy. The EAGALA Model does not include mounted activities. EAGALA provides a practice model for practitioners to provide equine-assisted psychotherapy and equine-assisted learning (EAGALA, 2010). The model proposes that equine therapy sessions include a team that consists of an equine specialist, a mental health professional, and a horse. Intervention sessions do not involve horseback riding but use horses as “metaphors” in groundwork. The model states that it is solution-oriented, allowing for participants to problem-solve and discover solutions within a given session. Use of the EAGALA model requires certification of both therapists by the association.
- **Equine Partnering Naturally©:** Equine Partnering Naturally© is an equine-facilitated psychotherapy for individuals in recovery programs (Equine Partnering Naturally© Web site). The program incorporates mindfulness practice, psychodynamic and cognitive-behavioral therapy, energy medicine, and natural horsemanship.
- **Equinection, LLC:** Equinection is a private corporation that provides equine-facilitated learning workshops (Equinection Web site). All workshops incorporate groundwork with horses. Programs offered include women’s programs, recovery programs for individuals recovering from addiction and for their families, programs for professionals, and individual-, group-, or organization-wide therapy sessions.
- **Federation of Horses in Education and Therapy International (HETI):** HETI, Associations Internationales Sans But Lucratif (formerly the Federation of Riding for the Disabled International), is a Belgian nonprofit membership association with headquarters located in the United States (HETI Web site). The mission of the federation states that the association exists to provide collaboration among organizations and individuals involved in equine-assisted activities. The organization also provides training and certification for instructors of equine therapy for people with physical, cognitive, or emotional disabilities.
- **Horses4Heroes, Inc:** Horses4Heroes is a national nonprofit organization based out of Las Vegas, Nevada, with 250 partner facilities in 44 states (Horses4Heroes Web site). The organization aims to provide recreational, instructional, and health and wellness

programs to Active Duty Service members, veterans, caregivers, survivors, first responders, and their families.

- **Horses For Heroes – New Mexico, Inc.:** Horses For Heroes – New Mexico is a nonprofit organization based out of Santa Fe, New Mexico (Horses For Heroes – New Mexico Web site). The organization provides horse handling and riding to all post September 11<sup>th</sup> veterans and active military in a residential and nonresidential capacity.
- **Human-Equine Alliances for Learning (HEAL):** HEAL provides training and certification in the HEAL Model™ specifically in equine-facilitated psychotherapy and learning (HEAL Web site). The model is aimed at individuals with trauma-related disorders, mood disorders, anxiety disorders, and dissociative disorders.
- **PATH International:** PATH International is a nonprofit association promoting equine therapy for individuals with special needs (PATH International Web site). The association claims to have 866 member centers and over 7,000 members internationally. The association serves veterans and Active Duty military personnel through hippotherapy, equine-facilitated mental health, equine-facilitated learning, carriage driving, interactive vaulting, competition, groundwork, and stable management. The association also provides certification and accreditation programs.
- **The Ranch, Inc.:** The Ranch is a private corporation offering a residential therapy program, including equine-assisted psychotherapy, aimed at treating individuals with addiction disorders, eating disorders, love and sex addiction, and trauma and PTSD (The Ranch Web site).
- **Saratoga WarHorse Project:** The Saratoga WarHorse Foundation is a nonprofit organization offering veterans a 3-day equine-assisted experience with horses (Saratoga WarHorse Web site). This 3-day residential program is provided to veterans at no cost. The program involves classroom and hands-on training.

## **CONCLUSION**

Research sponsored by the DoD found that there is an insufficient body of evidence to determine the effectiveness and safety of equine therapy for adults at high risk for PTSD, suicide, and other psychological or emotional conditions. Significant methodological limitations in the current literature suggest additional research is necessary to determine the efficacy and effectiveness of equine therapy for all indications evaluated in this report. Future research should clearly identify the frequency, duration, intensity, and intervention components. In addition, studies evaluating the cost-effectiveness and safety of equine therapy compared with other standard forms of treatment should also be conducted. The Department will continue to review the clinical literature every 3 years to determine if new research evidence supports the provision of equine therapy.

## **REFERENCES**

Armed Services Committee. House Report 114-102 - National Defense Authorization Act For Fiscal Year 2016. 2015. Congress.gov [website]. Available at: <https://www.congress.gov/congressional-report/114th-congress/house-report/102/1>. Accessed October 28, 2015.

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## **ACRONYMS**

<u>Acronym</u>	<u>Term</u>
AHA	American Hippotherapy Association
DoD	Department of Defense
EGALA	Equine Assisted Growth and Learning Association
HEAL	Human-Equine Alliances for Learning
HETI	Federation of Horses in Education and Therapy International
MS	Multiple Sclerosis
PATH	Professional Association of Therapeutic Horsemanship International
PICOS	Populations-Interventions-Comparator-Outcomes-Setting
PTSD	Post-Traumatic Stress Disorder
QOL	Quality of Life
RCT	Randomized Controlled Trial