

## ***Aversion Therapy for Chemical Dependency***

**Effective:** February 1, 2021

**Next Review:** October 2021

**Last Review:** December 2020

### **IMPORTANT REMINDER**

Medical Policies are developed to provide guidance for members and providers regarding coverage in accordance with contract terms. Benefit determinations are based in all cases on the applicable contract language. To the extent there may be any conflict between the Medical Policy and contract language, the contract language takes precedence.

PLEASE NOTE: Contracts exclude from coverage, among other things, services or procedures that are considered investigational or cosmetic. Providers may bill members for services or procedures that are considered investigational or cosmetic. Providers are encouraged to inform members before rendering such services that the members are likely to be financially responsible for the cost of these services.

### **DESCRIPTION**

Aversion therapy is an in-patient substance abuse treatment strategy that has been used for alcohol and cocaine dependence at the Schick Shadel Hospitals (Universal Health Inc.). The treatment generally includes aversion counter conditioning designed to make the sight, smell, taste and thought of the alcohol and/or cocaine unpalatable.

### **MEDICAL POLICY CRITERIA**

Aversion therapy and pentothal interviews are considered **investigational** for all indications including but not limited to the treatment of chemical dependency.

*NOTE: A summary of the supporting rationale for the policy criteria is at the end of the policy.*

### **CROSS REFERENCES**

None

### **BACKGROUND**

Aversion therapy is an in-patient substance abuse treatment strategy that has been used for many years for alcohol and cocaine dependence at the Schick Shadel Hospitals (Universal

Health Services, Inc.). The treatment generally includes a 10-day in-patient stay during which the patient receives aversion counter conditioning designed to make the sight, smell, taste and thought of the alcohol and/or cocaine unpalatable. Narcotherapy (pentothal interview) is a component of the aversion therapy program designed to gather initial psychological diagnostic information and to monitor the development of aversion to the addictive substances. Under light anesthesia, patients are queried about the level of desire for each type of substance. Aversion therapy with pentothal interview is provided within a comprehensive treatment program that includes detoxification, counseling, addiction education, and introduction to a 12-step program for follow-up care.

## EVIDENCE SUMMARY

Currently, the components of standard outpatient substance abuse therapy consist of individual, group and family psychotherapy, relapse prevention therapy, and introduction to a 12-step program for follow up. Agonist substitution therapy (methadone or levo-alpha-acetyl-methadol [LAAM]) and medications to decrease the reinforcing effects of abused substances, also known as withdrawal drugs (e.g., naltrexone, clonidine/naltrexone, buprenorphine), may also be included as a component of standard therapy.

Long-term outcomes from prospective, randomized controlled trials comparing aversion therapy to standard substance abuse therapy are needed to demonstrate the independent contribution of aversion therapy in the overall treatment program.

### **RANDOMIZED CONTROLLED TRIALS**

There are no randomized controlled trials comparing aversion therapy or pentothal interviews to other treatments for chemical dependency.

### **NONRANDOMIZED STUDIES**

The available published evidence consists of outcomes from patients treated at Schick Shadel Hospitals which are summarized below.

In a pilot study, by Frawley and Smith, 20 patients (9 treated for cocaine only and 11 treated for cocaine/alcohol) completed a program which included chemical aversion therapy to develop a conditioned aversion to the sight, smell, and taste of a cocaine substitute (tetracaine, mannitol, and quinine with Psychem).<sup>[1]</sup> Ninety-five percent of patients were followed up in six months with a total abstinence rate from cocaine of 56% in the cocaine only group and total abstinence from cocaine of 70% for the cocaine/alcohol group. After 18 months out of the ninety percent of patients that were followed up, 38% of the cocaine only group had been totally abstinent (75% were currently abstinent) and 50% of the cocaine/alcohol group had been totally abstinent (80% were currently abstinent).

Smith and Frawley reported outcomes for 200 patients randomly selected from a group of patients that completed an initial 10 days of treatment at a Schick Shadel Hospital in 1983.<sup>[2]</sup> During the initial 10-day hospitalization, patients received 5 days of aversion therapy and 5 days of narcotherapy, given on alternating days. This was followed at 30-day and 90-day intervals with 2-day inpatient admissions for reinforcement treatment consisting of 1 day each of aversion therapy and narcotherapy. Follow up was by telephone interview at 12-months. Of the 200 patients, 20% were lost to follow up. In addition, 22 patients were known to have relapsed prior to the 12-month telephone interview.

The same authors followed several other groups of patients for up to 20 months post-aversion therapy, reported in 1990 and 1993.<sup>[3 4]</sup> Patients in these cohorts were addicted to alcohol alone, cocaine alone, cocaine and alcohol, or cocaine and marijuana. As with the first study, there was either significant loss to follow-up (29%-36%) or small initial sample size (n=20) and therefore conclusions about the study effects could not be determined.

In a 1991 retrospective matched case-control study, 249 patients in the Schick Shadel System were matched to an equal number of patients in the alcohol treatment database and were followed for up to 12 months.<sup>[5]</sup> As with previous studies there was significant patient attrition: only 33% (248/754) of patients who were contacted for participation remained in the study at 6 months and at 12 months another 17% (41/248) were lost to follow-up.

Based on the same study described above, the same 249 patients were compared for faradic aversion and chemical aversion.<sup>[6]</sup> The two groups were separately analyzed and authors concluded that no significant differences in outcomes were found.

## SECTION SUMMARY

Conclusions concerning the impact of aversion therapy and narcotherapy on health outcomes cannot be reached from the current evidence base. The evidence is limited due to methodological limitations including but not limited to lack of randomization, selection bias (individuals may not be representative of all those with chemical dependency issues), high loss to follow-up, and the inability to isolate the independent contribution of aversion therapy and pentothal interview from the overall substance abuse treatment program.

## PRACTICE GUIDELINE SUMMARY

There are no evidence-based clinical practice guidelines that recommend the use of aversion therapy for the treatment of chemical dependency.

## SUMMARY

The use of aversion therapy has been proposed as an alternative treatment for chemical dependency. There is not enough research to show that aversion therapy improves health outcomes. More research is needed with longer term follow-up. In addition, no evidence-based clinical practice guidelines recommend aversion therapy. Therefore, aversion therapy is considered investigational for all indications.

## REFERENCES

1. Frawley PJ,Smith JW. Chemical aversion therapy in the treatment of cocaine dependence as part of a multimodal treatment program: treatment outcome. *J Subst Abuse Treat.* 1990;7(1):21-9. PMID: 2313768
2. Frawley PJ,Smith JW. One-year follow-up after multimodal inpatient treatment for cocaine and methamphetamine dependencies. *J Subst Abuse Treat.* 1992;9(4):271-86. PMID: 1336066
3. Smith JW,Frawley PJ. Long-term abstinence from alcohol in patients receiving aversion therapy as part of a multimodal inpatient program. *J Subst Abuse Treat.* 1990;7(2):77-82. PMID: 2167389

4. Smith JW, Frawley PJ. Treatment outcome of 600 chemically dependent patients treated in a multimodal inpatient program including aversion therapy and pentothal interviews. *J Subst Abuse Treat.* 1993;10(4):359-69. PMID: 8105103
5. Smith JW, Frawley PJ, Polissar L. Six- and twelve-month abstinence rates in inpatient alcoholics treated with aversion therapy compared with matched inpatients from a treatment registry. *Alcohol Clin Exp Res.* 1991;15(5):862-70. PMID: 1755521
6. Smith JW, Frawley PJ, Polissar NL. Six- and twelve-month abstinence rates in inpatient alcoholics treated with either faradic aversion or chemical aversion compared with matched inpatients from a treatment registry. *Journal of addictive diseases.* 1997;16(1):5-24. PMID: 9046442

## CODES

| Codes | Number | Description                               |
|-------|--------|---|
| CPT   | 90899  | Unlisted psychiatric service or procedure |
| HCPCS | None   |   |

**Date of Origin:** November 2001