CHEMICAL AVERSION THERAPY (CAT) FOR ALCOHOL ADDICTION

Policy Number: BH727CATBCP_042018  Effective Date: April 11, 2018

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Related Clinical Policies & Guidelines:
- Complementary & Alternative Medicine (CAM)
- Substance-Related and Addictive Disorders

BENEFIT CONSIDERATIONS

Before using this policy, please check the member-specific benefit plan document and any federal or state mandates, if applicable.

COVERAGE RATIONALE

Chemical aversion therapy is unproven and not medically necessary for the treatment of alcohol and/or other substance addiction.

The efficacy of chemical aversion therapy has not been established in well-designed controlled trials, and this technique has not been directly compared to other generally-accepted, first-line treatments for alcohol addiction.

The requested service or procedure must be reviewed against the language in the member's benefit document. When the requested service or procedure is limited or excluded from the member's benefit document, or is otherwise defined differently, it is the terms of the member's benefit document that prevails.

Per the specific requirements of the plan, health care services or supplies may not be covered when inconsistent with Level of Care Guidelines and/or evidence-based clinical guidelines.

All services must be provided by or under the direction of a properly qualified behavioral health provider.

DESCRIPTION OF SERVICES

Chemical aversion therapy (CAT) is a form of psychological treatment that pairs the ingestion of alcohol with an aversive response agent (such as disulfiram) to cause some form of discomfort, usually nausea and/or vomiting. Over the course of treatment, conditioning occurs so that alcohol alone promotes the aversive response. The treatment is generally provided as a component of a 10-day inpatient program which may include other interventions, such as counseling and narcotherapy (Pentothal interview). CAT is distinct from disulfiram pharmacotherapy, which produces acute sensitivity to drinking alcohol, but does not include aversion counter-conditioning.

CLINICAL EVIDENCE
**Summary of Clinical Evidence** The efficacy of chemical aversion therapy has not been established in well-designed controlled trials. Studies on CAT from the early 1990s are primarily retrospective analyses and long-term telephonic follow-ups with patients receiving prior treatment. There are no studies available that compare the multimodal inpatient treatment program to other treatments for alcohol and drug addiction.

**Clinical Trials**

Smith and Frawley (1993) followed-up with a sample of 600 patients treated in a multimodal treatment program using aversion therapy and narcotherapy. Contact with patients was made a minimum of 12 months and as many as 20 months after completion of treatment (mean of 14.7 months). For follow-up, telephone contact was made with 427 of the patients (71.2%). Of these 427 individuals, 65.1% reported being totally abstinent for 1 year after treatment, and 60.2% abstinent at 14.7 months after treatment. Of those patients (n = 213) who reported alcohol as their only drug problem, the 12-month abstinence rate was 69% and the total abstinence rate was 65.3%. The authors note that a powerful predictor of long-term abstinence was whether or not the patient completed reinforcement treatment, and also noted that at least some degree of support group attendance after completion of the initial inpatient treatment program is associated with increased abstinence rates.

Frawley and Smith (1992) conducted long-term follow-up of patients treated with aversion therapy for cocaine and methamphetamine dependencies. Of the initial sample of 214 patients treated, 156 were followed-up with at 12-20 months post-treatment (average duration of 15.2 months). Results found that those treated with aversion for cocaine alone had a one-year abstinence rate of 39%, and those treated for both alcohol and cocaine had one-year total abstinence from alcohol of 54%. The authors conclude that these results are promising, yet note that the study was limited by a lack of a comparison group to which patients were randomly assigned. Additionally, the authors note that a lack of objective measures of abstinence limited their ability to determine the relative importance of aversion with respect to other program elements.

Smith and colleagues (1991) matched 249 patients treated for alcoholism in an inpatient multimodal treatment program including aversion therapy to a national treatment outcome registry. The registry included patients receiving inpatient treatment that emphasized individual and group counseling as primary therapeutic elements, without aversion therapy. The patients were matched post-hoc on 17 baseline variables, and 6- and 12-month abstinence rates from alcohol and all mood-altering chemicals were also reported. Results found that patients treated with aversion therapy for alcohol had higher abstinence rates at 6 and 12 months. Abstinence rates from all mood-altering chemicals were higher in the aversion group at 6 months but not at 12 months. The largest differences between treatment groups in 6-month alcohol abstinence rates were noted for males, those over age 35, daily drinkers, and those with alcohol-related work performance problems.

Frawley and Smith (1990) conducted a pilot feasibility study of chemical aversion therapy among twenty patients treated for cocaine (n = 9) or cocaine/alcohol (n = 11) to determine the possibility of integrating chemical aversion therapy into a multimodal treatment protocol. The average number of drinks per occasion was 11.6 (range 3-30) and average number duration of the alcohol problem was 11.6 years. Patients completed a program which included chemical aversion to develop a conditioned aversion to the sight, smell, and taste of a cocaine substitute. The authors reported no adverse effects during the treatment period. All but two patients returned for their first reinforcement treatment one month later, with sixteen of them completing a first reinforcement. Of the original 20 patients, a total of 9 returned for the second reinforcement treatment three months later. At this time, all received one day of chemical aversion for cocaine or cocaine/alcohol, and one day for a sodium pentothal intervention as well as group and individual counseling. Primary treatment goal was abstinence from cocaine or cocaine/alcohol use. At six months, 19 of the patients were contacted, with 56% of the cocaine only group and 70% of the cocaine/alcohol group reporting total abstinence. At 18 months, 18 patients were contacted, with 38% of the cocaine only group and 50% of the cocaine/alcohol group reporting total abstinence. The authors conclude that chemical aversion therapy in this pilot study was shown to have high patient acceptability and to be associated with good patient outcomes when used as part of a multimodal treatment program. The authors note a number of limitations: this was a preliminary study in which only a small number of patients participated; there was also no matched control group assigned to no treatment or some other form of treatment.

Smith and Frawey (1990) conducted long-term follow-up of abstinence from alcohol among patients who received aversion therapy as part of a multimodal inpatient program. A random sample of 200 patients who completed 10 days of inpatient treatment that included aversion therapy were selected. Patients were contacted via phone and received a structured interview. A verification interview with a significant other was carried out in 36% of cases. The charts of all 200 patients were also reviewed. In total, 160 patients were contacted (80% follow-up). The minimum elapsed time since treatment was 13 months, and the maximum was 25 months (mean 20.5 months). Of the 40 patients who could not be contacted, chart review indicated that 22 of them were known to have relapsed, and 5 were known to be deceased. The contacted group had a 12-month abstinence rate of 71.3%, and a 13-25 month abstinence rate of 65%.
The authors conclude that the findings suggest a multimodal alcoholism treatment program utilizing aversion conditioning is at least as acceptable to patients as counseling-centered programs and can be expected to yield favorable abstinence rates.

Professional Societies
American Academy of Child & Adolescent Psychiatry (AACAP): A 2005 practice parameter for the assessment and treatment of children and adolescents with substance use disorders recommends that “medication can be used when indicated for the management of craving and withdrawal and for aversion therapy...medications used to target alcohol-related cravings...and aversive agents such as disulfiram could be considered for use in treatment-resistant adolescents.”

American Psychiatric Association (APA): A 2006 practice guideline for the treatment of patients with substance use disorders states that “compared with positive reward approaches, aversive therapies have been less successful. Only a small number of studies have documented the efficacy for aversion therapy using nausea or electric shock” (Kleber et al 2007).

U.S. FOOD AND DRUG ADMINISTRATION

Chemical aversion therapy is a procedure and not subject to Food and Drug Administration (FDA) regulations. None of the drugs have been specifically approved by the FDA for use in chemical aversion therapy.

CENTERS FOR MEDICARE AND MEDICAID SERVICES

A National Coverage Determination exists for Chemical Aversion Therapy for Treatment of Alcoholism:

Item/Service Description
Chemical aversion therapy is a behavior modification technique that is used in the treatment of alcoholism. Chemical aversion therapy facilitates alcohol abstinence through the development of conditioned aversions to the taste, smell, and sight of alcohol beverages. This is accomplished by repeatedly pairing alcohol with unpleasant symptoms (e.g., nausea) which have been induced by one of several chemical agents. While a number of drugs have been employed in chemical aversion therapy, the three most commonly used are emetine, apomorphine, and lithium. None of the drugs being used, however, have yet been approved by the Food and Drug Administration specifically for use in chemical aversion therapy for alcoholism. Accordingly, when these drugs are being employed in conjunction with this therapy, patients undergoing this treatment need to be kept under medical observation.

Indications and Limitations of Coverage
Available evidence indicates that chemical aversion therapy may be an effective component of certain alcoholism treatment programs, particularly as part of multi-modality treatment programs which include other behavioral techniques and therapies, such as psychotherapy. Based on this evidence, the Centers for Medicare & Medicaid Services’ medical consultants have recommended that chemical aversion therapy be covered under Medicare. However, since chemical aversion therapy is a demanding therapy which may not be appropriate for all Medicare beneficiaries needing treatment for alcoholism, a physician should certify to the appropriateness of chemical aversion therapy in the individual case. Therefore, if chemical aversion therapy for treatment of alcoholism is determined to be reasonable and necessary for an individual patient, it is covered under Medicare.

When it is medically necessary for a patient to receive chemical aversion therapy as a hospital inpatient, coverage for care in that setting is available. Follow-up treatments for chemical aversion therapy can generally be provided on an outpatient basis. Thus, where a patient is admitted as an inpatient for receipt of chemical aversion therapy, there must be documentation by the physician of the need in the individual case for the inpatient hospital admission.

APPLICABLE CODES

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member-specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Coverage Determination Guidelines may apply.

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REFERENCES


HISTORY/REVISION INFORMATION

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<tr>
<td>04/11/2018</td>
<td>Annual Update: Updated formatting, references. Approved by UMC.</td>
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