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Unique Issues Faced by Deaf Individuals Entering Substance Abuse Treatment and Following Discharge



everal barriers can frustrate a deaf individual's intention to enter a substance abuse treatment program. Because few specialized programs work with the Deaf, it is difficult to determine the factors that influence a deaf individual's desire to maintain sobriety following completion of a residential treatment program. A sample of 100 individuals was drawn from the Minnesota Chemical Dependency Program for Deaf and Hard of Hearing Individuals, a model hospital-based inpatient treatment program. The study participants were asked to complete pretreatment and posttreatment surveys upon admission and discharge, respectively, in addition to a follow-up survey, to help determine which background factors might be associated with different treatment outcomes for deaf and hard of hearing persons who completed treatment in the program. Results are presented for the pretreatment and posttreatment assessments, and for the follow-up survey. Study limitations are discussed and recommendations are given for future treatment programs serving deaf and hard of hearing individuals.

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There have been few attempts to conduct prevalence studies to determine the incidence of substance abuse in the Deaf community. Some researchers have attempted to extrapolate data from other sources on the seriousness of substance use and chemical dependency among deaf persons. McCrone (1994) projected the presence of approximately 3,505 deaf heroin users, 31,915 deaf cocaine users, 5,105 deaf crack users, and 97,745 deaf marijuana users in the United States. These figures were based on the U.S. Department of Justice reports of the overall incidence of illicit drug use in the United States for 1992 and the assumption that deaf people represent 0.5% of the general population. Further, the National Council on Alcoholism has suggested that at least 600,000 individuals in the United States experience both alcoholism and hearing loss (Kearns, 1989).

Barriers to Substance Abuse Treatment

Within the Deaf and hard of hearing communities, there is a lack of awareness about the problem of substance abuse. Many individuals in these communities have not had access to the recent widespread efforts to educate people about the dangers of drug use and abuse. Public service announcements on television often are not captioned. Preventive curricula in schools have not accommodated the communication skills of deaf and hard of hearing children and have often been insensitive to their culture. Because of the general lack of awareness, alcohol continues to maintain a protected status relative

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to other drugs, while the abuse of chemicals continues to carry a stigma that discourages individuals from admitting a problem. Naturally, like other minority communities, the Deaf and hard of hearing communities work to present a positive image, and, in so doing, may be reluctant to admit to problems relating to drug or alcohol use.

For many years, a grapevine-like system of communication has kept deaf people informed of community news across the United States. Frequently, deaf individuals who live in one area of the country socialize and communicate often with deaf individuals in other areas. Members of the Deaf community often express concern that sharing information in treatment will result in having one's life story fed into that grapevine. As a result, many who struggle with a chemical dependency also fear a loss of respect and status within the Deaf community should their struggles be made a part of that shared information. The confidentiality that is an integral part of therapeutic treatment consequently can come into conflict with the communication style of the Deaf culture.

Deaf and hard of hearing individuals have few resources in dealing with alcohol and other drug problems. Few treatment programs exist that offer deaf and hard of hearing people the kinds of services necessary for them to get access to and benefit fully from such programs. Availability of counselors fluent in American Sign Language (ASL), assistive listening devices, TV decoders, and TTYs are not commonly found in standard treatment programs. Further, specialized assistance following treatment is rare. For example, interpreters for 12-step programs are difficult to find or finance. Consequently, the recovering person must resort to writing notes back and forth to communicate with his or her sponsor. Also, few recovering community members are available to serve as role models and guides on the path to recovery.

Family and friends who are concerned about the deaf or hard of hearing individual often do not recognize the signs and symptoms of a chemical use problem or are unable to confront the individual about his or her behavior. In other cases, behaviors relating to a person's chemical use are attributed to the hearing loss. Family and friends, in a sincere but misdirected effort to help, rescue these individuals from the consequences of their behaviors, but in so doing rob them of the opportunity to see how their alcohol use or other drug use damages their lives. Failing to hold an individual accountable only serves to sustain that person's unwillingness to seek help.

Programs meeting the communication and cultural needs of deaf and hard of hearing individuals supply the missing educational pieces relating to substance abuse. However, these programs are expensive. Such programs require specially trained staff who are difficult to locate. Because of the low incidence of substance abuse among deaf and hard of hearing people, local treatment often is not cost-effective; as a result, individuals often must travel long distances to obtain appropriate treatment services, which adds to the cost of treatment. The issue of funding is further complicated by a general lack of understanding on the part of funding sources-whether these are public or private—and of the special needs of these individuals. Further, the process of gaining access to funding presents one more barrier because of its complexity, which is compounded by the need for interpreters.

Generally, pursuing a life-style free from mood- altering substances means leaving old friends. Often, no more than a few deaf or hard of hearing people reside in the same area, and at present, the number of deaf or hard of hearing people in recovery in a given area is likewise small. Even after completion of a treatment program, many people need and benefit from ongoing education and support from counseling, therapy, and support groups. Finding service of this kind that is accessible to a deaf or hard of hearing individual presents an additional obstacle.

Another barrier faced by deaf and hard of hearing persons seeking treatment services is in the area of communication. Instead of the common practice of having clients write when doing treatment-related assignments, specialized programs such as the Minnesota Chemical Dependency Program for Deaf and Hard of Hearing Individuals (the Minnesota Program) use methods such as asking clients to draw as a means of completing these assignments. Role-play and other experiential activities help meet the needs of patients with a variety of learning styles.

A Model Program

The Minnesota Program is a specialized program designed to meet the communication and cultural needs of deaf and hard of hearing persons in chemical dependency treatment The program has a highly trained staff who provide a full range of treatment services. All staff are fluent in sign language as well as knowledgeable about and sensitive to Deaf culture.

Program offerings include individual and group therapy, educational offerings, spirituality group, grief group, recreational therapy, men's and women's groups, participation in accessible 12-step groups, comprehensive assessment services, and aftercare planning. Currently, there are few other programs in the country designed to provide culturally appropriate and fully accessible treatment services for this population.

The Minnesota Program has received several grants from two federal agencies, the Office of Special Education and Rehabilitative Services and the Center for Substance Abuse Treatment. The program is based on a 12step model but applies a variety of approaches, with emphasis on identifying and changing behaviors. Each client is viewed as unique, and as such, experiences an individualized treatment program. Attention is given to client diversity, taking into account ethnic background, education, socialization, cultural identity, family history, and mental health status.

From the opening of the Minnesota Program on March 14, 1989, through July 31, 2000, a total of 783 clients were served. Of those patients, 21 were under the age of 18 years at the time of admission. Of the remaining 762, most reported that their alcohol use and other drug use had begun much earlier than when they were admitted for treatment. The majority of clients started using in some cases as early as age 10 years. The program was designed with a 40-day length of stay, and even with current health care restrictions, the average length of stay for private and publicly funded clients is 25 to 30 days.

The Minnesota Program offers intensive programming averaging 9 to 10 hours each day. Program components include educational sessions, individual counseling, group therapy, and recreational therapy, as well as detoxification and monitoring of medical needs.

The Minnesota Program uses a variety of treatment approaches that are modified to respect the linguistic and cultural needs of the clients. In contrast to the traditional emphasis on reading and writing, clients are encouraged to use diverse methods, including drawing, role play, and a variety of sign language systems. Any written material used in the Minnesota Program is modified, and video materials are developed and presented using sign language, voice, and captioning. TTYs, assistive listening devices, flashing light signals, decoders, and other technology help to make the treatment setting accessible to deaf and hard of hearing clients.

Phase I: Evaluation/Assessment

At the Minnesota Program, treatment is provided in three phases. Phase I is evaluation/assessment, in which information about the client is gathered. The assessment includes data on the client's medical background, a social history, a chemical use history, a clinical assessment, and a communication assessment. The communication assessment is an important tool that profiles a client's communication needs and facilitates the provision of treatment and support using the client's preferred method of communication. During Phase I, clients also complete a drug chart assignment in which they provide information about the different drugs they have used, a description of their last use, and examples of consequences of their use in major life areas such as physical health, legal, family, social, work/school, and financial. With few exceptions, drug chart work and many other assignments are done through drawing. The use of drawing removes the barrier created for many deaf people by the English language. It also encourages clients to be in touch with their experiences and, as a result, to be more in touch with the feelings connected to those experiences. Each completed assignment is shared with peers and staff in a group setting, most often using ASL.

Phase II: Primary Treatment

During the *primary treatment* phase, clients receive education about the 12 steps and work toward completing assignments related to steps 1 through 5. The goal of this phase is for clients to integrate the concepts of the 12 steps into their recovery and is more important than the number of steps completed. The typical step work assignments used by programs for hearing persons have been modified to meet the needs of the clients at the Minnesota Program. Rationales developed by the treatment staff for various portions of step assignments help to identify the objectives of each assignment and determine if the client has met these objectives.

Beginning in Phase I and continuing throughout, information is provided about the programs of Alcoholics Anonymous (AA), Narcotics Anonymous (NA), and other 12-step groups, as well as opportunities to be involved in these meetings. A family week experience is provided for clients and their families as appropriate whenever possible. Such an experience is often the first time many families are able to explore issues related to alcohol and drug use and its impact on the family. If family members are unable to attend, materials, referral to other resources, and telephone contact with staff are available to them.

The Minnesota Program uses a behavioral approach with clients that includes education and support designed to help individuals identify and correct self-defeating behaviors. Intervention efforts are matched to behaviors of concern. An initial intervention typically consists of a one-to-one discussion with the counselor, which often helps the client recognize and change the behavior. If the behavior continues or worsens, a behavior contract might be an appropriate secondlevel intervention.

Behavior contracts may be used to address lapses such as violating unit rules, arguing about staff directives, failing to complete work on time, or failing to focus on treatment or focusing on the needs or issues of other patients. Such contracts specify the behaviors for which they are issued as well as the changes that are expected.

Another behavior management technique is the probation contract. It may be used to help a client recognize behaviors that seriously threaten the success or quality of the treatment ex-



perience. It is used as a follow-up to a behavior contract in the event that the client does not respond positively or flouts the terms of a behavior contract. Probation contracts also specify expected changes in the client's behavior, and may include an assignment that helps the client identify and change his or her behavior. Failure to adhere to the probation contract may result in the client being asked to leave the program.

Phase III: Aftercare/Extended Care

Phase III focuses on *aftercare planning and services*. For clients from outside Minnesota, staff members attempt to set up a comprehensive aftercare program in the client's home area, including education and support to service providers there. For local clients, the Minnesota Program offers individual aftercare sessions and connects clients to other local resources such as 12-step meetings, relapse prevention groups, therapists fluent in ASL, an interpreter referral center, vocational assistance, halfway houses, and sober houses.

Networking with other service providers both locally and nationally is an important activity related to aftercare. Aftercare for clients residing outside Minnesota continues to be a challenge. Few 12-step meetings provide interpreters. There are national shortages of professionals trained to work in this discipline. Developing an aftercare plan for out-of-state clients might be compared to putting together a puzzle—sometimes with many of the pieces missing.

Relapse prevention may be addressed in primary treatment, or in a later stage of treatment such as aftercare. It is important to understand that relapse is a process of behavior changes that culminates in the return to mood-altering chemicals. Clients are offered information about warning signs of relapse in terms of feelings, behaviors, or environment. Clients are taught to recognize and respond to warning signs in ways that are likely to support ongoing sobriety.

Individuals participating in treatment at the Minnesota Program come from the United States and Canada, and upon admission have ranged in age from 17 to 72 years. Most clients entering the program have reported use beginning at approximately 10 years of age.

The Present Study

As previously indicated, there are few specialized programs serving the deaf and hard of hearing population and very little data available on the prevalence of alcohol and drug use in this population. To date, there are no known studies of the long-term outcome status of clients completing either specialized or nonspecialized treatment programs. A variety of instruments have been developed to help assess the status of these individuals prior to and up to 1 year following treatment.

The present study reports follow-up information for 100 individuals who completed inpatient treatment at the Minnesota Program over a 2-year period. An important goal of the study was to assess client status in the year following treatment. Contact with each client by telephone or in person was attempted at 1, 3, 6, and 12 months following treatment to determine if sobriety was maintained and if quality of life had been enhanced. An attempt was made to identify factors contributing to or associated with the success of individuals admitted to the program for treatment. Demographic, attitudinal, and other background variables were explored for their association with treatment outcomes for individuals completing the program. Program staff hoped that once this information was gathered, it could be used to identify program strengths as well as weaknesses and omissions so program improvements could be made. They also hoped that the evaluation of the program would serve the Deaf and hard of hearing communities by indicating those program components contributing to the provision of the most effective treatment.

Much time was required to obtain the study sample. This could be attributed to the low incidence of deaf and hard of hearing individuals generally, and in particular to the small number of clients entering the Minnesota Program at any given time (typically four to six). Many of the clients referred to the Minnesota Program have additional mental health diagnoses that have gone untreated. Also, a number of referral sources may indicate that a client has a substance abuse problem but is functioning at a very low level or has other issues that need to be addressed before the chemical dependency issue. These and a variety of other factors may influence a client's decision to leave before treatment is completed, or may provide a reason for discharge. Therefore, we examined data only from clients who successfully completed treatment.

Finally, some individuals completed treatment more than once. For these individuals, we considered only data obtained following the first treatment.

Clients were asked upon admission and again at discharge to participate in the present study. Specifically, individuals were asked if they would be interested in being involved in a follow-up study to explore overall quality of life and sobriety following treatment. Clients who agreed to participate signed a consent form. The study (including all instruments and consent forms) was reviewed and approved by the Human Subjects Committee of the University of Minnesota's Institutional Review Board.

Participants

One hundred individuals who completed chemical dependency treatment at the Minnesota Program were surveyed. They came from numerous states and Canadian provinces, and upon admission ranged in age from 17 to 72 years. The majority of clients entering the program reported use beginning at approximately 10 years of age.

The sample was 75% White, 13% African American, 6% Hispanic, and 6% Native American. Seventy-seven percent were men. Thirty-nine percent of the participants were under 30 years of age upon admission to the program. The median level of educational attainment was the completion of high school. Most (65%) had no dependents, with others reporting up to four dependents.

The most common methods of payment for treatment were Medicare (44%), private insurance (27%), and Medical Assistance/Medicaid (15%). Other sources included Minnesota State Public Assistance (6%), a health maintenance organization (2%), a vocational rehabilitation agency (2%), the Ontario Health Insurance Plan (2%), or some other entity (2%).

The great majority of clients (93%) were discharged from the program on the advice of staff. The rest left against staff advice (3%), because of a behavioral discharge (2%), or because of an insurance denial or request (2%).

Sixty percent of clients reported upon admission that alcohol was their preferred chemical to use. Others reported cocaine (28%), cannabis (9%), opiates (2%), and hallucinogens/phencyclidine (PCP) (1%).

Referrals to the program came from a variety of sources: a social worker (21%), family (20%), a chemical dependency or mental health program (16%), an employee assistance program (10%), a county agency (8%), the courts (5%), a detoxification center (5%), a therapist (3%), school (2%), a friend (1%), other (3%). Six percent of clients reported coming to the program without being referred by any particular entity. The number of days clients stayed in treatment ranged from 12 to 68, with a median of 38.

Clients were asked to complete five inventories administered either upon admission to the program or upon discharge. These included (a) a pretreatment survey, completed upon entry into the program, measuring attitudinal, behavioral, and knowledge changes regarding substance abuse that might occur while an individual was in treatment; (b) a posttreatment survey, completed at discharge, measuring attitudinal, behavioral, and knowledge changes relating to substance abuse that might occur upon completion of treatment (see Appendix); (c) a written demographic questionnaire, completed upon admission; (d) a written program satisfaction survey, completed upon discharge; and (e) a follow-up questionnaire completed in an interview between staff and former clients in the months following discharge. The pretreatment and posttreatment surveys were administered through signed, voiced, and captioned videotapes.

Results

Identical pretreatment and posttreatment surveys, administered upon admission and discharge, respectively, were designed to measure attitudes, vocabulary, and knowledge concern-

Table 1

Summary Statistics for Attitude, Vocabulary, and Knowledge Scales, Pretreatment and Posttreatment

	Pre	Posttreatment				
Scale	м	SD	n	м	SD	n
Attitude	7.91	2.92	100	9.63	2.32	100
Vocabulary	8.23	2.19	100	9.27	2.06	100
Knowledge	9.20	2.31	100	10.00	2.34	100

ing substance abuse as related to treatment and recovery (see Appendix). From the surveys, three scales—one each for attitudes, vocabulary, and knowledge-were created by taking a sum of correctly endorsed items. Each scale had a possible range of 0 to 13. Summary statistics for the three scales are presented in Table 1. Paired *t* tests were performed to assess change in the pretreatment and posttreatment scale scores. For the attitude scale, the difference in means between assessments was statistically significant (t =5.74, p < .01), suggesting an overall improvement in the attitudes measured. For the vocabulary scale, the difference in means between assessments was also statistically significant (t = 23.23, p < .01), suggesting an overall improvement in knowledge of vocabulary related to alcohol and drug treatment. Finally, the difference in means between assessments on the knowledge scale was statistically significant (t = 3.40, p < .01), suggesting an overall improvement in knowledge of issues relating to alcohol and drug treatment.

Upon discharge, clients were asked to report their level of satisfaction with the treatment program, materials, and staff at the Minnesota Program (see Table 2). Overall, clients reported being most satisfied with many aspects of the treatment program, with the exception that many had no opinion about Family Week. Response patterns were similar for satisfaction relating to program materials and staff. However,

Table 2

Program Satisfaction Survey

	True	False	No opin- ion
<u>Treatment</u> I was satisfied with OT time. I was satisfied with RT time. I was satisfied with the school program. I was satisfied with AA/NA meetings. I was satisfied with AA/NA meetings. I was satisfied with group on the unit. I was satisfied with group on the unit. I was satisfied with men's or women's group. I was satisfied with my 1:1 meetings with nurses. I was satisfied with my 1:1 meetings with other patients. I was satisfied with Family Week.	86 96 91 96 93 75 91 88 20	2 3 2 1 4 9 7 6	12 1 6 2 6 21 0 5 74
<u>Materials</u> The books used in treatment were helpful. The papers I got in treatment were helpful. The videotapes I saw in treatment were helpful. The drawing assignments I did in treatment were helpful.	66 92 92 95	3 8 3 2	31 0 5 3
Staff Did staff explain rules and procedures in treatment? I was satisfied with my 1:1 meetings with counselors. I was satisfied with the interpreters. I was satisfied with the service from the doctor. Did doctors or nurses explain any medical problems? Did staff talk with you about going to AA/NA meetings? Did staff talk with you about your aftercare plans? Could you understand staff most of the time? Could staff understand you most of the time?	96 98 95 78 71 97 89 98 95	4 1 16 18 3 10 2 2	0 1 6 11 0 1 3

Notes. Numerical values are percentages. OT, occupational therapy; RT, rehabilitative (recreational) therapy; AA, Alcoholics Anonymous; NA, Narcotics Anonymous.

small proportions of individuals expressed dissatisfaction with the service they received from the doctor or the communication between clients and doctors or nurses about medical problems.

Attempts were made to reach all clients at 1, 3, 6, and 12 months following discharge. Most could not be reached at each assessment period, but each was contacted at least once during the year following discharge. In some cases, if the client was not available, a contact person was interviewed on the client's behalf. We present data representing responses from the clients only. Forty clients were successfully contacted at 1 month, 19 at 3 months, 29 at 6 months, and 25 at 12 months following discharge. With only a small number of clients responding at each of the different time points, the results may not be representative of the follow-up status of all individuals who completed treatment. The results should thus be interpreted with caution.

Reports of alcohol, marijuana, and other drug use at each assessment time from those clients who were contacted are presented in Table 3. At all four follow-ups, the majority of individuals who responded indicated no alcohol use, while much smaller percentages reported occasional use. Reports of marijuana use and other drug use followed a similar pattern.

When asked in the follow-up survey about attendance at 12-step meetings, the majority of individuals responding at any given follow-up point indicated AA/NA attendance to be weekly. The next most frequent response was no attendance (22% to 25%). Most individuals responding indicated no contact with sponsors (43% to 50%), while a smaller number indicated weekly contact (18% to 38%). Clients were asked to report their attendance at individual and family counseling sessions. Of those responding at the various assessment times, some reported weekly individual counseling sessions (30% to 49%); others indicated no attendance (32% to 43%). Reports of family counseling were few at all assessment times, with the majority of responses indicating no such attendance (78% to 84%).

At the 1-month assessment, 70% of the clients contacted reported themselves to be unemployed. Unemployment rates were lower for the following assessments: 53% at 3 months, 47% at 6 months, and 46% at 12 months. Reports of full-time employment were at their highest level at the 12-month assessment (27%), with lower rates reported for 1, 3, and 6 months (19%, 20%, and 21%, respectively). Part-time employment was reported at more modest levels: 11% at 1 month, 17% at

Table 3

Alcohol, Marijuana, and Other Drug Use at Four Follow-up Assessments

Number of responses (percentages in parentheses)								
Outcome	Daily	Weekly	Monthly	Less than monthly	Not at all	Do not know		
Use at 1-mo.								
(N = 40)								
Alcohol	0(0)	4 (10.0)	0 (0)	1 (2.5)	34 (85.0)	1 (2.5)		
Manjuana Othor drug	0(0)	0(0)	0(0)	0(0)	39 (97.5)	1 (2.5) 2 (5.0)		
Other drug	0(0)	0(0)	0(0)	0(0)	38 (33.0)	2 (0.0)		
Use at 3-mo.								
(N = 19)								
Alcohol	2 (10.5)	1 (5.3)	0 (0)	1 (5.3)	15 (78.9)	0 (0)		
Marijuana	0 (0)	1 (5.3)	0 (0)	0 (0)	18 (94.7)	0 (0)		
Other drug	0 (0)	3 (15.8)	1 (5.3)	1 (5.3)	14 (73.7)	0 (0)		
Lise at 6-mo								
(N = 29)								
Alcohol	2(6.9)	3 (10.3)	1 (3.4)	2(6.9)	20 (69.0)	1 (3.4)		
Marijuana	1 (3.4)	1 (3.4)	1 (3.4)	3 (10.3)	22 (75.9)	1 (3.4)		
Other drug	2 (6.9)	1 (3.4)	0 (0)	0 (0)	25 (86.2)	1 (3.4)		
llos et 12 ma								
(N = 25)								
Alcohol	3(120)	3 (12 0)	3(120)	3 (12 0)	13 (52.0)	0 (0)		
Marijuana	1 (4.0)	0(0)	0(0)	2(8.0)	21 (84.0)	1 (4.0)		
Other drug	1(40)	1(40)	1(40)	1(40)	20 (80.0)	1 (4 0)		
	1 (4.0)	1 (4.0)	1 (4.0)	1 (4.0)	20 (00.0)	1 (7.0)		

3 months, 21% at 6 months, and 21% at 12 months. Some clients reported that they were attending school following treatment. Though the majority of responses at the 1-month assessment (95%) indicated that the client was not enrolled in school, reports of enrollment increased somewhat at the following assessment times: 17% of those responding at 3 months reported to be either full-time or part-time students; 9% of those interviewed at 6 months and 18% of those interviewed at 12 months reported similarly.

Discussion

Because of weaknesses in the followup survey, it is difficult to make as many generalizations related to the findings as we had hoped. It is worth mentioning, however, that several individuals obtained employment following treatment. This is an important finding because, as previously noted, a number of clients entering treatment at the Minnesota Program had been unemployed and were receiving some kind of public assistance. The vocational rehabilitation counselor may be the initial point of contact for many clients and the person who may determine that the individual is in need of treatment. This finding further suggests a need for a stronger relationship between treatment providers and vocational rehabilitation workers in assisting clients in gaining employment upon the completion of treatment.

Clients came from all over the United States and Canada, and many of the states had few accessible 12step meetings. In order to be accessible to deaf and hard of hearing individuals, a hearing 12-step meeting would need to provide a certified sign language interpreter. Not all communities are willing or able to provide interpreters since the cost may be up to \$50 an hour with a 2-hour minimum. Some states have received funding that is made available to the



smaller 12-step meetings that covers the cost of interpreters. Some communities have been successful in setting up deaf meetings that do not require the use of sign language interpreters since all those that attend are able to communicate with each other. Another difficulty for some deaf and hard of hearing individuals is finding a sponsor who can communicate in ASL and has long-term sobriety. Some hearing individuals who do not know ASL may sponsor a deaf or hard of hearing person, and attempt to communicate using e-mail, written communication, or the telephone relay service. (When a deaf person and a hearing person use a relay service, the hearing person talks to a specially trained operator who then types what the hearing person has said to the deaf person; the deaf person types back to the operator, who verbalizes to the hearing person what the deaf person is saving.)

There is a shortage in many communities of counselors who are fluent in ASL and able to provide clinical support to individuals who have completed substance abuse treatment. In some communities, a hearing counselor not fluent in ASL may contract with an interpreter to provide this service. This entails the presence of a "third" person and is not the preferred method of clinical intervention. In some places where there are few deaf individuals, the only available counselors who are fluent in ASL may have a dual relationship with the client, which may make it unethical for them to provide individual counseling to that individual.

A high percentage of clients who enter treatment at the Minnesota Program are on public assistance and unemployed. Many deaf and hard of hearing individuals are clients of vocational rehabilitation services within their state and have been since high school. Each state has different criteria for determining if it can work with a client who is actively using drugs or alcohol or has recently attempted to stop using. States' criteria for providing service ranges from doing so while the client is in treatment to requiring 6 months or more of sobriety before someone can become a client of the state vocational rehabilitation agency. Vocational rehabilitation agencies play a large role in the Deaf community because individuals are frequently referred to them in high school concerning educational and employment goals. In many situations, the vocational rehabilitation counselor may help arrange funding of postsecondary education or help find employment (or do both) for the deaf or hard of hearing individual.

Although inpatient treatment serves as an intervention in substance abuse, real recovery work begins after treatment. A part of that work involves the recognition of relapse prevention. Although many factors may influence relapse, the lack of accessible resources may be a major factor for deaf and hard of hearing people. Specialized materials taking into account the communication and cultural needs of deaf and hard of hearing people can contribute to the recovery process. Support services such as aftercare, vocational rehabilitation, and self-help groups, can encourage the pursuit of a recovering life-style, but only if those services are accessible.

As already noted in the present study, many individuals seeking treatment are on public assistance. Demographic data indicated that 36% of those admitted to treatment who participated in the present study were actually on some kind of public assistance, were not employed, or were attending school. The number of authorized treatment days appeared to be related to the employment status at follow-up, since employed individuals tended to spend fewer days in treatment than unemployed individuals. It has always been curious that, while people are encouraged to get jobs, those who are employed frequently stay in treatment for less time than those who remain on public assistance. One may speculate that if employed individuals are shown to maintain abstinence for a longer time and to have shorter treatment stays than unemployed individuals, then employment may actually be considered equal to or more important than duration of treatment as a predictor of abstinence.

Several studies have been completed with hearing individuals that have had similar outcomes to those of the follow-up survey described in the present study. Menaja Obinali (1986) completed a study in conjunction with Camarillo State Hospital's Alcoholism Treatment Unit, located in California, to investigate factors contributing to the success-or failure-of efforts to complete treatment successfully. The findings indicated that successful completion was related to employment history, involvement in psychotherapy, a supportive milieu (family and friends a participant can talk to about his or her sobriety), and attendance at AA meetings. Three of the four factors listed were also found to be significant in the present study with deaf and hard of hearing individuals. These included employment, attendance at AA meetings, and a supportive milieu. Vaillant (1988) investigated long-term follow-up in a sample of 100 heroin addicts and 100 alcoholdependent individuals. Consistent with the results of the present study, his findings indicated that factors contributing to sustained sobriety were compulsory supervision (parole, employment), substitute dependence (AA/NA, parole), new social supports (sponsor, AA/NA) and inspirational group membership (attendance at 12step meetings).

The number of facilities emerging to meet the needs of deaf and hard of hearing substance abusers is increasing, and existing resource providers are gradually attempting to make their services accessible to deaf and hard of hearing people. We applaud the increase in attention to preventive efforts, and hope that expanded emphasis in this area will continue. The integration of community models and public health concepts offers the promise of a wider perspective, and this appears to be a wise approach to addressing the multifaceted problems of addiction.

Ideally, individuals who successfully complete an alcohol or drug treatment program should be able to return to the environment where they lived prior to entering a treatment program. However, that environment must include a sober living option, support from family and friends, availability of professionals trained to work with clients on aftercare issues, and accessible 12-step meetings.

There are at least two obstacles to achieving a successful return to one's previous environment. One is that the availability of local educational facilities, support groups, counselors, family, and friends varies widely from one part of the country to another. Few individuals complete treatment and return to a positive, healthy living situation that is supportive, with the majority leaving treatment not having such opportunities available to them. Second, current laws sometimes inhibit good opportunities to intervene with these individuals at an early age.

Our follow-up survey represented the first known national effort to examine treatment outcome data of deaf and hard of hearing individuals who successfully completed an inpatient chemical dependency treatment program. As with any such initial data that are gathered, there are inherent limitations that must be identified and addressed. First, this follow-up survey was based on internal data, since no comparable chemical dependency programs were available for comparison. Second, data for only a relatively small number of individuals were available, because of to the limited number of individuals served by the program on a daily basis. Third, the documents used to measure treatment outcomes were not designed specifically for a treatment outcome study, and as a result may not provide the most informative means of program evaluation. Fourth, the majority of follow-up surveys were completed through the use of a TTY, and consequently some questions were either not answered or possibly misunderstood. In these cases, an attempt was made to contact referral sources, family members, or others who could provide corroborating information. Finally, responses to questions were typically self-reported. Although many questions concerning treatment outcome are well answered in this manner, those addressing drug and alcohol use, in particular, likely require external validation.

Recommendations

Based on the current data and the analyses presented in the present study, we offer 10 recommendations for future treatment programs.

First, vocational rehabilitation should be made a strong component of inpatient treatment and aftercare. Current findings suggest a positive relationship between abstinence and employment. Treatment programs should work to incorporate vocational components into treatment services. Strategies may include employing a rehabilitation counselor as part of the treatment plan. This individual could provide vocational assessment services as well as assistance in job training and placement. For individuals living out of state, the vocational rehabilitation counselor would serve as a liaison with the home community and assist in creating access to appropriate services at the time of discharge.

Second, educational components should be incorporated that teach basic job-seeking and job retention skills. The knowledge and skills to seek, obtain, and retain a job are prerequisites to the positive relationship noted in the first recommendation. A high rate of public assistance and unemployment (36% at the Minnesota Program) suggests that clients in chemical dependency treatment could benefit from knowledge and skills in this area. The tendency of welfare and assistance programs to financially penalize individuals who obtain income from jobs needs to be thoroughly scrutinized.

Third, a consistent national policy is needed for state-level vocational rehabilitation departments. In addition to the inconsistency of policies from state to state, requirements for a period of abstinence or sobriety for eligibility for services may actually create barriers to maintaining sobriety. To encourage the positive connection between work and abstinence, policies should provide for early involvement in vocational rehabilitation services.

Fourth, training programs should be established for vocational rehabilitation counselors and other professionals who serve deaf and hard of hearing persons. Substance abuse course work is not a part of the preparation programs of most professionals who work with deaf and hard of hearing individuals. Course work should include information about chemical dependency assessment, recognition of symptoms of substance abuse, prevention strategies, clinical issues, the referral process, and aftercare needs and options. Such training would enable professionals to assist clients in advocating and securing appropriate services. This type of training should also be provided to all professionals preparing to provide education and other social services to deaf and hard of hearing persons.

Fiftb, a substance abuse hotline should be established for deaf and hard of hearing individuals. A national, toll-free, TTY-accessible hotline could assist deaf and hard of hearing persons with obtaining access to as-

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sessment, treatment, aftercare, and support resources such as AA or other 12-step groups. Current findings indicate the value of support in maintaining sobriety but also a lack of such support nationally. The hotline could also provide support and referral information to family members, friends, concerned persons, and professionals.

Sixtb, education about chemical dependency and recovery should be provided to family members and friends. Involving family members and friends of deaf and hard of hearing clients in a family treatment component or in some kind of education about addiction may help to reduce the amount of enabling and thus improve the recovery rate. When family members and friends are knowledgeable about the disease of dependency, they can be more helpful in encouraging and supporting recovery.

Seventh, there should be improved access to self-help groups such as AA and NA. Feedback from respondents indicates a phenomenon of "whiteknuckling it," meaning that deaf and hard of hearing individuals attempt to maintain sobriety on their own because they lack access to various support groups. This is typically experienced by individuals who become sober, complete a treatment program, and think that because of all they have learned, they will never use drugs or alcohol again. They continue the same life-style and friendships as before treatment. But the findings indicate that once a person has been out of treatment 6 months or longer, it is not possible for that person to remain sober if he or she does not participate in a self-help program such as AA or NA. This recommendation involves creative approaches to funding that would provide interpreters and other communication access to self-help groups.

Eighth, aftercare services should be made more available. The lack of aftercare services continues to be one of the greatest obstacles to maintaining sobriety. One of the biggest gaps seems to be in the area of safe, sober living environments following completion of treatment. Other kinds of aftercare, including outpatient counseling, aftercare appointments, and relapse prevention groups, are also lacking or inaccessible.

Nintb, avenues for additional funding need to be explored. With today's economy, organizations need to be innovative and creative in finding ways to fund programs. Training in the area of grant-writing strategies needs to be offered to professionals, because those individuals interested in developing comprehensive treatment services for deaf and hard of hearing individuals need to find new funding sources as budget reductions continue to occur at the local, state, and federal levels.

Tenth, additional research with deaf and hard of hearing individuals is needed. Findings of the present study were based on a sample of 100 individuals. This study should be replicated using a larger sample size to help confirm its findings. Additional research, including more longitudinal studies and general research in the area of substance abuse and deafness, should also be completed to expand on the data for future planning. Such data would allow extant and newly developed programs to base treatment strategies on solid research.

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Appendix

Pretreatment/Posttreatment Survey

Please respond to the following statements: Y = Yes. N = No. ? = Do not know.

Part 1: Attitude

- 1. Is it OK to have friends who use alcohol or other drugs?
- 2. Is using alcohol and drugs important to you?
- 3. Do you believe treatment can help you?
- 4. Will other people solve your problems in treatment-not you?
- 5. Can you control your alcohol or drug use alone?
- 6. Are many of your problems related to using alcohol or other drugs?
- 7. Are other people responsible for your problems—not you?
- 8. Do you have good judgment when you use alcohol or other drugs?
- 9. Can a 12-step program help you?
- 10. Is belief in a Higher Power important to you?
- 11. After treatment, can you use drugs and alcohol again without any problems?
- 12. After treatment, can you continue to have the same using friends as before?
- 13. After treatment, if you relapse, should you forget about staying sober?

Part 2: Vocabulary

- 1. Does chemical mean alcohol and other drugs?
- 2. Can *withdrawal* happen if you stop using alcohol or drugs?
- 3. Does powerlessness mean you cannot control your alcohol or drug problems alone?
- 4. Does denial mean refusing to admit you have a problem with alcohol?
- 5. A person who only drinks beer cannot be an alcoholic?
- 6. Is alcohol a drug?
- 7. Does being sober mean not using alcohol or other drugs?
- 8. Does *detoxification* mean you have no alcohol or other drugs inside your body?
- 9. Is *recovery* a time when people learn to live without alcohol or other drugs?
- 10. Does relapse mean starting to show old behaviors and use alcohol or other drugs again after treatment?
- 11. Is a sponsor a sober person from AA or NA?
- 12. Does program mean the 12-step program of AA/NA?
- 13. Does Higher Power always mean God?

Part 3: Alcohol and Drug Knowledge

- 1. Is alcoholism a disease/illness?
- 2. Does detoxification require 12 to 72 hours?
- 3. Is blaming others or making excuses called denial?
- 4. Do blackouts happen to all people, both people who use and people who don't?
- 5. Can using alcohol or other drugs cause problems at home, school, or work?
- 6. Can using alcohol or other drugs cause problems with friends and family?
- 7. Can using alcohol or other drugs cause money problems?
- 8. Can using alcohol or other drugs change thinking?
- 9. Can using alcohol or other drugs change behavior?
- 10. Can using alcohol or other drugs cause health problems?
- 11. Is hard liquor (whiskey, vodka, rum, etc.) more dangerous than beer or wine?
- 12. Are AA and NA places where people can get help to stay sober?
- 13. If people relapse, sometimes they need to go back to treatment, AA, or a halfway house?