Wilderness Therapy

MEDICAL POLICY NUMBER: 289

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INSTRUCTIONS FOR USE: Company Medical Policies serve as guidance for the administration of plan benefits. Medical policies do not constitute medical advice nor a guarantee of coverage. Company Medical Policies are reviewed annually and are based upon published, peer-reviewed scientific evidence and evidence-based clinical practice guidelines that are available as of the last policy update. The Company reserves the right to determine the application of medical policies and make revisions to medical policies at any time. The scope and availability of all plan benefits are determined in accordance with the applicable coverage agreement. Any conflict or variance between the terms of the coverage agreement and Company Medical Policy will be resolved in favor of the coverage agreement. Coverage decisions are made on the basis of individualized determinations of medical necessity and the experimental or investigational character of the treatment in the individual case. In cases where medical necessity is not established by policy for specific treatment modalities, evidence not previously considered regarding the efficacy of the modality that is presented shall be given consideration to determine if the policy represents current standards of care.

SCOPE: Providence Health Plan, Providence Health Assurance, Providence Plan Partners, and Ayin Health Solutions as applicable (referred to individually as “Company” and collectively as “Companies”).

PLAN PRODUCT AND BENEFIT APPLICATION

☒ **Commercial** ☒ **Medicaid/OHP*** ☒ **Medicare****

*Medicaid/OHP Members

Oregon: Services requested for Oregon Health Plan (OHP) members follow the OHP Prioritized List and Oregon Administrative Rules (OARs) as the primary resource for coverage determinations. Medical policy criteria below may be applied when there are no criteria available in the OARs and the OHP Prioritized List.

**Medicare Members

This *Company* policy may be applied to Medicare Plan members only when directed by a separate *Medicare* policy. Note that investigational services are considered **"not medically necessary"** for Medicare members.

COVERAGE CRITERIA

I. Wilderness therapy is considered **not medically necessary and not covered** for the treatment of behavioral health and substance-use disorders including, but not limited to, the following:

   A. Mood disorders
   B. Anxiety disorders
   C. Depressive disorder
   D. Eating disorders
   E. Attention-deficit hyperactivity disorder

Link to Evidence Summary

POLICY CROSS REFERENCES

None

The full Company portfolio of current Medical Policies is available online and can be accessed here.

POLICY GUIDELINES

Wilderness Therapy

Wilderness therapy, also referred to as "residential wilderness treatment" or "outdoor behavioral healthcare," refers to a an experiential residential treatment program, wherein adolescent participants undergo continuous group living with peers, outdoor wilderness living experiences and concurrent therapy for the treatment of various mental health and substance use disorders.[1,2] Trained field staff oversee on-site adventure and problem-solving activities, which are designed to increase participants' self-concept, internal locus of control, and interpersonal and social skills.

REGULATORY STATUS

U.S. FOOD AND DRUG ADMINISTRATION (FDA)

Approval or clearance by the Food and Drug Administration (FDA) does not in itself establish medical necessity or serve as a basis for coverage. Therefore, this section is provided for informational purposes only.

CLINICAL EVIDENCE AND LITERATURE REVIEW

EVIDENCE REVIEW

A review of the ECRI, Hayes, Cochrane, and PubMed databases was conducted regarding the use of wilderness therapy as a treatment for mental health and substance use disorders. Below is a summary of the available evidence identified through February 2022.

Systematic Reviews

- In 2019, Weeland and colleagues conducted a systematic review and two meta-analyses evaluating the purported beneficial effects of exposure to nature on children's self-regulation.[3] Independent investigators systematically searched the literature through April 2019, identified eligible studies, assessed study quality, extracted data and pooled results. In total 31 studies were included for meta-analysis (15 correlational studies and 16 quasi-experimental studies). Investigators reported small, but significant positive overall associations of nature with cognitive, affective and behavioral self-regulation in both correlation and quasi-experimental studies. While moderation analyses showed no differential associations based on sample size or study traits, the type of instrument used to measure exposure to nature was found to have significantly affected the association between nature and self-regulation. Limitations included the limited quantity and low-quality of studies included for meta-analyses (e.g. small sample sizes, only one RCT). Authors concluded that while nature therapy may be a promising tool in stimulating children's self-regulation, additional experimental studies using validated measures and outcomes were needed to validate positive outcomes reported to date.

- In 2016, Bettmann and colleagues conducted a meta-analysis of wilderness therapy outcomes for private pay clients.[4] Independent investigators systematically searched the literature through December 2014, identified eligible studies, assessed study quality, extracted data and pooled results. A random effects model was used to account for heterogeneity across studies to improve generalizability. In total, 36 studies evaluating 2,399 participants receiving wilderness

therapy were included for review. Investigators reported medium effect sizes for all six constructs assessed: self-esteem (g = 0.49), locus of control (g = 0.55), behavioral observations (g = 0.75), personal effectiveness (g = 0.46), clinical measures (g = 0.50) and interpersonal measures (g = 0.54). A contradictory impact on effect sizes was found regarding program duration, with the behavioral observation construct showing the stronger effect of shorter programs and the personal effectiveness construct showing the stronger effect of longer programs. Limitations included reviewed studies' lack of long-term follow-up, reliance on self-report data, lack of statistical analyses, and use of pre-post designs without control groups. Moreover, 20 of the 36 studies were theses and dissertations. Investigators called for additional, high quality research to improve validity, but concluded that private pay wilderness therapy shows medium-sized effects for participants at short-term follow-up.

- In 2013, Bowen and Neill conducted a meta-analysis of adventure therapy outcomes and moderators compared to alternative treatment and no treatment.[5] Independent investigators systematically searched the literature through October 2012, identified eligible studies, assessed study quality, extracted data and pooled results. In total, 197 studies of adventure therapy participant outcomes (2,908 effect sizes, 206 unique samples) were included for review. The short-term effect size for adventure therapy was moderate (g = .47) and larger than for alternative (.14) and no treatment (.08) comparison groups. Short-term adventure therapy outcomes were significant for seven out of the eight outcome categories, with the strongest effects for clinical and self-concept measures, and the smallest effects for spirituality/morality. The only significant moderator of outcomes was a positive relationship with participant age. Limitations included the low-quality of studies included for review (e.g. lack of statistical analyses, heterogenous treatment parameters, and discrepancies in effect sizes between different studies assessing the same outcome.) Despite these limitations, authors concluded that adventure therapy programs are moderately effective in facilitating positive short-term change across key behavioral and functional outcomes.

Nonrandomized Studies

- In 2018, DeMille and colleagues conducted a comparison group study addressing the efficacy of outdoor behavioral healthcare (OBH) as reported by participants' parents.[6] In total, 120 subjects were placed in either OBH or treatment as usual (TAU) groups, which included participants who inquired into treatment at a specific OBH program yet decided to seek treatment within their community. Parents of participants in the treatment group were given a questionnaire (i.e. Youth Outcome Questionnaire 2.01) at baseline and at 15-month follow-up. Findings showed that youth participants who attended an OBH treatment program were, as reported by their parents, functioning significantly better than the treatment as usual (TAU) group at 1-year follow-up as measured by the Youth Outcome Questionnaire 2.01. Youth who remained in their communities were still at acute levels of psychosocial dysfunction during the same time span. Regression analysis indicated participation in the treatment group as the only significant predictor of improvement; no significant differences were reported between groups across race, gender or age. Limitations included heterogeneity of patient characteristics and diagnoses between comparator groups, and the variety of treatments received by participants in the TAU group. Investigators called for additional studies to validate findings.

- In 2017, Roberts and colleagues conducted a 3-year longitudinal assessment of outcomes in outdoor behavioral health (OBH) care.[7] In total, 186 volunteer participants (age 18-32), mostly with a primary diagnosis of either a mood disorder, substance use disorder, or anxiety disorder, participated in a wilderness therapy program. Subjects participated in weekly individual and group therapy sessions facilitated by a therapist. Outcomes of interest included overall psychosocial functioning, symptom distress, interpersonal relationships, and social role performance. Participants completed the Outcome Questionnaire (OQ® 45.2) six times, between week 1 and 18-months post-discharge follow-up. Results found participants to show statistically and clinically significant change in their time in OBH care, and progress was maintained at up to 18 month follow-up. Investigators concluded that clinically and significant change occurred in treatment. Limitations included the use of self-report data, lack of outcome measures, use of a convenience sample and a within-subjects design without a control group. Authors called for additional, controlled studies with longer follow-up to better isolate the key change factors associated with the intervention.

- In 2016, Bowen and colleagues evaluated the therapeutic effects of wilderness adventure therapy (WAT) on the mental health of youth participants.[8] In total, 36 adolescents, aged 12-18 with mixed mental health issues completed a 10-week part-time program, facilitated by 3 WAT practitioners. After a week of screening, assessment, engagement, orientation, and discussion of client goals, the subsequent 8 weeks involved 7 day-based adventure activities (e.g., bushwalking, rock climbing, cross country skiing, and white water rafting), plus 2-day and 5-day training excursions. Concurrently, parents, teachers, and support workers participated in weekly indoor adventurous problem-solving activities integrated into group therapy. Results showed a small, positive, and significant changes at 3-month follow-up in psychological resilience, social self-esteem, depressive symptomology and behavioral and emotional functioning. Improvements in family functioning and suicidality were not maintained at follow-up. The authors concluded that while findings indicate WAT to be effective for clinically symptomatic people, future research utilizing a comparison or wait-list control group and a larger sample size would be necessary to validate results. Additional limitations included the evaluation design, reliance on self-reported data, missing data, and use of non-validated questionnaires.

- In 2016, Hoag and colleagues sought to evaluate the therapeutic efficacy of wilderness therapy.[9] In total, 332 adolescents between the ages of 13-17 years participated in at least 5 weeks of a wilderness program. The Youth Outcome Questionnaire Self-Report 2.0® (Y-OQ®SR 2.0), Life Effectiveness Questionnaire (LEQ), the Hope Scale (HS), and the Treatment Expectancy/Credibility Questionnaire (CEQ) were used for adolescent outcomes, while the Y-OQ® 2.01 was used for parent outcome results. Significant improvement was noted on the self-assessments from intake to discharge across measures of hope, life effectiveness and treatment expectancy. Outcome differences across patients' genders was also near significant. Limitations included low parent participation, significant attrition, inadequate follow-up (i.e. 3-months) and a lack of statistical analyses.

- In 2016, Zachor and colleagues sought to evaluate the effectiveness of an outdoor adventure program for young children with autism spectrum disorder.[10] In total, 51 participants aged 3 years to 7 years were evaluated, of whom 30 participated in an outdoor adventure program for 13 weeks, completing physical activity challenges. At the program's completion, participants in the intervention group experienced significant improvement in social communication and social

cognition, social motivation, and autistic mannerisms subdomains of the Social Responsiveness Scale. Authors concluded that outdoor programs may be an effective intervention alongside traditional treatments in young children with autism spectrum disorder, but called for additional studies with long-term follow-up. Other limitations included a lack of randomization and incomplete participant education before evaluation questionnaires were completed.

- In 2016, Tucker and colleagues examined the effects of outdoor behavioral healthcare (OBH) on family functioning.[11] In total, data were collected from 1,389 participants across 17 OBH programs. The primary outcome of interest was family functioning, which was measured using the Youth Outcome Questionnaire (YOQ), whereas changes in family functioning were measured by the general functioning scale of the Family Assessment Device (FAD). Youth self-reported overall improvements across all questionnaire scores, which were below the clinical cut-offs at discharge and remained at levels below the clinical cut-off at 6-month follow-up. Both clinically and statistically significant positive results with youth, mothers, and fathers at points of intake, discharge, and 6-month follow-up were reported, although parent and youth reports differed. Limitations included the lack of comparator groups, lack of long-term follow-up up and potential for confounding due to family's potential heightened awareness to previously unseen dysfunction due to therapeutic work. Investigators called for additional studies to triangulate findings and better determine how OBH affects family functioning.

- In 2015, Tucker and colleagues examined changes in body composition and mental health outcomes among adolescents who participated in a wilderness therapy program.[11] In total, 516 adolescents received individual and group psychotherapy, wilderness-living, psycho-education groups, adventure therapy activities, and followed a value-based academic curriculum. Primary measures for the study included BMI and the Youth-Outcome Questionnaire Self Report Version 2.0 (Y-OQ SR 2.0), which were gathered at both admission and discharge. Noteworthy improvements in mental health functioning were reported, particularly among obese and female participants. Limitations include the lack of a comparator group, and the use of self-reported data. Authors called for additional research assessing the long-term impact on youth physical and mental health outcomes.

CLINICAL PRACTICE GUIDELINES

American Academy of Child and Adolescent Psychiatry (AACAP)

In 2010, the AACAP published principles of care for treatment of children and adolescents with mental illness in residential treatment centers.[12] Authors stated that "wilderness therapy programs" frequently do not provide the range of services that would meet the definition of a clinical residential treatment center, noting the lack of psychologists, pediatricians and licensed therapists involved in the individual's treatment.

EVIDENCE SUMMARY

There is insufficient evidence to support the efficacy and safety of wilderness therapy for the treatment of behavioral health and substance-use related conditions. Studies are limited by a lack of long-term follow-up, use of self-report data, heterogeneous treatment parameters and a lack of matched

comparator groups. In addition, no evidence-based clinical practice guidelines recommend the use of wilderness therapy for the treatment of behavioral health and substance use conditions.

MEDICARE ADVANTAGE

Note: The Company policy for *PHA Medicare Medical Policy Development and Application* (MP50) provides details regarding Medicare's definition of medical necessity and the hierarchy of Medicare references and resources during the development of medical policies, as well as the Plan's use of evidence-based processes for policy development.

As of 4/2022, no specific Medicare coverage policy or guidance (e.g., manual, national coverage determination [NCD], local coverage determination [LCD] article [LCA], etc.) was identified which addresses wilderness therapy. In the absence of a NCD, LCD, or other Medicare policy, Medicare regulatory guidelines do allow Medicare Advantage Organizations (MAOs) to make their own coverage determinations, as long as the MAO applies an objective, evidence-based process, based on authoritative evidence. *(Medicare Managed Care Manual, Ch. 4, §90.5)* Thus, the Company medical policy criteria may be applied for medical necessity decision-making.

BILLING GUIDELINES AND CODING

No CPT or HCPCS codes for residential mental health treatment facilities. Revenue codes 1001 (Residential Treatment, Psychiatric) and 1002 (Behavioral Health Accommodations Residential Chemical Dependency) may apply.

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POLICY REVISION HISTORY

DATE	REVISION SUMMARY
2/2023	Converted to new policy template.