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A SURVEY OF ALCOHOL AND DRUG ABUSE PROGRAMS IN THE RAILROAD INDUSTRY

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FINAL REPORT

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16. Abstract

A survey of 20 industrial alcoholism and counseling programs run by railroad corporations covering 58 variables was made by semi-structured interviews of program directors, union officials, and by questionnaires applied to individual clients. Descriptions of program policy, practices, penetration rates, success rates, relationships to discipline and client population parameters are given along with other topical areas.

A factor analysis and intercorrelations between all variables measured are also displayed.

Included is a comprehensive literature review on Industrial Alcoholism programs covering topics parallel to the survey.

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Canadian National Railways
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Chicago, Milwaukee, St. Paul and Pacific Railroad Company
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EXECUTIVE SUMMARY
OF THE
SURVEY OF DRUG AND ALCOHOL ABUSE COUNSELING
PROGRAMS IN THE RAILROAD INDUSTRY

Objectives

The objectives of this survey were (1) to describe in detail the employee assistance and alcohol abuse programs being run by railroad corporations and (2) to provide information upon which further research could be implemented to increase effectiveness of these programs.

How the Information Was Obtained

The information presented in this report was obtained by (1) administering detailed interviews to directors of 20 programs, (2) administering a separate interview to 39 general chairmen from various unions representing railroad employees and (3) administering brief anonymous questionnaires to clients where the program directors were willing. Additionally, a literature search on industrial alcoholism programs was made for comparison purposes. The results of the surveys, questionnaires, and searches were tabulated and compared to develop an overall picture.

Significant Findings

Program Policy

Generally the older programs in existence (five to ten years) limit treatment to alcoholism problems, while recent programs addressed other human ailments (drug abuse, marital counseling, etc) in addition to alcoholism.

Program Policy Statements are of varied quality. Some programs operate without written statements.

A majority of the programs operate with labor involvement in program activities and control.

Labor involvement in the program results in a higher percentage of individuals volunteering for help.

Where programs operated under a well prepared set of regulations or policy, the medical departments of these corporations were involved in referrals and consultation but not in diagnosis and treatment.

Most programs were offered over the entire system of the railroad and to immediate family members as well as employees.

Staffing and Organization

Programs emphasizing treatment for alcoholism only, as opposed to broader based programs, tend to be based on patterns established by Alcoholics Anonymous (AA), are older, and are staffed by personnel with AA background and training. The broader based programs tend to be patterned after recommendations from the National Council on Alcoholism (NCA), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA).

The number of employees per counselor varied widely and was not always related to company size.

Paraprofessionals that are trained in alcoholism counseling are preferred to the untrained counselor or highly trained clinicians.

Volunteers are widely used, but only reluctantly so, due to their lack of training, low availability, and poor reliability when compared to the full-time, paid counselors.

Most counseling programs are staff organizations reporting to a company vice-president.

Program Funding

The vast majority of the programs' staffing costs are funded as a company operating expense.

Program costs ranged from $2 to $10 per employee per year.

Employee treatment costs are almost always covered by group health insurance.

Insurance coverages varied greatly and should be standardized.

Facilities

Program facility location varied from office space provided on the railroad property to secluded office space provided in the business or residential community.

All programs relied heavily on existing hospitals, clinics, groups, etc. to service their employees.

Most programs depended heavily on services provided by Alcoholics Anonymous.

The presence of employees in the outlying areas of large railroads causes logistical problems in providing program service.

Information and Education

Program information is distributed by a number of means: pamphlets, posters, paycheck flyers, talks, articles in company papers, word-of-mouth, etc.

Program directors felt that mailings were effective but costly.

Clients felt personal contact was most effective.

Various methods were used by most programs in an attempt to formally educate both management and labor on program specifics.

Records and Confidentiality

Most programs did a reasonable job of safeguarding employee confidentiality.

Generally, records were not systematically purged and much out dated information was kept.

Possible conditions, however, did exist affecting an employee's right to confidentiality. An example would be courts issuing subpoenas for an individual's records.

A client-employee undergoing disciplinary procedures where proof-of-treatment-progress can influence a decision found information release extremely helpful.

Program Clients

The average client with an alcohol related problem was a male, 41-45 years old, and had been working with the company for at least 10 years.

Relationship to Discipline

The vast majority of the programs offered program services to Rule G violators with the stipulations that he was addicted to alcohol, that reinstatement was not automatic, and that he adhered to treatment.

Reinstatements were more likely if program treatment was successful.

The vast majority of programs were rigidly separated from disciplinary proceedings.

Methods of Referral

An alcoholic employee was most likely to be referred to the program by this supervisor. The second most likely referral means is where

the employee turns himself in.

Other sources of referral include, union officials, medical departments, fellow employees, family, or referral as a result of a Rule G violation.

Program Effectiveness

The penetration rate of railroad programs compares favorably to those of other industrial programs.

Programs with high penetration rates identify and treat alcohol abusers at an earlier age.

The rate of successful interventions varied according to definition but ranged from 50%-84% with an average of 69%. Broader definitions of success would increase the averages to 80%.

INTRODUCTION

Objectives

This program has had as its intent a descriptive survey of employee counseling programs for alcohol and other drug abuse problems that are currently being run by railroad corporations. Programs run by other transportation industries were to be included for comparison purposes. Included in the survey was a sampling of labor perceptions regarding these counseling efforts and related literature criterion. While the primary thrust was to produce an informative document outlining administrative policies, practices, and results, it was proven inescapable that some evaluative material has also been collected. This has become then, a secondary objective to collect and present this information in a form useful to future efforts in a possible full-scale determination of effectiveness.

The results of this survey forms one of the two major studies of this report, A Survey of Railroad Employee Assistance Programs. Another primary objective was to provide a comprehensive survey of literature pertaining to industrial alcoholism programs to which the results of the railroad survey might be compared. The results of this survey form the other major section of this report, A Literature Review on Industrial Alcoholism Programs.

Literature Review

The literature review covers the characteristics and administrative aspects of industrial alcoholism programs. Discussion of the causes of alcoholism and treatment have been excluded. The material presented in the literature review provides a background in industrial alcoholism programs against which the railroad programs may be compared.

Methods Used in the Railroad Survey

Twenty currently operating railroad employee assistance programs in the United States have been covered; two Canadian programs are included in this survey. Initial contact and inquiry was made through the Association of American Railroads.

Data Collection

To collect the necessary information three primary means were used. First, the program directors from the various corporations were subjected to a semi-structured interview of the format shown in Appendix A. Since detailed statistical information was desired in some categories, the format was forwarded to them prior to the time of interview in hope that time might be taken to unearth the desired information. All except one interview was tape recorded following the format question sequence; sufficient time was allowed for

exploratory diversions, illustrations, and comments during the time allotted. The responses were then translated and categorized for each question utilizing keyword and keyphrase statements of the directors on the tapes, interviewer notes and, in some cases, the interview format that the directors had annotated with information. Interviews with non-railroad industrial programs followed the same general format.

Union perceptions were gathered by interviewing the general chairmen of a sampling of eight unions that represent portions of the railroad labor force. The initial stratified sampling scheme fell apart for practical, logistical reasons of mismatched schedules, cancellations, sudden meetings, and changed itineraries. The format for this series of interviews is also contained in Appendix A. Reduction of the data was performed identically to that of the program directors.

The third class of data was derived from a mailback anonymous questionnaire that was forwarded to program participants whenever the director was willing. In only 9 of 20 cases were the directors willing, consequently, only limited importance was attached to this information because of the sampling bias.

Organization and Statistical Manipulation of Data

The responses from the director interviews form the primary informative portions of the information derived. Of the 20 programs surveyed, five were either just starting and had not compiled sufficient data or experience to adequately report, or were limited in geographic coverage in such a manner that penetration rates and other population-related variables became confused. Consequently, the bulk of discussion must be centered around 15 programs of extensive geographic coverage and duration of one year or greater. This includes one of the Canadian programs. Throughout the summation, changes in sample size were unavoidable. This was caused by evasive or non-responsive answers given to some of the questions by respondents not having data prepared for some of the questions that were asked and by insurmountable confusion of categories from non-standardized data between programs.

The variables measured are contained in Appendix B along with translations of the computer codes (mnemonics) used in computer print-out variable labels for the factor analysis, regression equations, and correlations.

Correlations

Appendix C contains a correlation matrix which relates all variables to each other. This tabulation will frequently be referenced to in order to establish the strength of relationships between policies, practices,

and results of over all program. It is possible in a correlational analysis to relate seemingly nonsense variables. One must remember that almost all of the variables examined will also be correlated to other variables that might make better "sense" or have higher "face validity". The reader should be cautious about drawing conclusions from a seemingly strong relationship between only two variables. The correlations of these two with other variables should be examined before a conclusion is attempted.

Where the correlations are mentioned in the text an operational definition of the relationship will be given followed by the mnemonics used and the correlation coefficient (r). Correlation coefficients less than .514 are not mentioned. This value corresponds to a two-tailed test for a 5% significance with 13 degrees of freedom. Values less than this may have resulted from accidents in sampling.

Factors

Appendix D displays the results of a quartimax factor analysis performed on all variables. The factors have a high degree of face validity, the primary dependent variables of penetration and success rates have high factor loadings in three of the derived factor groups. The factor derivation does not, of course, establish direct relationships to measures of effectiveness. It does, however, establish broad groupings of variables that have meaning in depicting the significant aspects of these programs. The broad groupings of variables, or factors, are listed in a rank order of importance that is based on the quantity of total variance explained by the group. One should also remember that there is no final "best" factor solution. The particular one was selected on the basis of making clear the loading of singular variables in the factor group. Any number of other variations could be run.

Regressions

There are five regression equations listed in Appendix E that relate the primary effectiveness measures against the most predictive of the other variables. These are more fully discussed in the section, Effectiveness. The purpose in displaying these equations is to show the direct predictive qualities of the data taken on the sample of programs. Here again, there are other variations that can be made, particularly in light of the high intercorrelations between variables. One could, on the basis of selecting controlling variables, force a regression that would predict effectiveness on the basis of what a program director could change.

Descriptive Information

The body of the report follows closely the organization of the interview format for program directors in that the topical headings in

the report closely correspond to the question content of the interview. By this means a nearly complete read-out of responses could be displayed. Information provided by the union general chairmen is included where there was disparity in feelings and responses or where uniquely different information was derived. Responses from programs in existence less than a year or that limited service to only one or two divisions are also included in the descriptive statements wherever possible.

The Quality of Data

The validity and accuracy of the information received varied considerably. A continuum between the extremes of accurate statistical accounting and off-the-top-of-the-head estimates were encountered. As a consequence, caution should be exercised in interpreting the results. One should also recognize that the measures were anything but unobtrusive. It was apparent in many cases that both program director and union chairmen were "awakened" to the reality that what they are doing (or failing to do) had become a matter of public interest. Changes in program administration might be seen, at least indirectly, as the result of this study. The material presented in this report must, by necessity, take on a historical flavor.

A LITERATURE REVIEW ON INDUSTRIAL ALCOHOLISM PROGRAMS

The literature review that follows is focused primarily on occupational alcoholism. Specifically, it deals with the extent of alcoholism in industry, its effects on work behavior and industry's response to the problem. This perspective excluded from consideration the causes of alcoholism in general, and the effectiveness of specific treatment modalities used with alcoholics. Characteristics of occupational alcoholism programs are discussed, but not the specifics of the therapy used. A major portion of this review is devoted to the effectiveness of occupational alcoholism programs and to methodological difficulties encountered in measuring effectiveness.

The review begins by exploring the definition of alcoholism and then deals briefly with the history of alcoholism treatment programs in industry. The extent of alcoholism among working people is explored and the effects of alcohol and alcoholism on industrial work performance are documented. Finally, the general characteristics and approaches to alcoholism among industries are discussed and evaluated.

Definition of Alcoholism

The Department of Health, Education, and Welfare has declared alcoholism "the nation's number 1 health problem". (Egeberg, 1971). Despite this, the concept of alcoholism has yet to be defined in a manner agreeable to all those working in the field. Emrick (1974) after reviewing over 250 alcoholism studies concluded that "alcoholism was defined in too many ways in the studies to permit adoption of a more detailed definition". To people outside the area of alcoholism, the term conjures up the image of the deprived, lost soul, skid row derilic. Actually nothing could be further from the modal alcoholic. Less than 5% of all alcoholics are the skid row type (Trice and Roman, 1972). This image has prevailed despite the fact that the vast majority of alcoholics are working and have families; many are leaders in both civics, government, and industry. Three major reasons for the continued skid row image were offered by Trice and Roman, 1972:

(1) Skid rows are highly visible in cities.

(2) By believing that alcoholics are all skid row types it helps those with alcohol problems to deny their alcoholism. (I'm not like that, therefore, I am not an alcoholic).

(3) Paradoxically, efforts to get support from government and community to combat alcoholism have used "scare tactics" and employed the skid row image. In reality, this ploy may be hampering their efforts to identify and treat alcoholics.

Most definitions of alcoholism involve either or both of two components. The first is a drinking habit component described in terms of chronicity or repetitiveness (quantity, frequency, pattern, etc.). The second component is an ill effects component in which drinking brings about undesirable consequences on the drinker such as ill health, family disruption, or poor work performance.

Keller (1960) feels that the use of the term "excessive" in the drinking habit component of a definition is inadequate -- first, because no quantitative measure of "excessive" is possible and second, because quantitatively, over time, many alcoholics drink less than many non-alcoholics. He prefers the term "implicative"(suspicion-arousing) drinking. Keller does admit that this is less than ideal. Besides implicative, Keller feels the element of repetitiveness or chronicity of the implicative drinking is essential. An example of the drinking habit definition is that given by Chafetz, Blane, and Hill (1970) -- "Alcoholism is a label attached to a drinking pattern defined as deviant by the social control institutions".

The key criterion for the ill effect component is this (Keller, 1960): Would the individual be expected to reduce his drinking (or give it up) in order to avoid the ill effect? If the answer is "yes", and he does not do so, it is assumed -- admitting that it is only an assumption -- that he cannot, and hence that he has "lost control over drinking" and is addicted to, or dependent upon, alcohol.

An example of the "pure" ill effect definition is embodied in the statement made by Cahalan (1970): "Not concerned with amount or frequency of drinking, but rather with the disruption it causes on the individual's life organization and behavior".

Keller (1960) presents an example of a definition taking both components into consideration.

> Alcoholism is a chronic disease manifested by repeated implicative drinking so as to cause injury to the drinker's health or to his social or economic functioning.

It is both unnecessary and beyond the scope of this literature review to develop a "better" definition. Suffice it to say that the definition chosen by an investigator or program director will seriously affect his/her estimate of the prevalence of the condition in the population or a particular work force.

When dealing with occupational alcoholism, the key element for a company is deteriorated job performance (an ill effect component). If alcohol is contributing, we would be forced to say that such an individual has, at least, an "alcohol problem" or is an "alcohol abuser". He may not be an alcoholic in the implicative drinking pattern

sense, but nonetheless he would be a candidate for an occupational alcoholism program. This seems to be the definition most widely applied by program directors. Whether a person with an alcohol problem will develop into an alcoholic is a moot point. The fact is that a person with an alcohol problem whose performance on the job is deteriorating should be treated and helped. It, therefore, should be this population which is the basis for evaluating the effectiveness of an occupational "alcohol abuse" program.

History of Occupational Alcoholism Programs

The first efforts at the development of programs within companies to reach problem drinkers were begun in the 1940's (Presnall, 1967) with programs at Dupont starting in 1942 (Edwards, 1975) and at Eastman Kodak in 1944 (NIAAA, 1973). This corresponded to a general increased awareness of alcoholism in the country as a whole. The Yale Center of Alcohol Studies (now at Rutgers) was established in 1941 and the National Council on Alcoholism in 1944. Alcoholics Anonymous was founded nine years before in 1935, but it wasn't until the 1940's that it was becoming nationally known and accepted (NIAAA, 1973). From 1944 to 1959 there was no sharp increase in the number of companies who developed alcoholism programs. By 1959, it was estimated that approximately 50 companies had developed some type of program (Presnall, 1967). Around 1960, the National Council on Alcoholism developed a specific department of industrial services and propagated a combined community organization-management consultation approach which by 1965 had helped increase the number of companies developing new alcoholism programs by 357 percent (Presnall, 1967). The National Council on Alcoholism continues to this day distributing program literature and consulting services (National Council on Alcoholism, 1975).

The first large thrust at the federal level culminated in 1971 (Public Law 91-616) with the development of the National Institute of Alcohol Abuse and Alcoholism (NIAAA). Part of its mission was "to encourage and advise on the development of employee alcoholism programs at the state and community levels and in private industry" (Public Law 91-616). To this end, the Occupational Programs Branch was begun. Under the leadership of Willard O. Foster, Jr., they surveyed more than 300 companies with existing programs and found that only 12 could be said to be actually successful and operating efficiently (NIAAA, 1971). In early 1972, NIAAA, to promote the development of occupational alcoholism programs throughout the country, offered $50,000 to each state to hire two consultants to stimulate the development of programs within both public and private industry at the state level. The consultants underwent a three week training course at Pinehurst, North Carolina on June 11, 1972 when the program was formally launched (NIAAA, 1973). In the first year, alcoholism programs had been started by 20 state governments, and in 36 states, 203 new programs were developed in conjunction with the NIAAA trained consultants (NIAAA, 1973).

In 1968, more than 35 of the 100 largest U. S. industrial corporations had programs, compared with only four companies 15 years before (Business Week, 1968). Today, the number of programs operated by companies and government offices has risen to over 600 (NIAAA, 1974).

From this thumbnail sketch of the history and growth of occupational alcoholism programs, it should be clear that the field is very young with perhaps less than 15 years of investigation under its belt. This is hardly enough time to separate the chaff from the wheat. Much of what we consider "true" about alcoholism and occupational alcoholism program approaches today will be shown to be false or at best not "universally true" tomorrow. Further, from such a short history, there has come relatively little good systematic research. Much has been written, but most of it is only subjective opinions based on uncontrolled observation.

Characteristics of Employed Alcoholics

Prevalence of Alcoholism in the Workforce

The exact percentage or number of alcoholics in the workforce is a matter of conjecture. The specific percentage quoted depends on one's definition of alcoholism and to a great extent on his willingness to acknowledge the problem. In a 1972 survey of executives, only 34 percent estimated that more than 2 percent of their workforce were problem drinkers. By 1974, 50% of the executives estimated a prevalence rate of at least 2 percent (Chafetz, 1974). Estimates of the number of alcohol abusers or problem drinkers in any work force range from 2 percent (Franco, 1957) to 3 percent (Roman and Trice, 1972; Clyne, 1971) through 5-6 percent (Chandler, 1972; Whitehead, 1974; Business Week, 1968) up to 10 percent (Department of Health, Education, and Welfare, 1971).

These overall prevalence rates, although dramatizing the problem, probably are of limited usefulness in estimating the prevalence of alcohol abuse in a specific industry or workforce. For example, in one oil company the prevalence rate was estimated at 0.7 percent (Thorpe and Perret, 1959). Using a questionnaire with auto workers, Siassi, Crocetti, and Spiro (1973) identified 27% of the 937 respondents as heavy drinkers (6 or more drinks/week). Hitz (1973) found different rates of alcohol abuse among nine occupations. The sample sizes for each occupation, unfortunately, were too small upon which to base population projections. The data, however, strongly suggest, in agreement with Presnall (1967) that the proportion of alcohol abusers differ among industries. This is not accepted by everyone, however. Trice and Roman (1972) feel there is no definite concentration of deviate drinkers in particular industries.

Trice and Roman (1972) isolated and identified 12 factors in the work situation which can encourage individuals to continue abusing alcohol. These 12 factors were clustered into four (4) general categories. One would think, to the extent that industries and jobs within industries differ in the prevalence of these factors, alcohol abuse would also differ in prevalence although Trice and Roman do not specifically say so.

1. Low Visibility includes those work situations which have unclear production goals, flexible working hours and output schedules, and which are not subject to close supervision.

2. Absence of Structure refers to those positions whose occupants are going through transition, either because their former functions are being gradually eliminated or because they are assuming a role which is new to the organization.

3. Absence of Social Control describes those job roles where the alcohol use of an employee is actually beneficial to others. It also describes the environment when during stressful periods an individual moves from a closely supervised position to one which is controlled minimally.

4. Miscellaneous Factors include those instances where a work position provides no adequate outlet for resulting stress, where few rewards are available in a highly competitive work situation, and where the individual is exposed to alcohol users through work-related interactions.

It should be clear that an overall alcohol abuse prevalence rate does not do justice to the variance in rates between industries and within an industry between different jobs and working conditions. This variance becomes important when comparing the penetration rates of occupational alcohol programs in various companies. This will be discussed further in the sections on Program Characteristics and Effectiveness in the Literature Survey.

Characteristics of Alcohol Abusers in Industry

This section will deal briefly with the characteristics of alcohol abusers in industry, i.e., age, years of service, education, organizational level, etc. The specific values obtained by investigation are dependent on several factors -- first, is the definition of alcohol abuse. Most commonly it is defined as the people referred to and who agreed to participate in a company alcoholism program. In other cases, questionnaire data are collected on a workforce. The specific company in which the

data are collected will determine in great part the characteristics of the alcohol abusers found. A predominantly male workforce with low turnover will show alcohol abusers as males with long years of service. The specific alcoholism program to which the individuals are referred also serves as a selective screen. Most programs are aimed at rank-and-file workers with little or no referrals of management or supervisory personnel. These groups will be, therefore, underestimated by studies which base their figures on participants in occupational alcoholism programs.

With these warnings in mind we will proceed to a review of characteristics of employed alcohol abusers.

Age. The general consensus of opinion is that employed alcohol abusers are between 35 and 50 years of age (Business Week, 1968; Follmann, 1976). Table 1 presents substantial data collected from participants in various occupational alcoholism programs which strongly support the 35-50 age range conclusion. The only really deviant results comes from a metropolitan police force (Dunne, 1973) showing a mean age of 28.6 years. This may be due to the age compression of the rank-and-file policemen who are most likely to be referred to such a program.

Years of Service. The consistent finding is that employees with alcohol problems tend to have many years of service behind them when they are referred to alcoholism programs. Hilker, Asma, and Eggert report 90% of their referrals having over 10 years service with the company. Chandler (1972) reports a mean of 12 years of service for referred employees. Franco (1960) reports many problem drinkers with over 20 years of service. Mr. C. L. Vaughan, Jr., was quoted as saying (Business Week, 1968) that the average alcoholic at the Great Northern Railroad had 21 years of service. There is no doubt, then, that the problem drinkers in industry are the very ones in which the company has invested the most. It is for this reason that occupational alcoholism programs may show favorable cost/benefit ratios even when relatively few individuals are introduced into the program.

Sex. The majority of referrals to occupational alcoholism are male. Hilker, Asma, and Eggert (1972) report that only 77% of their patients were male while Pell and D'Alonzo (1973) report a staggering 94% male proportion. Siassi, et al (1973) report 83% of their heavy drinkers were male.

Education. This criteria may be biased because few supervisors, executives, professional or white collar workers find their way into occupational alcoholism programs. One study (Warkov, et al, 1965), however, did compare 62 problem drinkers with a control group selected from non-drinkers in the same company. Among problem drinkers, 27% had only a grade school education or less compared to 12% of the control group. Thirty-four percent of the problem drinkers

TABLE 1. EVIDENCE BEARING ON AGE OF EMPLOYED ALCOHOL ABUSERS

SOURCE	EVIDENCE
Business Week (1968) Great Northern Railroad	Mean Age 40
Dunne (1973) - New York City Police	Mean Age 28.6
Franco (1960) Consolidated Edison	Majority between 46-54 years of age
Hilker, Asma, and Eggert (1972) - Illinois Bell	31% between 35-44 years of age 40% between 45-54 years of age
Kamner and Duping (1969) - New York Telephone	64% between 40-59 years of age
Pell and D'Almzo (1970 - DuPont	79% between 40-49 years of age
Siassi, Crocetti, and Spiro (1973) - Auto Workers	54% of heavy drinkers were between 40-59 years of age
Thorpe and Perrett (1959) - Esso Standard Oil	90% over 40 years of age
Tucker (1974) - Auto Workers	35% between 30-39 years of age 29% between 40-49 years of age
Warkov, Bacon, and Hawkins (1965) Utility Company	74% over 40 years of age compared to entire company with 35% over 40 years of age

completed high school compared to 58% of the controls. This points to the possibility that problem drinkers may have less education, but the data is too meager to make such a conclusion.

Organizational Status. It appears that 50% or more of the problem drinkers in industry are executive, white collar or professional people (Whitehead, 1974; Business Week, 1968; Chandler, 1972; Hitz, 1973, Warkov, et al, 1965). In contrast, Pell and D'Alonzo (1973) report that 69% of the alcoholic employees at DuPont were hourly paid production workers. So far, however, the evidence points to a fairly even split of problem drinking between white and blue collar employees.

The profile of the employee with a drinking problem is a male between 35 and 50 years of age with more than 10 years service with the company occupying either a managerial or rank-and-file position. This description hardly fits the skid row alcoholic image many uninformed people still associate with alcoholics.

The Effect on Work Performance

In 1967, the cost of alcoholism to the American business community was reported by the National Council on Alcoholism to be 2 billion dollars a year (Follmann, 1976). The cost of each alcoholic employee to his employer was placed, in the average, at $1250 a year at that time. In 1970, NCA revised the figures to 7 billion dollars yearly and $2500 per alcoholic (Follmann, 1976). Shortly before this, Dun and Bradstreet placed the loss at 7.5 billion dollars yearly (Dun's Review, 1968). In 1973, Arthur B. Little, Inc., estimated the cost at 8 billion dollars a year (Follmann, 1976). In 1974, the figure used by NIAAA was 9 billion dollars a year (NIAAA, 1970). Today the National Council on Alcoholism places the cost at 12.5 billion dollars annually.

These aggregate figures do not clearly illustrate the cost of alcoholism to specific companies. Several studies have been published, however, which do attempt to estimate costs for a particular company. These are summarized in Table 2. The factors which influence the figures given include (1) the year the estimate was made, (2) the estimated prevalence of alcoholism in the particular company, (3) the size of the company, and (4) what cost parameters are included. This last factor is the least well defined. Estimates may or may not include each of the following: sick pay, replacement/recruitment costs, increased health insurance premiums, claim processing costs, processing costs for grievances, disciplinary actions, garnishments, and lost production due to inefficiency or disruptions from accidents and absences.

The remainder of this section will focus on data related to differences between problem drinkers and non-problem drinkers on work-related measures. Studies which compared problem drinkers before

TABLE 2. COSTS OF ALCOHOLISM TO SPECIFIC COMPANIES

SOURCE	COST FIGURES PER YEAR
United California Bank (New York Times, 1973)	$1 Million
North American Rockwell (Conference Board, 1970)	$5220 per alcoholic employee
Gulf Oil Canada, Ltd (Conference Board, 1970)	$400,000
Manufacturing Company (Unidentified) (Pritchett and Finley, 1971)	$100,650 in 1971
U. S. Postal Service (NCA, 1972)	$3,000 per alcoholic employee
Kennecott Copper Corporation (Follmann, 1976)	$500,000
Unspecified (Winslow, Hayes, Prentice, Powles, Seeman, and Ross, 1966)	$1,652 per alcoholic employee
Hughes Aircraft Company (Chandler, 1972)	$6,000 per alcoholic employee
Civil Service Employees (Comptroller General, 1970)	25% of their annual salary

and after treatment were excluded. Such studies deal more directly with the effectiveness of the treatment rather than the effects of the disease, per se.

Absenteeism

The evidence is consistent with regard to absenteeism. A group of problem drinkers will have a higher rate of absenteeism than a similar non-problem drinking group (Trice and Roman, 1972; Winslow, et al, 1966; Follmann, 1976). The following results are illustrative of the typical finding in industry.

A telephone company found alcoholic employees had three (3) times the absences of other employees (Follmann, 1976).

Scovill Manufacturing Company, in 1973, estimated the average cost of an alcoholic employee to be $4,550 a year in absenteeism alone (NCA, 1973).

Oldsmobile Division of GM found six (6) times the number of leaves of absence among alcoholic employees than among others (Alexander and Campbell, 1973).

Kennecott Copper found five (5) times as much absenteeism in a sample of alcoholics than in the total work force (Junes, 1972).

Observer and Maxwell (1959) compared a group of 48 problem drinkers with a matched control and found the following with respect to long-term absences (greater than 8 days).

	Alcoholic	Control
Number of Cases	364	149
Mean Cases per Employee	7.6	3.1
Total Days Absent	11,672	4,648
Total Sickness Payments	$108,495	$36,912
Mean Payment/Employee	$ 2,260	$ 769

Trice (1965) reported that six percent of "normals" in a company had an absence of 10 days or more compared to 30 percent of the alcoholics.

Consolidated Edison reported alcoholics had double the company average of sick absences (Franco, 1957).

Table 3 lists the average number of days absent annually as reported in a number of studies. The average computed from Table 3 is 27 days. This is well above the usual 6 to 10 days per year of many non-alcoholic employees. From the studies quoted, it appears that alcoholics tend to be absent more than non-alcoholics. This is true for alcoholics as a group, but it may not be true for individual alcoholics. Pell and D'Alonzo (1970) and Trice (1965) report that out of 765 alcoholics in their sample, 55% had reasonably good attendance for the year of the study. In fact, 37.8% had no absenteeism at all during that period. It is obvious, therefore, that a few alcoholics are accounting for the significantly higher absence rates.

Part of this may be a function of job characteristics which allow or restrict the worker to take it easy on the job. Trice has often said (Trice, 1962; Trice, N. D.; Trice and Roman, 1972) that employees in lower status jobs, usually under more direct supervision, tend to take days off rather than show up for work. Higher status workers, under less direct supervision, on the other hand, often come to work but in essence they do nothing or very little. This has been referred to as on-the-job absenteeism or the half-man syndrome.

In summary, then, alcoholics can rack up substantial absenteeism rates often 3 to 5 times the normal rate. Not all alcoholics, however, will display this behavior. Using absenteeism rates to identify possible alcoholics will inevitably miss many who need help with their drinking program.

Accidents

The evidence rating accidents and alcoholism is at first glance somewhat equivocal. Demore and Kasey (1966) concluded after reviewing the literature that "alcohol and accidents are related. Evidence going back as far as 1887 makes this clear". Cavalie (1956) reported that in a French public transport industry, accidents were 19 times more frequent among alcoholic employees than among a matched group of non-alcoholic controls. Alexander and Campbell (1973) report ten times more accidents among alcoholics than among controls. Somewhat less impressive differences have been reported by Follmann (1976) at three times normal, Jones (1972) at five times normal, and Observer and Maxwell (1959) at less than double that found in a control group. But counter to this evidence, however, is the finding of Roberts and Russo (1955) that checking a fifteen-year period in a company of 1800 employees found no fatal injury caused directly or indirectly by alcoholism, nor could any non-fatal injury in the last five years be attributed to alcoholism. Trice in 1962 surveyed 750 members of AA about work accidents and found a very low incidence of work accidents reported.

TABLE 3. AVERAGE NUMBER OF DAYS ABSENT PER YEAR FOR ALCOHOLIC EMPLOYEES

Source	Days Absent
Jelliner (1943)	22 days
O'Brien (1949)	26 days
Franco (1957)	13.5 days
Landis (1945)	36 days
Wall Street Journal (1958)	45 days
Pell and D'Alonzo (1970)	19.5 days

This conflict can be rectified by reference to a more detailed analysis of the data collected by Observer and Maxwell (1959). They conclude that when the data were analyzed by age group, problem drinkers did account for more accidents than other workers during the early problem drinking years (before age 40), but that when the problem was fully developed (after age 40) problem drinkers were generally no more prone to on-the-job accidents than other employees. They did find, however, that they were more prone to off-the-job accidents. The previous studies which found large differences in accidents between alcoholics and controls did not report their data by age groups or years of problem drinking. It is possible that even in these cases the younger alcoholics were the groups that were contributing to the bulk of the accidents.

Trice and Roman (1972) list several reasons why the alcoholic employee will have no more and maybe less accidents than control groups.

1. Safe Jobs. Problem drinkers scattered throughout all occupational levels have their share of the safe jobs with little risk of accidents.

2. Routine Jobs. The repetitive nature of many jobs and the routine to which an experienced employee reduces his work serve to reduce the chance of an accident even if he has been drinking.

3. Overcaution. An alcoholic is suspicious of others checking on him so he avoids situations which would call unfavorable attention to his behavior. He is overly cautious of job hazards.

4. Alcohol "wise". The problem drinker develops a keen awareness of alcohol's effect on him and when he drinks during the work day, it is to regain, not destroy, his sense of balance; by drinking only enough to relax himself and control his growing restlessness he avoids the tenseness conducive to accidents.

5. Absenteeism. On many work days when he believes he is likely to have an accident, he often resorts to absenteeism.

6. Cover-Up. If he is on-the-job in "bad shape", fellow workers may take over the hazardous aspects of work for their own protection as well as his. A supervisor may reassign him to a "safe job" for the day.

The extent to which these factors operate in a work situation will impact on the accident rate found. Interestingly, Trice (N.D.) suggests that when an alcoholic goes "on the wagon", attempting total abstinence, he may go to the job without the temporary sedation

of alcohol and try to get through the entire work day without a drink. As a result, says Trice, emotional and physical tensions build up higher than they usually do and he is more likely to have an accident.

Grievances, Garnishments, and Disciplinary Actions.

Grievances were twice as common among alcoholic employees (26) than among a problem-free group (12) at a General Motors Plant (Alexander and Campbell, 1973). At the same plant, disciplinary actions were 17 times more common among problem drinkers (103 versus 6). Dunne (1973) found in a metropolitan police force that alcoholics had twice the number of disciplinary charges per man than that of for the entire department. Winslow, et al (1969) estimated that suspected drinkers cost a particular company in grievance procedures $1681 compared to nothing for non-problem drinking employees.

Trice (1964) found three times as many garnishments and twice as many fines and legal assignments among the alcoholics as among the average employees in a large company.

Lost Production

By far the most significant cost to industry of alcoholics is the cost of lost production. This accrues from higher absences, more injuries early in the disease and a generally reduced proficiency while on the job. Winslow, et al (1966) estimates that the problem drinker, when working,is working at only 67% of his potential compared to 86% for the non-problem drinker. A large and significant portion of the economic impact of alcoholism includes premature disability and death, resulting in loss of many employees in their prime who have skills that are difficult to replace (Pell and D'Alonzo, 1973).

There is agreement that the work place of alcoholics is erratic. They work rigidly and heavy for short periods and then do nothing during other periods. It is debatable whether or not work quality suffers. Trice (N.D.) makes a good case for a decline in quality. Wickes of TRW (Business Week, 1968) says quality usually goes up, not down. The ultimate answer probably depends on what task is performed, and which work period is considered, the "up" or the "down" of the individual.

Specific Skills

The effect of alcohol on specific skills such as driving, psychomotor, visual, information processing, and judgment have received considerable attention from investigators. The relevance of much of this data to alcoholics on the job is dubious. There are several reasons for this. First, few industrial tasks match the characteristics of the tasks and environments used by the investigators. Secondly, not all alcoholics actually drink on the job.

Thirdly, the studies rarely use "experienced drinkers". There is evidence that heavy drinkers are more resistant to intoxication than light drinkers (Carpenter, 1962) and furthermore, alcoholics may be more resistant to the effects of alcohol on motor performance and driving skills (Seixas, 1973). Fourth, a small amount of alcohol, as might be consumed on the job by an alcoholic, may actually serve to steady his nerves, and his skill performance may actually improve with alcohol.

Another problem with the "alcohol" literature is the interactions of the variables investigated. The effect of alcohol depends on the dosage, the blood alcohol level, pattern of consumption, time since ingestion, individual characteristics of the drinkers, and even what type of alcohol is consumed. Katkin, Hayes, Teger, and Pruitt (1970), for example, found that drinking bourbon (high cogener content) resulted in greater risk taking than when vodka (low cogener content) was consumed.

For these reasons, neither a complete nor extensive review of the literature relating alcohol to specific skills will be made. A few illustrative results will be reviewed to convey the general findings in each area.

Driving Skill. Huntley (1973) found that alcohol altered driving behavior, in agreement with Moskowitz (1973). For example, it increased steering and velocity variation and the frequency of procedural errors, and decreased driving smoothness, stopping efficiency, cornering ability, and the size of the visual field explored by the driver. Although the data indicate a high probability of impairment at blood alcohol levels (BAL) between .05% and .075%, it cannot be assumed that all drivers are always impaired at these concentrations for even BAL's as high as .13% are not sufficient to impair performance in all instances. The influences of alcohol are modified by driving skill, drinking experience, personality, and the nature of the driving task.

Mental and Judgment Skills. From an extensive review of the literature, Levine, Kramer, and Levine (1975) report large decrements in performance on cognitive and selective attention tasks of as much as 35%. This is in agreement with findings of Carpenter (1962) and Mortimer and Sturgis (1975). Ryback (1970) concludes that alcohol most severely disrupts short-term memory making it difficult for an intoxicated person to remember instructions given to him less than five minutes before. Even after the blood alcohol level is zero, Jonsson, Cronkolm, and Izikowitz (1962) still found alcoholics scoring lower on reasoning ability, memory, and spatial ability tests.

The judgmental ability of an alcoholic may also be impaired. It is an open secret in industry that one of the most disastrous mergers in the 1960's was made by an executive while under the

influence of alcohol (Dun's Review, 1968). Cohen (1960) reported that bus drivers who drank took greater risks than non-drinkers.

Visual Skills. Three principle visual skills seem to show decrements with ingestion of alcohol. First, dynamic visual activity seems most affected (Brown, Adams, Haegerstrom, Portnoy, Jones, and Flom, 1975; Perrine, 1973). Dynamic visual activity is a measure of the ability to see small moving objects (or viewing stationary objects while the viewer moves). The second visual skill affected by alcohol is the size of the visual field (Huntley, 1973; Mortimer and Sturgis, 1975). Under the influence of alcohol, the visual field is smaller, events in the periphery are not seen. Third, adaptation and brightness sensitivity are affected (Perrine, 1973).

Program Characteristics

Early occupational alcoholism programs inspired by Alcoholics Anonymous teachings and adapted in the "Yale Plan" (Henderson, Bacon, 1973) relied on the recognition of the signs and symptoms of alcoholism. The approach was frequently impractical for several reasons (Chafetz, 1974). First the use of signs and symptoms for identification requires extensive supervisory training, and places supervisors in an unaccustomed role of diagnosticians. Many supervisors feel uncomfortable in such a role and would cover up for an employee while attempting to handle the problem themselves (Trice and Roman, 1972).

Second, such a strategy requires the explicit designation of the company program as an alcoholism program. Employees are often reluctant to utilize a resource which labels them an "alcoholic", a term regarded by some as derogatory.

Third, some employers have hesitated to adopt a visible "employee alcoholism program" because it might damage their image with clients or the community.

Fourth, the strategy tends to foster the notion that a drinking problem emerges as a clear-cut entity unaccompanied by emotional, marital, financial, or legal problems.

For these reasons, in 1972 the Occupational Programs Branch of the NIAAA began recommending a "troubled employee" (Chafetz, 1972) or "broadbrush" (Edwards, 1975; NIAAA, 1975) approach. The focus was shifted from spotting alcoholics to identifying impaired job performance without pinpointing the cause or relating it to possible alcohol use. Such a strategy obviously will encounter employees with problems originating from things other than alcohol. The approach avoids the potentially stigmatizing labels of "alcoholism" or "problem drinking". Approximately 60% of the occupational programs begun after 1972 followed the troubled-employee approach; the remaining were limited to problem drinking employees. This is contrasted with 75% of the pre-1972 programs being limited to alcoholism (Chafetz, 1972).

The essential ingredients of such programs are arrived at by consensus of people with considerable experience in developing such programs. The following is a list of the critical elements most authors include in their discussions of occupational alcoholism programs (Chafetz, 1974; Lotterhos, 1975; Follmann, 1976; Elliot, 1975):

1. Written policy
2. Management support
3. Supervisory Training in Early Identification and Confrontation
4. Adequate Referral Services and Clear Responsibility for Administration
5. Insurance and Compensation Assurances
6. Union Involvement
7. Employee Education

Each of these ingredients will be discussed in the remainder of this section.

Written Policy

Many companies, in fact most companies, do not have written policies covering alcoholism. A survey in 1974 revealed that 46% of the companies simply dismissed the alcoholic employee after a "warning" (Conference Board, 1974). Such a policy represents firing those employees in the last stages of the disease. They have already cost the company in lost production, absenteeism, etc. during the early stages of the disease. Further, a "fire with warning policy" promotes concealment by all other employees with the same problem (Wolf, 1973).

A clear, written statement of policy serves several purposes (National Council on Alcoholism, 1975):

1. It provides a clear statement of the purposes, nature and benefits of the program.
2. It provides a basic frame of reference which is essential both in the development of procedures to be followed in implementing the policy and as a guide for uniform administration of all elements of the program.
3. It encourages the individual's voluntary utilization of the program by assurances of confidentiality, job security, insurance coverages, and acceptance of the disease concept of alcoholism.

4. It serves as a valuable training tool for both union and management personnel involved in implementing the policy itself.

The actual policy statement can be relatively elaborate, such as the 13 point plan suggested by the National Council on Alcoholism (1974) or quite simply as the four point plan of Bell Canada (Lindrop, 1975) or the six point plan of the Kemper Insurance (1975) or Insurance Company of North America (N.D.).

From a review of actual company policies and recommendations from those writing in the area (e.g., Wiegand, 1972; NIAAA, 1975; Chafetz, 1974; Tucker, 1974) the following is a rather complete list of items which should be included in a company policy statement.

1. The company believes that alcoholism is a treatable illness.

2. The company is only interested in alcoholism as it affects job performance.

3. The company is not concerned with social drinking or what people do in their private lives as long as it does not affect job performance.

4. A person in a rehabilitation program is guaranteed job security and normal promotional opportunities.

5. Employees are encouraged to use the program.

6. Participation in the program is voluntary and the responsibility of the individual.

7. An individual's refusal to accept referral for diagnosis or to follow prescribed treatment will be handled in accordance with existing policy with respect to poor job performance if such continues.

8. All records are strictly confidential.

9. A definition of the insurance and compensation benefits are available.

A company policy to be effective must be applied at all levels in an organization. The policy tends to lose force when it is common knowledge that executives have liquor cabinets in their offices or that liquor is served in the executive dining hall.

Further, a company policy must be brought to the attention of the employees. Tucker (1974) suggests sending a copy of the policy to each employee at home. This might serve to mobilize family pressure on the alcoholic to seek help.

Management Support

An occupational alcoholism program is doomed to failure without strong and continued support from management. This is a central point made by both the National Council on Alcoholism and NIAAA in their publications (NCA, 1975; NIAAA, 1973). Dana (1968) suggests that specific executives and managers be involved in the setting up and administration of the program to help insure continued management support. In a survey of private industry programs, Stanford Research Institute concluded that strong support from top management is the most crucial ingredient in program development and continuity (Stanford Research Institute, 1974).

Supervisory Training in Early Identification of Problem Drinkers

The first link between alcoholics and entering treatment is the supervisor. The responsibility usually falls on him/her to identify individuals which might profit from referral to the company's "troubled employee" or broadbrush program. It is essential, however, that supervisors be trained to identify problem employees, confront them, and educate them about the program. During the supervisor's training, it is critical that his/her support and commitment to the program be established and nurtured. Clyne (1971) relates an experience at American Cyanamid Company of a physician who went through the motions of supervisory training without really believing in the program himself. Only one case was brought to his attention in four years.

Clyne also points out that supervisors need refresher sessions or literature on alcoholism and the company program on a regular basis or it will be forgotten.

Programs that required supervisors to identify alcoholic behavior and symptoms on the job have generally produced very negative responses from supervisors, and a very low penetration rate (Lotterhos, 1975; Trice and Roman, 1972; NIAAA, 1975). Most supervisors are not prepared nor do they feel qualified to diagnose illnesses. Such approaches are often feared by the employees, disliked by the unions, and have received the label of "witch hunt".

Good programs today let the supervisor do what he should do best - judge job performance. When job performance deteriorates below acceptable standards, the employee is confronted and offered a chance to enter the program, be diagnosed by a competent person, and enter rehabilitation. The implied role is that a supervisor should not attempt to counsel an employee with a behavioral or health problem but should make a referral to the proper associated health, medical, or counseling section of the company.

It can generally be expected that at least 50% of identified problems will be alcohol related in such broad coverage programs (Lotterhos, 1975; Habbe, 1970) and that the broad coverage approach

often results in the identification of more early stage alcohol abusers.

Trice and Roman (1972) have pulled together evidence from several studies with their own experience and have defined a four-stage recognition scenario.

Stage 1, The disrupted-but-normal stage. The first stage is long, lasting several years. There are no dramatic symptoms in the early phases. The supervisor is only vaguely aware of numerous subjective signs such as minor hand tremors, increased nervousness, hangovers on the job, avoidance of boss and work associates, and morning drinking before work. The supervisor and work associates also begin to note overt behaviors such as leaving the work post temporarily, unusual excuses for half day and full day absences, lower quality of work, mood changes after lunch, and bleary eyes. There is a general impression of impaired performance, but it is not severe enough to be regarded as abnormal. The evidence simply does not accumulate in amounts sufficient to trigger recognition of a serious behavior problem.

Stage 2, The blocked awareness stage. There is a growing awareness that deviance is linked with drinking, but there is, at the same time, numerous barriers that continue to restrain the supervisor from recognizing the deviant drinker.

New kinds of on-the-job behaviors emerge in this stage. The deviant drinker can no longer camouflage his hangovers and the quantity and quality of his work declines. What work he does do is spasmodic.

On the other hand, it is difficult for the supervisor to admit that the employee is a deviate drinker. Often they are friends, having come up through the ranks together; the employee may be generally a knowledgeable worker who would be difficult to replace, and if the supervisor confronts the employees there may be repercussions from the union and upper management.

Stage 3, The see-saw stage. There is a steady accumulation of behaviors that aggrevate other workers and impair performance. Supervisors report a tendency for the deviate drinker to eventually begin drinking at lunch time, show sharp personality changes after lunch, engage in loud talking, and manifest quite obvious hand tremors. In addition, the earlier deviate behaviors have now become more frequent and noticeable and partial absenteeism, absence excuses that border on blatant lying, bleary eyes, lower quality and quantity of work, and hangovers on the job become prevalent. At the same time, the deviate drinker, attempting to manipulate the situation "snaps out of it" temporarily and makes a valiant effort to return to his normal standing. As a result, the supervisor vacillates and is indecisive.

Stage 4, Decision-to-recognize stage. By this time the developing alcoholic begins to drink during working hours and his absenteeism is aggrevated by minor illnesses. Flushed face and red eyes now join the overt symptoms of hangover. The entire array of problems created by the deviant drinker becomes intolerable for those who work with him. They lose empathy. The supervisor has increased the social distance between him and the drinker. He can no longer ignore the problem and decides to confront the employee.

Occupational alcoholism programs which are based purely on impaired job performance aim at making it easier for the supervisor to confront the employee in stages 1 or 2 rather than waiting until it is too late in stage 4.

Supervisory Training in Confrontation of the Problem Drinker

It is generally believed that a key component in occupational alcoholism programs is "constructive confrontation", a term coined and developed by Trice and Roman (1972). The constructive confrontation strategy calls for a series of confrontations based on poor performance, and, if necessary, for bringing about a job-related crisis in the problem drinker's life. The employee is warned of his deteriorating job performance and is told, in essence, "to shape up". If his performance improves, no problem. If not, he is confronted again and offered the services of the "troubled employee" program. If he accepts, fine. If not and his performance does not improve, he is confronted again and given the ultimatum, "sign up or disciplinary action will be taken". Disciplinary action could include layoff without pay, reduction in grade, or termination. At this third confrontation, a medical representative would introduce the possibility of alcohol addiction and very explicitly tell him what health benefits and services are available.

Trice and Roman (1972) strongly suggest that a clear-cut policy be developed regarding how many chances (confrontations) an employee is given before disciplinary action is taken. The constructive dimension of this strategy is lost if disciplinary action is taken on the first or second confrontation or is never exercised.

The essence of constructive confrontation is that it defines the use of alcohol in conjunction with the job as inappropriate behavior rather than "sick" behavior. Some organizations have modeled their programs upon the disease concept of alcoholism assuming that such labels will prevent undue disciplinary action and lead to humanitarian and effective management. In such situations, all drinkers are referred to the medical department and required to follow its recommendation. This makes it difficult to motivate the problem drinker to alter his own behavior. It implies the undesirable behavior is out of the individual's control. With constructive confrontation, medical labeling and treatment is the last step used when the behavior is beyond the individual's control (Trice and Roman, 1972).

One might be led to believe that patients referred for rehabilitation by the use of constructive coercion would do better than other patients. In an extensive study of recovery, Smart (1974) found that coerced patients improved in drinking behavior as much as voluntary patients, but that in overall behavior, voluntary patients surpassed the coerced group. Why then all the emphasis on constructive confrontation? The answer is in terms of penetration rates. Very few people volunteer for rehabilitation (Hilker, Asma, and Eggert, 1972). Constructive confrontation significantly increases the number of people who enter rehabilitation. According to Smart (1974) this coercion does not seem to materially inhibit therapy.

Trice and Roman (1972) discuss in detail the results of training supervisors on their willingness to confront employees. They found several surprising things. First, just completing the data collection questionnaires resulted in consistent and significant changes in knowledge about deviate drinking, attitudes toward them, and predispositions toward action. Apparently, just sensitizing the supervisors, without elaborate training, accomplished the major goals. Second, the training itself resulted in moderate but clear-cut changes in the supervisors. Third, the goal of the training program should be to create intolerance toward deviate drinkers. Supervisors who were more tolerant and had more favorable attitudes toward drinkers were less likely to confront them. The more intolerant, the more likely to confront.

Treatment Modalities

Table 4 lists a sample of treatment modalities used in specific occupational alcoholism programs. The list for any one company is probably not complete, but reflects only those modalities which the particular author describing the program chose to mention. The small number of modalities listed does not do justice to the diversity of modalities available. Jones (1972) reports, for instance, that Kennecott Copper makes referrals to over 200 community service agencies in their area.

A glance at Table 4 reveals two basic trends that deserve additional comment. First, there is a strong medical orientation in the selection of modalities (i.e., hospital, drug). This is due mainly to the predominance of programs administered by and/or through the medical departments of companies, rather than by the personnel department. Lindrop (1975) in reviewing programs of Bell Canada, and Gulf Oil Canada, Ltd. found a tendency for management to abnegate their responsibility for developing policy and procedures to the Medical Department rather than taking the major share of the responsibilities themselves. It should be the responsibility of the Medical Department to diagnose those referred to it by supervisors.

TABLE 4. TREATMENT MODALITIES USED BY A SAMPLE OF OCCUPATIONAL ALCOHOLISM PROGRAMS

SOURCE	COMPANY	AA	HOSPITAL	DRUG	IN-HOUSE COUNSELING	RELIGIOUS GROUPS	PSYCHOMATIC CLINIC	OTHER COMMUNITY AGENCIES
Kemper (1975)	Kemper Ins.	X						X
Lindrop (1975)	Gulf Oil Canada	X						X
Asma et al (1971)	Illinois Bell	X	X		X			X
Jones (1972)	Kennecott Copper	X						X
Thorpe: Perret (1959)	Esso Standard Oil	X	X				X	
Kamner & Duping (1969)	New York Telephone	X	X				X	
Slotkin et al (1971)	Unions & Companies in Chicago	X						
Turfboer (1959)	Oil Refinery in Caribbean	X		X				
Raleigh (1968)	Eastman Kodak	X	X		X			X

TABLE 4 (continued)

SOURCE	COMPANY	AA	HOSPITAL	DRUG	IN-HOUSE COUNSELING	RELIGIOUS GROUPS	PSYCHOMATIC CLINIC	OTHER COMMUNITY AGENCIES
Mellon (1969)	Boeing	X						
David (1970)	Not Specified	X	X	X		X	X	X
Clyne (1965)	American Cyanamid	X				X		X
Edwards (1975)	New York City Transit	X	X		X			
Edwards (1975)	DuPont	X	X		X			

The second feature of treatment modalities gleaned from Table 4 is the most universal use (i.e., explicit mention) of Alcoholics Anonymous (AA) as a treatment mode. Most programs consider AA to be the single best referral source (e.g., Kemper, 1975; Trice and Roman, 1972; Slotkin, et al, 1971; Turfboer, 1959).

Trice and Roman (1972) do a fine job of summarizing the essential features of AA. The following is a distillation of that review.

1. AA is based on close interaction between members. Contacts between members are available around the clock.

2. AA members must admit loss of control over drinking, "hit bottom".

3. AA definitely has a spiritual base, although relatively unspecified.

4. AA meetings involve use of testimonials showing transgressions and abstinence.

5. Abstinence is the criteria for membership and success.

There are some problems with the AA approach. The bottom line, however, is that "it's not for everyone". Trice and Roman (1972) indicate that only people with a particular personality (can share basic emotional reactions with others, are more outgoing, have good interpersonal skills, need for affiliation, guilt prone) will benefit from AA. They feel that people of lower class statuses and minority groups do not generally make good AA members.

More importantly, it appears (Trice and Roman, 1958) that the early stage deviant drinker (the ones that, hopefully, are identified in an occupational alcoholism program) would likely be poor AA candidates. It is the middle stage alcoholic who has had a long series of alcohol-related job disruptions, has lost control of his drinking, and can be made to see himself as having "hit bottom" who will benefit most from AA. Asma, Eggert, and Hilker (1971) report, for instance, that only 55% of the referrals to the Illinois Bell program accept the AA treatment modality and almost all of these were chronic "hard core" alcoholics.

The major advantage of AA is its availability and apparent willingness to cooperate with a company in using their services. As some have said, often AA is the "only game in town" and compared to nothing, it's a pretty good game at that.

Insurance Benefits

A major involvement to an employee to enter a rehabilitation program is the knowledge that there are insurance benefits to cover the cost of the treatment and loss of wages while recovering (Adee, 1975;

Follimann, 1975, 1976). Most insurance companies now cover alcoholism in their medical policies. The benefits, however, are often limited and there is wide diversity as to specific benefits provided (Follimann, 1976). As of 1975, eleven states enacted legislature either requiring alcoholism coverage or requiring insurance companies to at least offer the option to the company purchasing the insurance.

Follimann (1976) lists four deterrants to further expansion of insurance coverage for alcoholism:

(1) Limited data available on incidence and cost to insurance companies for such coverage. This is primarily due to (2) reluctance of physicians to diagnose alcoholism as "alcoholism", (3) the lack of uniformity among the states in licensing alcoholic treatment centers and facilities and the present absence of accreditation of such facilities, and (4) the reluctance of insured groups to include alcoholism treatment in their insurance benefits, even when there is no added cost.

Follimann points out that unions generally rank coverage for the treatment of alcoholism fairly low on the priority list of labor union collective bargaining goals. Only a small minority of unions have insisted, at the bargaining table, on insurance coverage for alcoholism treatment.

Union Involvement

It is considered by most people in the field (e.g., Trice and Belasco, 1966; Trice and Roman, 1972; NIAAA, 1973; Follimann, 1976; Habbe, 1973) that a critical element in successful alcoholism programs in industry is union involvement.

Historically, labor unions have been reluctant to accept management programs dealing with employee welfare without full assurance that union members are protected from arbitrary action (Trice and Roman, 1972). A union welfare specialist recently pointed out that "labor is generally suspicious of management's interest in the mental health of its employees. Too often such interest has been used as a guise for anti-employee practices, whether by design or by unintended consequence". (Weiner, 1967). To help counter this, many unions want a clause in collective agreements that a joint union-employer committee will determine who the problem drinkers are and that the problem drinkers are not to be fired if they join the rehabilitation program (Bannon, 1975).

It appears that often unions adopt an attitude of apathy and disinterest, coupled with a vague threat to disrupt any program which might injure a union member (Trice and Roman, 1972). In 1968, the National Industrial Conference Board surveyed 120 companies with alcoholism programs inquiring about union cooperation. The results showed the following:

The union was fully consulted by 17 companies, was consulted to some extent by 22 and not at all by 27. (The remaining 54 companies did not respond).

The program was considered jointly operated by 8 companies, partly so by 14. Only 14 of the 120 companies had drinking problems covered in their union contracts.

In working with problem drinkers, 53 companies found the union cooperative, 23 sometimes cooperative, and 4 rarely cooperative.

The need for union cooperation in the successful operation of an occupational alcoholism program was recognized by 35 companies, denied by 21, and 52 companies were in doubt.

These results do not point to mass involvement by the union in problem drinking programs. It is not for lack of understanding about what the union's role should be that prevents unions from participating more. The National Council on Alcoholism publishes an excellent guide entitled, "A Joint Union-Management Approach to Alcoholism Recovery Programs" (NCA, 1975), and organized labor in the state of Missouri has inaugurated a comprehensive alcoholic and "troubled member" assistance program directed at establishing employer agreements (Tucker, 1974).

Trice and Roman (1972) have enumerated union and management characteristics which <u>increase</u> the likelihood of active union participation:

1. Large and uniform industry as opposed to one dominated by small shops or contractors.

2. Management does not have a history of paternalism.

3. Union lacks a militant history.

4. Union and management have previously resolved critical events jointly.

5. Union leadership rejects the notion that labor relations should be one of conflict.

6. Union is stable, without divisive internal politics.

7. Collective agreement that provides for union-management joint committees.

8. Neither union or management is too powerful or too weak vis-a-vis the other.

Education

A major problem of many occupational alcoholism programs is to maintain visibility within the workforce. This requires constant publicity about the program,not just a one-shot announcement. Supervisors, especially, must be given "refresher courses" on the importance of confrontation and the mechanics and success of the program. Although most writers speak of "education", the term "publicity" is far closer to conveying their intent.

Several avenues of communication are available; company publications such as newsletters, bulletin boards, management seminars, union publications, the weekly pay envelopes, and even the company public address system. No source should be ignored in an effort to publicize the existence and mechanics of the program.

Cost

Unfortunately, there is a paucity of hard data on what it costs to set up an alcoholism control program. There appears to be a consensus that such costs are relatively negligible, particularly when compared to the gains (Follimann, 1976).

A few attempts have been made to enumerate costs, but they are, of course, specific to the program's characteristics, company size, and what is included in the cost estimates. Pritchett and Finley (1972) estimate that a program in a 1,700 employee manufacturing plant costs $11,400 annually in 1970. The largest single cost, $4,000 a year, was for the salary of a part-time trained employee counselor. Two hours per week of physician time cost $3,000 annually. Administration of the program consumed 10% of the time of a personnel department member at a cost of $2,000 a year. The time spent by 100 supervisors was valued at $2,400 a year.

James Ray, former executive director of the Association of Labor-Management Administrators and Consultants on Alcoholism, Inc. estimated the cost of administration of an alcoholism program to be 35 to 50 cents per month per employee (Business Week, 1972).

The New York City Transit Authority Program is estimated to cost $100,000 per year (Edwards, 1975). The savings in sick pay alone from operation of the program are estimated at $1 million minimally.

A program for the Philadelphia Police Department (Follimann, 1976) cost $119,000 over a two year period of which $50,600 was for counseling and $68,000 for sick leave costs. The Philadelphia Fire Department spent $51,463 over an 18 month period using $23,716 for counseling and $27,747 for the cost of sick leave (Follimann, 1976). Some programs can reduce costs drastically by administering

the program through the Medical Department and rely solely on outside agencies for referral service.

The costs of an alcoholism program can often be amortized off within the first few years from the savings in absenteeism, accidents, grievances and lost production. The cost savings of programs are discussed more fully in the Evaluation of Effectiveness section of this report.

Effectiveness

Occupational alcoholism programs are justified on the grounds that they are effective in helping employees to overcome alcoholism or at least to reduce the impact of problem drinking on the work place behaviors of the problem drinkers. There are two issues involved in the effectiveness question. First, are occupational programs doing any good relative to no intervention at all? Second, are occupational programs better or worse than other types of programs? Before these issues can be addressed, however, it is best to explore a few methodological considerations which impact on the evaluation of occupational alcoholism programs.

Methodological Considerations

Problem of Criteria for Successful Rehabilitation. Different studies employ different criteria in evaluating the effectiveness of a program. Emrick (1974) reviewed 265 studies and found that 80% of the studies used a "drinking amount or frequency" measure, 26% used "work situation" criteria, 15.8% used "home situation relationships" and 14% used "arrest and other legal problem" measures. By and far, the most commonly used criteria relates to drinking, with the most common criteria of "recovery" being total abstinence.

There is an abundance of evidence that a proportion of alcoholics can achieve patterns of controlled drinking. The "one drink away from drunk" formulation has enjoyed almost universal acceptance, but it has little scientific evidence to support it as a universal truth. The recent Rand report (Los Angeles Times August 8, 1976) found evidence that alcoholics could achieve moderate alcohol intakes. The conclusion, however, is not new. At least four literature reviews, reviewing hundreds of studies, all come to the same conclusion (Hamburg, 1975; Emrick, 1974; Lloyd and Salzberg, 1975; Patterson, 1966), In the words of Patterson (1966):

> "Abstinence is an inadequate criterion of health or of successful treatment in alcoholism. It is not to be disregarded but should be placed in appropriate perspective along with other parameters of health and adaption".
>
> "Abstinence as a necessary condition for successful treatment is an overstatement".

In addition, it has been shown that abstinence is not related, and often negatively related to other criteria of improvement including work and general life functioning criteria (Belasco, 1971; Schramm and DeFillippi, 1975; Hamburg, 1975). It has been found, for example, that for many alcoholics the achievement of abstinence is not associated with enhanced emotional and vocational adjustment, improved interpersonal relationships or other indices of general life adjustment (Pattison, Headley, Gileser, and Gottschack, 1968; Gerard, Saenger, and Wile, 1962). On the contrary, for a significant proportion of alcoholics, the achievement of abstinence is accompanied by adverse consequences. Some become overly dependent on AA (Hamburg, 1975).

Emrick (1975) in an extensive review of the alcoholism literature concluded that more than minimal treatment did not result in any greater percentage of patients achieving abstinence than no treatment at all; however, more than minimal treatment did result in a greater percentage of patients achieving improvement (although not necessarily abstinence) of drinking behavior than with no treatment at all. If only abstinence were used as the criterion, no treatment would be considered as effective as programmed treatment.

All of this strongly suggests that effectiveness of a treatment program be measured in terms of improved drinking behavior rather than just abstinence, and, more importantly, that other criteria of improvement, other than drinking behavior, be included in the evaluation.

Client Population Differences. Company alcoholism programs often boast of success rates ranging from 50 to 70 percent and higher (see the Overall Effectiveness section of this literature survey). By contrast, Mandell (1971) reviewed 22 studies of alcoholism treatment in non-work settings and revealed that the majority of the programs showed success rates between 18 and 35 percent.

This type of comparison, however, is somewhat unfair. Numerous prognostic studies of alcoholic treatment centers have identified current employment and job stability as one of the best predictions of treatment success (Bateman and Peterson, 1971; Pokorny, Miller, and Cleveland, 1968; Goldfried, 1969). By definition, all patients in occupational alcoholism programs are employed; therefore, this select population would be expected to achieve higher recovery rates regardless of the type of program in which they are involved.

Another problem related to patient populations is selective attrition. The series of events which begins with a patient referral and ends with a group of treated and fully documented cases contain "cracks" through which people fall and are often not included in the final statistics. Referrals refuse treatment; the treatment staff may reject the applicant; patients fail to show for treatment; they fail to complete once they start; they move or die making follow-up impossible; and some refuse to participate in the follow-up (Miller et al, 1970). At each stage the question of how to handle the data must be

answered. Often studies do not report the number of patients "dropping out" of the data base at each of these stages. This makes comparisons and interpretation of success rates tenuous.

Spontaneous Recovery. Most studies which evaluate occupational alcoholism programs use a one group pre-post test design. Patients are measured before entering the program and again after the conclusion of treatment. The major shortcoming of this evaluation approach is that it is impossible to determine if the improvement found is due to the program or whether the patients would have improved without treatment, that is, would have showed "spontaneous recovery".

Smart (1975/76), after reviewing the literature, concluded that "clear statements about spontaneous recovery of alcoholics are difficult. The problem has not been directly approached in many treatment studies or in special surveys. Most of our information comes from studies of alcoholics not applying for treatment and perhaps they do not apply because their symptoms are controllable or because they realize that their prognosis is good".

Several estimates can be made concerning spontaneous recovery rates, but they must stand as tentative. They may not adequately reflect the spontaneous recovery rate of employed individuals who generally have a good prognosis to begin with.

Kendall and Staton (1965) found about 50% of patients seeking treatments recover without treatment over varying follow-up intervals. Emrick (1975) pulling together data from several studies found that 13.4% of alcoholics achieved abstinence without treatment, and 41.6% improved their drinking behavior although they did not necessarily achieve abstinence. Edwards (1975) estimates that 5 to 18 percent of the employees referred to an occupational program refuse to participate and between 35 and 61 percent of those refusing will improve job performance enough to maintain employment. In support, Thorpe and Perret (1959) report that 37% of those who refused treatment showed improvement. Franco (1957) reports 61% of those who refuse maintain their jobs, but of those who drop out of a program before one year, only 45% maintain their jobs.

Follow-Up Intervals. It is often difficult to compare success rates of programs because different follow-up intervals are used. Many researchers have reported a high drinking relapse rate during the first six months after treatment (Franco, 1954; Williams, Latemendia, and Arroyave, 1973). Once six months to a year have passed, time between treatment and follow-up does not significantly influence the outcome of patients (Emrick, 1975). Several studies have found differences in treatment outcome at evaluations six months or less after termination, but no such results at later follow-ups (Pokorny, et al, 1973; Ravensborg, 1973).

Evaluation of Effectiveness

There are essentially two parameters used in evaluating occupational alcoholism programs. The most obvious, and the one receiving the bulk of attention, is the parameter of recovery, that is, how well did the individuals in the program do in terms of drinking or work related behavior. The second parameter, receiving scant attention, is penetration rate, that is, the extent to which the program is reaching its target population. It can be argued that, of the two, penetration rate is the most important measure of success in an occupational alcoholism program. The chief reason for this is because there is virtually no difference in recovery rates among groups undergoing different forms of treatment (Emrick, 1974, 1975). Basically then, as long as the treatment is not harmful, the more employees that use an occupational program, the better the program is.

The following sections will expand on penetration rate and recovery criteria in more depth.

Penetration Rate. The computation of the penetration rate of a company program would at first glance appear straightforward -- simply divide the number of problem drinkers in the workforce by the number of problem drinkers having gone through the program. There are, however, several problems with this.

First, the length of time the program has been in effect must be included. A program will be able to penetrate the population further in five years than in one year. Second, it is almost impossible to determine the number of problem drinkers in a particular workforce. Prevalence rate of alcohol abusers in the workforce vary from 2% to 10% (see the Definition of Alcoholism section of this review), and in all cases are just estimates. A company which accepts a 5% prevalence rate will show a greater penetration rate than a company adopting a 10% prevalence rate -- all other things equal.

These first two problems can be resolved by computing the penetration rate as a proportion of the employees annually. Thus, a company of 5000 employees having a program which has seen 250 people over a five year period would have a penetration rate of .010 per year (i.e., ((250 ÷ 5000) ÷ 5).

The third problem in computing penetration rates is not as easy to deal with as the first two. The number of employees must reflect not the average number of employees, but the number of persons employed at the beginning of the period, plus those hired during the period. Further, the estimate of the number of problem drinkers in the work-force must be adjusted because some of the companies' problem drinkers have been identified by the program (Schlenger and Hayward, 1976). To deal with this, a prevalence rate must be established and penetration rates computed each year adjusting for new hires and problem drinkers previously identified. Unfortunately, no published study has supplied

enough information to compute "corrected penetration rates on a year-by-year basis". Usually, if at all, only aggregate values are presented for the reader.

Table 5 presents data gleaned from a number of published reports. These figures do not take into account new hires and previously identified problem drinkers. In each case, where the data were available, a penetration rate expressed as a portion of the workforce per year was calculated. The penetration rates range from .0011 per year to .016 per year. The mean penetration rate was .00642 while the median was .00452. This is to say that 50% of the entries had penetration rates less than .00452 per year.

For the most part, the penetration rates indicate that the programs are only scratching the surface of the problem. If we accept a prevalence rate of 10%, as has been suggested by the National Institute of Alcoholism and Alcohol Abuse, and even take a penetration rate of .016 per year, it would take over six years to see all the problem drinkers in a workforce and that assumes that no new employees will enter the workforce during those six years.

It is a shame that despite the rather poor performance of most companies in the area of penetration, they continue to concentrate their program evaluation on the improvement of the relatively few patients they actually see.

Overall Effectiveness. As discussed previously, different programs assess effectiveness using different criteria. Most studies simply consider the number of individuals seen by the program that are still on the job. This may overestimate the real impact of the program, however. Many employees can maintain their jobs, not because of any improvement, but rather because of lack of action on the part of management in terminating them.

Table 6 summarizes the percent "recovery" figures gleaned from the published literature. The percentages are classed under four headings. Five studies did not furnish sufficient information upon which to determine the basis for the recovery figure given. A quick glance at Table 6 reveals very little variance in "recovery" rates between programs -- almost all range between 65 and 80%. This can be seen as additional support for the conclusion that the specifics of a program are less important than the fact that there is a program at all. Although almost all of the programs are patterned after the same model the specifics of each are undoubtedly different. These variations, however, do not seem to make much difference in recovery. Their impact is undoubtedly on penetration rate. As Table 5 shows there is a wide variation in penetration rates between many of the same programs that showed little variation in Table 6.

TABLE 5. PENETRATION RATE DATA FROM A SAMPLE OF COMPANY PROGRAMS

SOURCE	ORGANIZATION	CASES SEEN	NUMBER OF EMPLOYEES	AGE OF PROGRAM YEARS	PENETRATION RATE IN PROPORTION TO THE WORKFORCE PER YEAR
Siassi, et al 1973	United Auto Workers	254	8,000	5	.00635
Davis (1970)	Airframe Manufacturer	340	10,000	7	.00486
Turfboer (1959)	Oil Refinery	160	7,000	1.5	.01524
Jones (1975)	Baltimore Health Program	220	100,000	2	.00110
Franco (1957)	Consolidated Edison	400	25,000	10	.00160
Chandler (1972)	Airframe Manufacturer	389	*30,000	4	.00324
Jones (1972)	Kennecott Copper	269	8,000	2	.01681
Follimann (1976)	U. S. Postal Service	1369	83,214	4	.00419
	Philadelphia Police Dept.	170	10,000	3	.00566
	Philadelphia Fire Dept.	77	3,410	1.5	.01505
Trice (1965)	Unspecified	144	20,000	4	.00180
Clyne (1965)	American Cyanamid	287	30,000	8.5	.00112

*Some confusion on workforce, program started in one division of 6,000 employees, but referrals may have been made from other divisions. Total workforce from all divisions is 30,000.

TABLE 6. SUMMARY OF OVERALL EFFECTIVENESS STATISTICS

SOURCE	DEFINITION OF THE EFFECTIVENESS			
	PERCENT RECOVERED OR IMPROVED UNDEFINED	PERCENT ABSTINENT	PERCENT IMPROVED DRINKING BEHAVIOR	PERCENT STILL ON THE JOB
Asby (1971)	65%			
Tucker (1974)				91%
Franco (1957)				72%
Turfboer (1959)				82%
Davis (1970)				87%
Hilker, Asma, Eggert (1972)		57% + 15%		72%
Raleigh (1968)				65%
Kamner and Duping (1969)				80%
Mellon (1969)	62%			
Clyne (1965)				71%
Hemmett (1972)	65-70%			
Smart (1974)	85%		88%	
Thorpe & Perrett (1959)			65%	
Dunne (1973)		70%		70%
Chandler (1972)				80%
Edwards (1975) (3 companies)	80%		75%	70%

Improvement in Specific Behaviors. A few studies have attempted to assess the reduction in lost manhours following treatment in a company alcoholism program. Follimann (1976) reports that the Pontiac Division of GM showed a reduction in lost manhours of 65% (from 16,473 one year before to 5,625 one year later). A better controlled study done for the Oldsmobile Division of GM by Michigan State University and reported by Follimann (1976) showed a 49% reduction in manhours lost. This was compared to a non-treated group in which lost hours increased 9%. Hilker et al (1971) found that 22% of a group of problem drinkers were rated "good" in job efficiency by their supervisor. After treatment, however, the percentage increased to 58%.

Reductions in sick leave, absences, and accidents and the benefits paid have received considerable attention as measures of the effectiveness of specific programs. Table 7 attempts to summarize many of the reports dealing with these criteria. As can be seen there is often substantial reductions in absenteeism (average = 52%), accidents (average = 54%), and, by definition, the benefits paid (average = 58%). This can represent a sizable savings to even a moderate sized company. These savings more than offset the costs of most programs and hence put the programs in the "black" financially.

TABLE 7. PROGRAM EFFECTIVENESS AS MEASURED BY ABSENCES, ACCIDENTS, AND SICK LEAVE

SOURCE	COMPANY	PERCENT REDUCTION	
Absenteeism (Sick Leave)			
Follimann (1976)	General Motors	47%	Sick Leave
Follimann (1976)	Oldsmobile Division	56%	Leave of Absence
Follimann (1976)	Philadelphia Police Department	38%	Sick Leave
Bannon (1975)	Allis-Chalmers	62%	Absenteeism
Jones (1972)	Kennecott Copper	50%	Absenteeism
Asma et al (1971)	Illinois Bell	46%	Absenteeism
Trice (1965)	Undefined	50%	Incidence of 10 days or more absences
Dunne (1973)	New York Police	51%	Absenteeism
Thorpe & Perret (1959)	Esso Standard	41%	Absenteeism
Davis (1970)	Airframe Manufacturer	84%	Absenteeism
Turfboer (1959)	Oil Refinery	33%	Absenteeism
Franco (1957)	Consolidated Edison	70%	Absenteeism
Accidents			
Follimann (1976)	Pontiac Division	39%	On the Job Accidents
Follimann (1976)	Philadelphia Police Department	62%	Accidents
Hilker et al (1972)	Illinois Bell	81%	On the Job Accidents
Hilker et al (1972)	Illinois Bell	36%	Off Duty Accidents
Sickness and Accident Benefits			
Jones (1972)	Kennecott Copper	67%	Sickness and Accident Costs
Follimann (1976)	General Motors	70%	Sickness and Accident Benefits
Follimann (1976)	Pontiac Division	59%	"
Follimann (1976)	Oldsmobile Division	29%	"
Follimann (1976)	Natural Resources Co.	64%	"

Policies

Almost all of the corporations having employee assistance programs have issued policy statements or regulations setting forth their objectives, scope, operations, and other definitions that they have considered essential to make binding. Statements of how the program works were not considered policy. There are, however, four programs that have not made any discernible policy statements -- the programs are run under what might be termed practice and precedent, and purely informal structure that was probed by the interview format questions. Two other corporations operate under what they have termed "informal policy statements". This is defined as statements made to employees in the form of letters and pamphlets that are held to be binding by virtue of the practices followed. The breakdown in terms of the number of programs by category is displayed in Table 8.

TABLE 8

Types of Policies

	Number of Programs
Written Policy	14
Informal Policy	2
No Written Policy	4

In programs where well-written formal policy statements are found, a close relationship to the medical department will also be found with consultations occurring between the medical staff and program personnel (MEDINVOL, TYPEPOL, $r = .526$).

Policy Content

Policy statements were obtained for 12 of the 14 programs claiming to have written statements. In examining these a wide variability in subject material becomes apparent. The results of a brief content analysis is shown in Table 9. The criterion for indicating that a program policy statement in one of the subject categories was the inclusion of an unambiguous sentence statement dealing with the subject in question; qualities of the statement were not considered in this tabulation. It is interesting to note that all accept alcoholism as some form of a "treatable disease model" embodying either or both physiological and psychological elements. Further, all state in clearly understandable terms the relationship between the program operation and normal discipline procedures. Beyond these major points, the coverage becomes increasingly spotty.

TABLE 9

POLICY CONTENT OF PROGRAMS HAVING WRITTEN POLICIES*

SUBJECT COVERED	PROGRAMS											
	T	F	M	P	A	L	B	Q	N	S	J	D
Discipline Policy	X	X	X	X	X	X	X	X	X	X	X	X
Alcoholism as a Disease Model	X	X	X	X	X	X	X	X	X	X	X	X
Confidentiality of Records or Information	X		X	X	X	X	X		X	X	X	X
Continuation in Service		X										
Use of Medical Examiners	X					X	X		X			
Eligibility Limits			X	X	X	X				X		
Supervisors' Role	X	X						X			X	
Counselors' Role	X	X				X						
Union Chairman's Role											X	
Leave Policy	X	X									X	X
Job Security Promotional Opportunities			X	X		X	X	X	X		X	
Extent of Problem Coverage					X	X						

*Based on a sample of 12 of 14 programs having written policy statements.

Policy Characteristics

It was obvious that one of the twelve documents examined had been extracted from a manual on personnel policies and procedures; apparently wide circulation was not intended. Four of the twelve programs had printed the policies in a pamphlet or letter form for wide distribution to the employee population. The most prevalent (7/12) treatment was to utilize a separate document format that could be used in a variety of means. The general chairmen were aware, for the most part, of these policy statements although some confusion was displayed. General Chairmen of three railroads felt there was a written policy even though the program director indicated there was not. The counterpart error was also made; general chairmen on five railroads indicated that there was no policy statement although there in fact was. Implications of faulty educational efforts on the part of the programs or low interest on the part of the representatives might be drawn from this.

Labor-Management Cooperation

Unlike programs in other transportation industries, the rail corporations have elected to provide rehabilitation counseling and resources at their own expense under the aegis of management for the most part. There exists, however, degrees of informal labor input and control. To explore this area parallel questions were asked of both the program directors and general chairmen. The results from the program directors are displayed in Table 10.

TABLE 10

LABOR MANAGEMENT COOPERATION
IN
PROGRAM ADMINISTRATION AND INITIATION

Management Alone Little Labor Input	1
Management with Labor Cooperation and Concurrence	13
Joint Initiation and Control	6

(N = 20)

Perhaps there are more increments than the three displayed. Cases where the program may have been initiated by management but labor participation on a "board of control" was requested have been included in the "joint" category.

Responses of the general chairmen generally agree with this distribution.

It was found that programs which offer counseling for problems in addition to alcoholism have more union participation and control (PARTUNON, BROADCOV, $r = .523$). Also, it was found where the unions have a partial controlling voice, there are more self-referrals or individuals volunteering for counseling on their own (PARTUNON, SELFREF, $r = .703$).

Program Coverage

As mentioned earlier, the primary thrust of all programs is to ameliorate the effects of alcoholism on the rail industry and its employees. The programs that have at least a five or ten year history tend to deal strictly with this problem alone. Those of more recent vintage have been adjusted to include coverage of other human problems as well, having recognized that employees of value can be destroyed by events and behavior other than that resulting from chemical dependence alone. Thus a dichotomy of approaches has evolved; of the 20 programs seen, 10 have limited coverage to primarily alcoholism and its ancillary human problems, another 10 will counsel or refer people displaying effects of a wide variety of performance degrading events and behaviors, such as marital problems, psychological problems, and financial trouble.

Of the 10 covering primarily alcoholism, eight of the program directors have indicated that their coverage is extended to abuse of other drugs than alcohol. This seems to have evolved upon them in the course of the program. Consequently, a better label for this type of coverage would be "chemical dependence". Further, two program directors have indicated that they would refer and counsel other problems personally although by policy this is not an offered coverage.

The 10 offering wide counseling coverage do not usually counsel individuals having problems other than alcohol abuse, unless a qualified psychologist or psychometrician is employed within the program. The usual procedure within the rail industry is to refer the individuals to public or private facilities or organizations that can provide the necessary services. The referral process is prevalent in the treatment of alcoholism also. These programs are completely dependent on the entire infra-structure of social services that exists within the states and provinces in which the railroads operate; none have undertaken a duplication or parallel type of service except in rare individual counseling efforts.

A breakdown by type of coverage and number of programs is shown in Table 11. The coverage categories are not overlapping in that each coverage category corresponds to the specific type of counseling specialty needed for a client's primary problem.

Broad coverage programs exhibit the following characteristics in this survey:

1. A higher percentage of self-referrals; employees volunteering for the program (BROADCOV, SELFREF, r = .538).

2. Are more likely to allow an employee control over release of information file (BROADCOV, EMPLREL, r = .764).

3. Have a greater number of women alcoholics in the program, based on the lower percentage of men alcoholics. (BROADCOV, ALKMENPC, r = -.524).

This variable also loads heavily in factor 1, Appendix D.

Relationship to Company Medical Personnel

Nine of the twenty programs do not involve company medical personnel in treatment or referrals at all. Information may be passed between the medical director and employee assistance counselors, but there is no clear policy or practice in effect. An ambiguous relationship exists. Necessary medical services are obtained from facilities external to the corporation.

A second grouping characterizing eight of the twenty programs is that of cooperation between the programs and medical departments in which referrals of individuals displaying physical symptoms of alcoholism will be made to the employee assistance counselors. Consultation between departments is maintained on a relatively informal basis. Here again, the necessary medical services for treatment of alcoholism or other disorders are usually purchased outside the corporation. Only one of these eight corporation programs has formalized this cooperative relationship in a policy statement.

In three other programs the corporate medical departments have been involved in treatment and referral by policy statement and practice. It is routine in two of the three to refer the individuals seeking treatment to the corporation medical staff to diagnosis and recommendation of treatment; in the third, some degree of election is allowed the individual. In all three, individual records are kept by the medical group. Treatment in extenuating circumstances may be undertaken; characteristically this is usually left to an external facility.

Further definition of the program relationships to medical staffs was attempted with a set of two questions exploring referrals to and from medical units. The results are shown in Table 12. The responses

TABLE 11

PROGRAM COVERAGE BY POLICY

PROBLEMS FOR WHICH COUNSELING OR REFERRAL SERVICE IS GIVEN	PROGRAMS																			
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	O	R	S	T	U	V
Alcohol Abuse	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Illegal Drugs	X	X	X			X	X	X	X	X	X	X		X		X			X	X
Prescription Drugs	X	X	X			X	X	X	X	X	X	X		X		X			X	X
Marital Problems	X	X	X			X		X		X		X		X					X	X
Behavioral Disorders	X	X	X			X		X		X		X		X					X	X
Financial Planning	X	X	X			X		X		X		X		X					X	X
Legal Assistance	X	X				X		X				X		X						

Other Categories Mentioned: Depression, Child Rearing, Workplace Behavior, Consumer Complaints.

to the second question underscore the conflicting roles of counselors and doctors in the rail industry programs. Some caution must be used in interpretation. It has become the practice of many corporations to purchase medical services by contract. In such cases the company doctor is an "outsider" that often also maintains a private practice. Where this has occurred the contract physician can negotiate the duties that will be assumed; many may not exhibit an interest in alcoholism.

TABLE 12

REFERRALS TO AND FROM MEDICAL UNITS

1. Are clients routinely referred to company medical personnel?	Yes - 2 Yes, but not alcoholics - 1 No - 17
2. Are clients routinely referred from company medical personnel to the employee assistance program?	Yes - 13 No - 7

The practice of referring clients from the program to the company medical staff has some negative associations. From the survey, it was found that where this practice is followed, the number still drinking after treatment is higher (MEDREF, NUMWET, r = .566), a lower percentage of any positive change in drinking behavior will be noticed (MEDREF, CHANGE, r = -.566); and there will be fewer employees disciplined for on the job drinking that are in the counseling program (MEDREF, GSINPROG, r = -.681).

The practice of referring personnel from company medical personnel to the program or involving the medical department with the program in a consulting role does not seem to have marked negative effects. This practice is associated with a shorter period of time that a client spends in counseling (MEDINVOL, TIMEPROG, r = -.540).

Eligibility

Employees. The usual policy quoted is that all employees of the corporation are offered the counseling services even if this is not specifically outlined in the printed policy statement. There are four corporations of the twenty that have had some exceptions to this. Three of these four have started programs on a limited "pilot" basis commencing in the most populous districts and not openly advertising the services in other districts. Of these three one also includes Rule G violators from any district of the road. This does not indicate that assistance is refused to employees beyond the pilot area; in all cases, some arrangement or assistance is provided although

it is of a more limited nature by virtue of the distance between the counselor and individual seeking assistance. The remaining case of limited coverage is one imposed partly by geography and partly by corporate structure. The railroad shares central office personnel with a holding company; all employees of the railroad proper are covered while the holding corporation is not covered under the railroad's assistance program.

Those that have pilot programs have expressed plans for expansion of an incremental nature. This type of expansion by area and district is not uncommon; some of the larger programs have done this over several years, opening new offices district by district by initial pioneering efforts in only a few areas.

While all employees are usually eligible, there are practical aspects of program operation that tend to limit coverage and services. These are discussed more fully in sections under Client Population and Facilities.

Family Members. In recognition of the reality that the state of health within the family can affect an employee's performance, 17 of the 20 programs will extend counseling and referral services to an employee's immediate relations who are addicted or distressed. Eligibility criteria are essentially the same as for an employee with the additional requirement that they be a "dependent" or in the "immediate family". There are exceptions to the immediate family requirement; three programs of the 17 opened to family members will counsel "those that have a significant impact on the employee". This has been a very minor percentage of the total cases and represents in-laws, girlfriends, or common law spouses; none of these are recognized in policy statements and may fall into the category of personal efforts on the part of the counselors.

Three of the twenty programs do not offer assistance to an employee's family except the counseling of affected family members in a case of alcoholism displayed by the employee. In all three instances the family members do have coverage under health insurance policies or natural health care programs; however, professional assistance must be sought without recourse to company resources or facilities. One of these program directors has indicated that family members would be counseled as part of his own personal efforts outside the corporation program.

In all cases where family members are allowed access to the program, the services are the same by policy and practical intent. It has been seen, however, that the treatment facilities to which a family member is referred may differ from those to which employees have access, where different insurance coverages or hospital associations are operating. This is covered more fully under "Funding".

Staff and Organization

One could surmise that the size of staffs would correlate somewhat to the size of the railroad, but this is not always the case. There are large systems with one and two counselor shops and there are small railroads with more than adequate coverage. As with other characteristics of employee assistance programs within the rail industry, variability is the key word for staff size, training, location, and other qualities.

The programs generally appear to fall into three categories: (a) programs initiated and operated on premises developed and promulgated by Alcoholics Anonymous (AA), (b) programs developed under guidelines by the National Council on Alcoholism (NCA) and (c) programs developed under the guidance and council of the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Only the latter category is readily identifiable; the first (AA premises) group seems to be blending into the second category as time passes.

The effects of these three origins are mostly seen in the characteristics of the staffs. Those having origins traceable to Alcoholics Anonymous influences are generally older programs, staffed by personnel with years of AA background and training, have a tendency to be of management initiation and control, and tend to develop their own counselors with emphasis given to on-the-job training. The NCA influence is categorized by the staff being trained either as professionals or para-professional counselors in schools and seminars devoted to alcoholism counseling. AA experience may be emphasized but is not held to be mandatory. As one might expect, labor and management input and control is emphasized.

Those programs modeled after advise from NIAAA feature a controlling coordinator or director who may not have training in the treatment of alcoholism. All clients are referred to state, private, or federal agencies for screening diagnosis, treatment and counseling. Almost all of the workload in counseling and record keeping is performed by outside agencies. As a consequence all the personnel doing counseling would tend to be of a professional or para-professional level.

Location in Corporation Organization. All the programs have a very small staff ranging from one to eleven full-time people. All tend to be placed in the higher echelons of the organizations, the directors reporting most usually to the vice-president levels. Placement within the corporate staff varies, however. Table 13 summarizes the department within which the programs are located.

TABLE 13

DEPARTMENTAL LOCATION OF EMPLOYEE ASSISTANCE PROGRAMS

DEPARTMENT	NUMBER OF PROGRAMS
Personnel	7
Medical	5
Labor Relations	4
Safety	1
Executive Department	1
Casualty Prevention	1
Inter-Departmental Committee	1

(N = 20)

The most interesting part of the tabulation is the five programs appended to the medical departments. Only one of these intimately involve medical personnel in the treatment or referral process. One should not assume that the programs are integrated into these departments; all tend to operate autonomously.

Job Descriptions

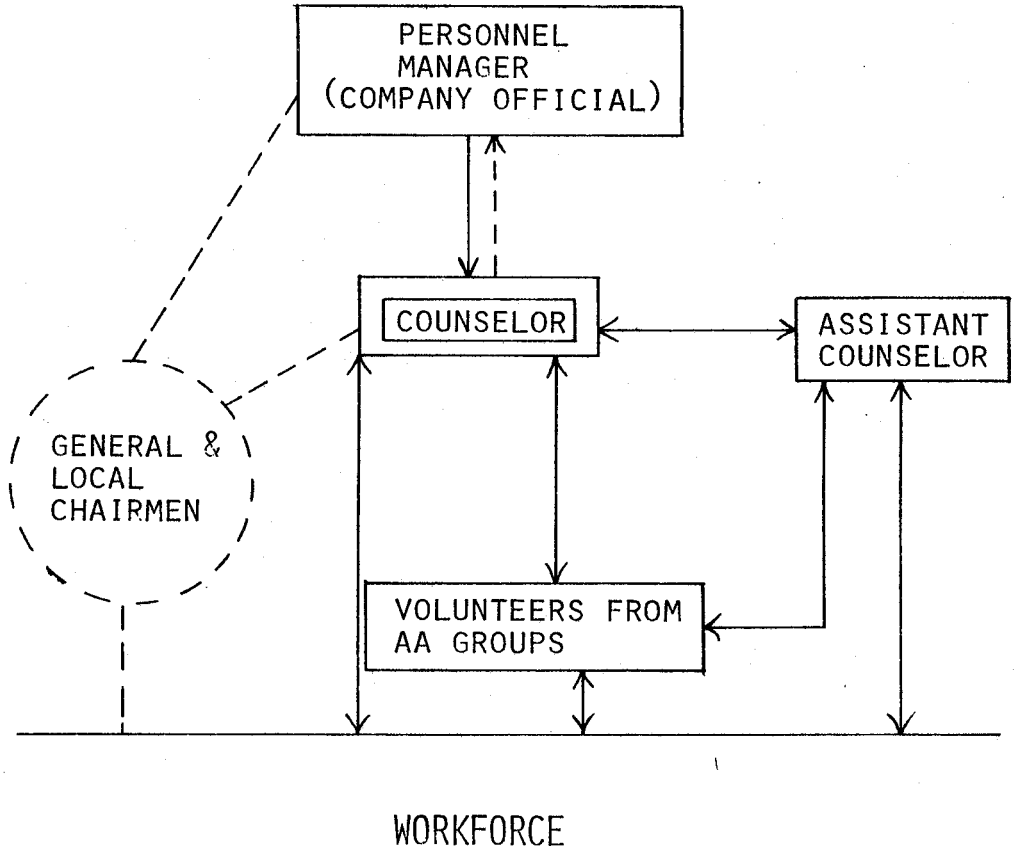
The only three job categories seen in the programs reviewed are director, counselor, and volunteer resource person, aside from a few clerical personnel. Most of the directors and counselors have formal job descriptions (12 of 20 programs). Six programs operate without formal job descriptions for their key personnel. Two programs are so structured as to make formal job descriptions superfluous since the key personnel have assumed program duties and ancillary tasks.

Program Structure

To gain some insight as to the variation in lines of authority and communication, figures 1 through 4 have been developed to graphically explore different sizes and types of programs. Figure 1 typifies a small organization consisting of one counselor who might have a part-time assistant. In this case the key person is the counselor with shared administrative duties between he and the nominal director in the corporate staff. Communication with union representatives is a shared responsibility between the counselor and program director (i.e., personnel manager). On smaller railroads, general chairmen are usually part-time officials and carry much of the duties of local chairmen on larger roads; consequently they are more intimately involved with referrals, Rule G cases and program operations. Figure 1 does contain reference to volunteer personnel; this is not always the case. Many counselors prefer not to use

FIGURE 1

SMALL PROGRAM STRUCTURE



volunteers at all save in cases of desperate circumstances where they themselves cannot contact an individual in a remote location.

Progressing in size to a medium program, figure 2, the program director assumes more administrative responsibilities as the corps of counselors increases. In this case the counselors carry the primary burden of client relationships although the program director may also act as a counselor. Union participation in these circumstances tends to be at the local chairman level - interfacing with the counselors on individual cases. Exceptional cases, Rule G appeals, and extraordinary occurrences such as false referrals or extreme behavioral disorders may cause interaction between general chairmen, the program directors, and management personnel. Additionally, the program director is required to educate management and union officials at all levels. Again, the optional use of volunteer personnel is indicated. Qualifications of the counselors will vary according to the precepts and biases of the director. The primary differences between the small and medium size programs are the separation of duties and the greater amounts of autonomy allowed the counselors forced by distance between them and the director.

The larger programs, figure 3, operate in much the same manner as medium-sized programs; however, greater between-program variation has been seen at the counselor level. Three categories are displayed in Figure 3. Working from left to right the first variation depicts the condition where the program is organized by railroad districts. A district director who has other duties as well is interposed between the counselors and the directors. The second variation is the counselor to director path seen before. Thirdly, husband and wife counseling teams are sometimes used, both being on the payroll, although one might be a part-time employee. The same ambiguity about the use of volunteer personnel is also displayed in the largest programs.

In all cases the general workforce is displayed as a monolithic block of personnel. In reality quite a different situation exists. In spite of our desire to adhere to egalitarian myths, different approaches are made by people of differing social and economic strata. Management and supervisory personnel in the higher corporate echelons are unlikely to have much to do with a counselor drawn from the rank and file crafts. Rather, middle management will tend to seek out program directors for counseling if they have the need and desire to do so. Further, communication lines between counselors, union representatives, and directors are not as rigid as the figures would indicate.

The most readily identifiable type of program is that built along NIAAA guidelines, figure 4. The program features a coordinator who may be a part or full-time employee assigned that function. Alternatively, the coordination duties may be assumed by the director of personnel. All counseling treatment, record keeping and follow-up are performed by hospitals, clinics, and regional mental health centers to which the individuals seeking assistance are referred by the

FIGURE 2

MEDIUM PROGRAM STRUCTURE

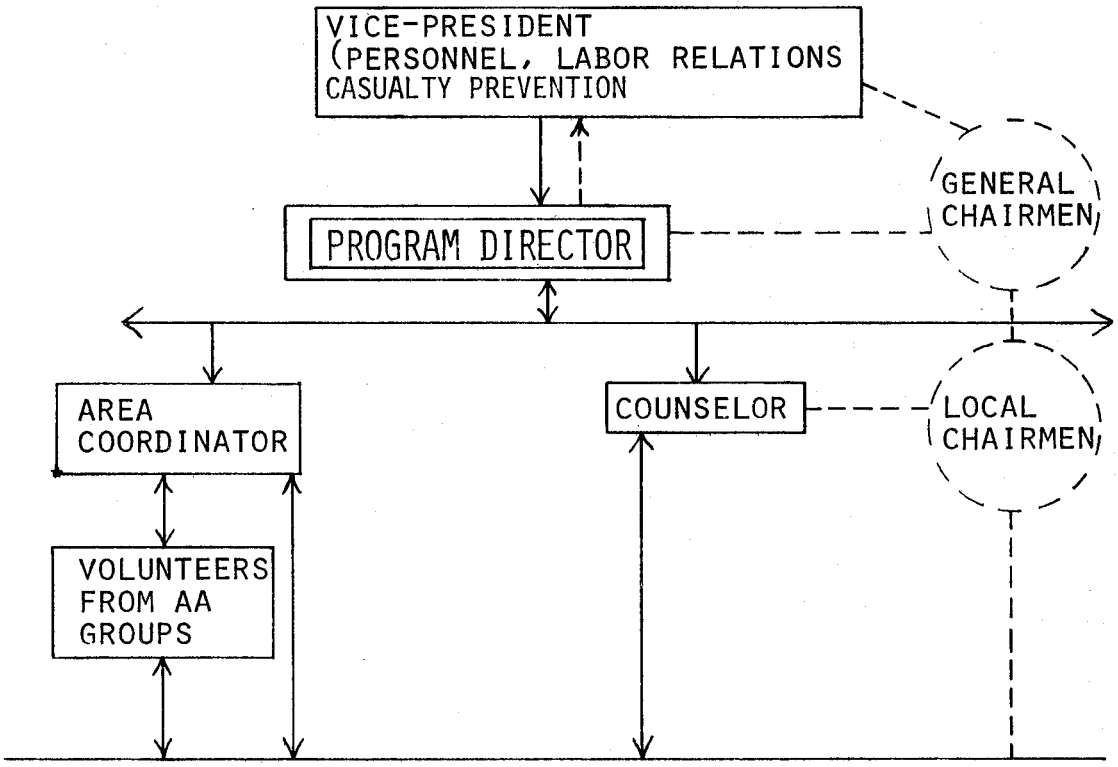


FIGURE 3

LARGE PROGRAM STRUCTURE

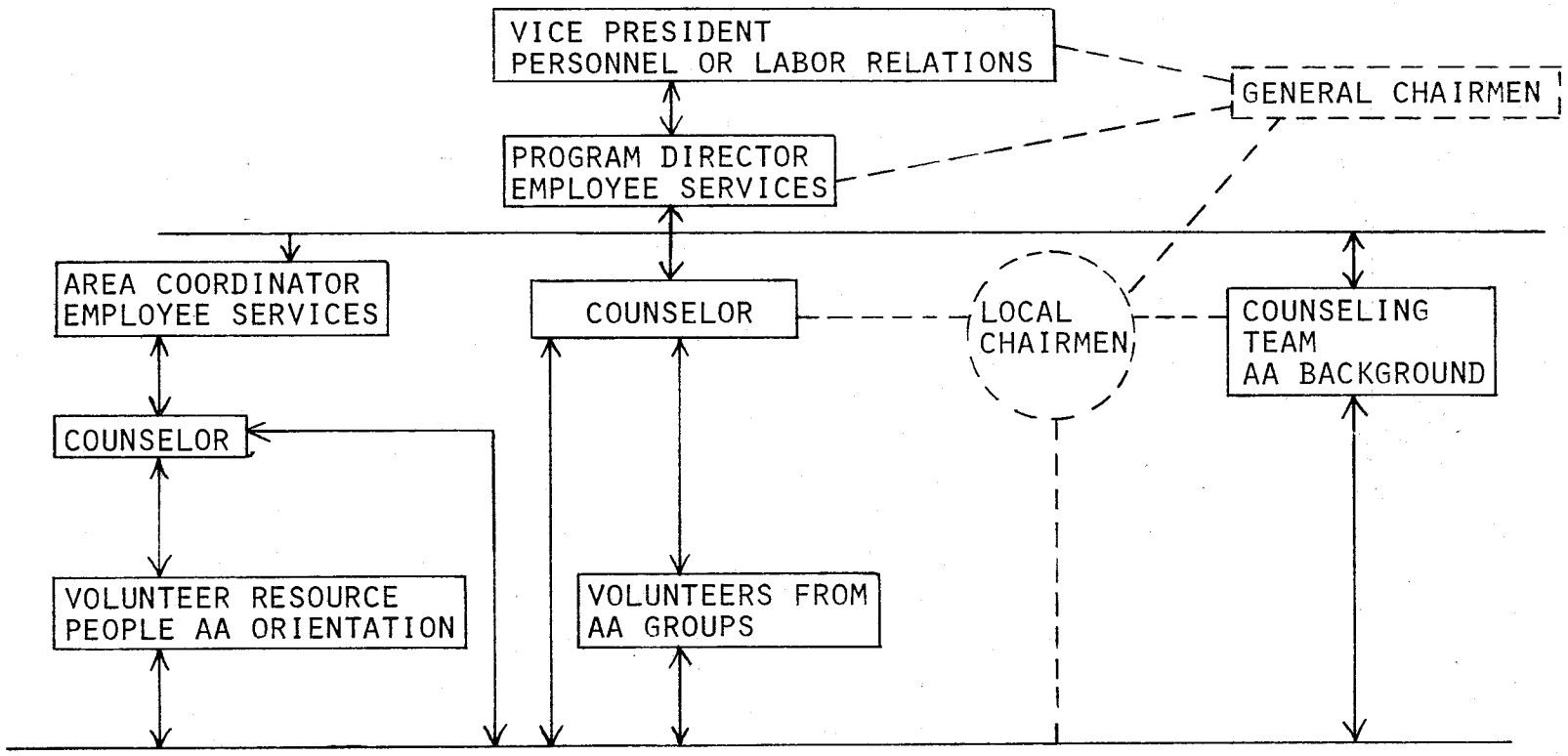
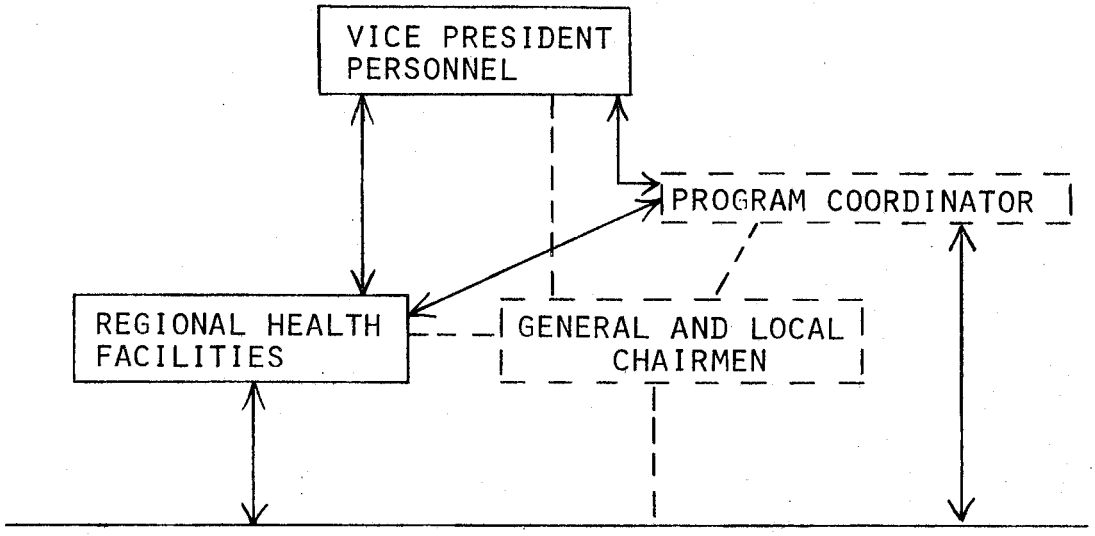


FIGURE 4

NIAAA PROGRAM STRUCTURE



coordinator. Administrative details affecting sick leave and pay are handled by the coordinator. The interesting aspect in this arrangement is that the roles of the union representatives appear to be of greater importance than in a counseling staff program, particularly in reinstatement proceedings and follow-up. More of a communication burden with the corporation personnel seems to be assumed by the general and local chairmen since in the NIAAA model the individual does not have a ready contact or advocate within the corporate structure.

There are variations that have not been graphically presented; one program utilizes screened volunteer personnel given specialized training with a "coordinator in the personnel department who performs these duties as an extension of normal job duties". Yet another utilizes a full-time coordinator who has counselors that are allowed to counsel on a half-time basis in addition to their normal working duties under an agreement with the corporation.

Major Duties of Program Personnel

The program directors were quieried on what they perceived to be their own major duties, the major duties of counselors under them, and the major duties of volunteer personnel if they used them. Some problems in definition arose since there are six one-man programs in the twenty reviewed. In these cases the individual was taken as a program director on the criteria of having administrative duties, coordination roles with management and policy interpretation responsibilities. Of these six, four have specific plans for expansion of the program staff that would ultimately place them in a true directorship role.

Reference was made by some directors to the position descriptions provided the interviewer; in these cases the frequency count was made from that document.

Program Directors. Interestingly enough the program directors perceive themselves as being primarily educators or perhaps salesmen; the highest frequency of response occurs under program education not only to employees but management and union officials as well, Table 14. Numerous comments were made of the continuing necessity of selling and reselling management on the qualities and importance of the program. As one might expect, administrative duties also occupy much thought and time; this includes selection and training of counselors, budgetary matters, record keeping, and reporting. Managing counselors did not appear frequently; realizing that counselors may be several hundred to a thousand miles distance from the director, this is not too surprising.

TABLE 14

MAJOR DUTIES FOR PROGRAM DIRECTORS

(Frequency Count of Duties Quoted by 20 Directors)

Duty	Frequency
Program Education	12
Administration	9
Counseling	7
Labor and Public Relations	7
Process Treatment Referrals	7
Manage Counselors	6

Although the seven responses on counseling come largely from the six one-man shops it should be realized that almost all program directors still counsel, although not as much as they might have done earlier in their careers. Program administration and education tend to crowd counseling duties as a program expands.

Counselors. Table 15 displays the frequency count for major duties of counselors in the thirteen programs that have more than one individual running the shop. As expected, administrative and educative duties diminish as the importance of counseling increases as compared to the directors. A new important category "follow up" emerges.

TABLE 15

MAJOR DUTIES OF COUNSELORS

Perceived by Program Directors

(Frequency Count of Duties Quoted by 13 Directors)

Duties	Frequency
Counseling	7
Process Treatment Referrals	7
Follow Up	6
Program Education	3
Administration	2
Labor and Public Relations	1
Seek Contacts	

Volunteer Personnel. Duties for volunteer personnel as perceived by the program directors are displayed in Table 16. Of the twenty programs, thirteen utilize volunteers in one form or another; one intends such use. The duties compliment those of the counselors in that much of the counseling done by volunteer people is performed in the latter stages of treatment after the counselors have screened the clients and arranged for treatment. In more difficult circumstances the volunteer may be utilized to make initial contact and treatment referral if the counselors cannot travel or reach the individual concerned. In all cases, volunteer efforts are limited in scope when compared to counselors.

TABLE 16

DUTIES OF VOLUNTEER PERSONNEL

Perceived by Program Director

(Frequency Count of Duties Quoted by 13 Directors)

Duties	Frequency
Counseling	7
Process Treatment Referrals	5
Follow Up	3
Seek Contacts	1

Although the interviews did not explore the efficacy of volunteer resource work, four program directors who utilized volunteers expressed some negative concern over the use of these people. Problem areas cited were lack of training broad enough to deal with a variety of problems, the serving of personnel interests in contradiction to established policies and procedures, lack of reliability, low availability (gone fishin'), entry into strong personal relationships with clients, and developing severe behavioral disorders themselves. As a consequence these directors indicated that although they had initially relied heavily on volunteer personnel who were formally recognized by the organization, they had to back away from formal recognition and rely on a few well-screened, reliable, mature people retained on an informal, almost personal, basis. Other program directors expressed or connotated concern in using volunteers although their comments were not specific or strongly negative. On the basis of this anecdotal evidence it appears as if the use of volunteers is diminishing for practical reasons found through experience. On the surface it appears to be a problem associated with the lack of organizational and supervisory control. The directors who had no volunteers were not specific as to why they did not.

Qualifications of Key Personnel

The essential experience, education and background necessary to fill the directing and counseling jobs in the rail industry program were explored by a series of four related questions. The resultant frequency counts for program directors, counselors, and volunteer personnel are shown in Tables 17 through 19. As was hoped for, the program directors described their own positions and program personnel, as borne out by a review of position descriptions.

Considerable variation in the total number of responses is seen in Tables 17 through 19. The researchers not infrequently obtained responses similar to - "All that is needed is a good AA man given a little additional training". This response tends to limit further qualifications from being quoted or considered, hence some low frequency counts.

There is clearly a preference for para-professionals as directors and counselors; the major difference between the two is the desire for more experience on the part of the director. Since most of the programs are relatively young, little background, specifically in alcoholism counseling, is seen in the director requirements. This is underscored by the fact that 17 of the 20 programs still have their original directors. All emphasize specialized training in alcoholism counseling, particularly for directors and counselors.

An interesting split occurs on the desirability of having a director who is a recovering alcoholic. Negative aspects were expressed by two program directors on the advisability of the program director being a recovering alcoholic. One felt that the recovering alcoholic

TABLE 17

QUALIFICATIONS FOR PROGRAM DIRECTORS

(Frequency Counts of Qualifications Quoted by 20 Directors)

Formal Education

Desirable, Not Mandatory	7
Not Important	4
Psychology	4
Business Administration	2
Sociology	2
Physician	1

Years Experience in Related Fields (Such as Social Work)

Desirable, Not Mandatory	12
Three Years	3
Not Necessary	2
Four Years	1
Five Years	1
Ten Years	1

Types of Specialized Training

Training Specific to Alcohol and Drug Abuse Counseling	14
Training in Vocational Rehabilitation	2
Clinical Experience and Training	2
On-the-Job Training as a Counselor	2

Recovering Alcoholic?

Not Necessary	8
Yes, Helpful	8
Absolutely Not	2

Others mentioned: teaching skill, administrative experience, knowledge of social resources

TABLE 18

QUALIFICATIONS OF COUNSELORS

(Frequency Counts of Qualifications Quoted by 13 Directors)

Formal Education		
	Not Necessary	7
	Desirable, Not Mandatory	4
Years Experience in Related Fields (Such as Social Work)		
	Not Necessary	6
	Required, No Fixed Time	2
	Five Years	1
	Three Years	1
	Two Years	1
Types of Specialized Training		
Training Specific to Alcohol and Drug Abuse Counseling		10
Public Welfare		2
Vocational Rehabilitation		1
Recovering Alcoholic?		
	Preferred	6
	Not Necessary	4
	Situational	1

Others Mentioned

Must Show Compassion and Sensitivity

Dedicated

Four Years Sobriety Minimum

Two Years Sobriety Minimum

AA Membership

TABLE 19

QUALIFICATIONS FOR VOLUNTEER PERSONNEL

(Frequency Counts of Qualifications Quoted by 14 Directors)*

Formal Education		
	Not Necessary	14
Experience in Related Fields		
	Not Necessary	14
Types of Specialized Training		
Training through Long-Term AA Association		6
Training by Program Personnel and Seminars		6
Working Knowledge of Alcoholism Displayed, Source Unspecified		2
Recovering Alcoholic?		
	Preferred	8
	Not Necessary	6
Others Mentioned		
Reliable		
AA Membership		
Long-Term Sobriety		

*Thirteen programs use volunteers in some capacity; one additional program director was planning to recruit volunteers at the time of the interview and answered this series of questions on the basis of the selection criteria.

would be bias too much in favor of the clients to objectively represent the corporation's needs. The second felt that there were situational hazards to sobriety that a director was likely to encounter and implied that the potential for a slip was not worth risking the program. It is difficult to give credence to either of these feelings after seeing 10 of the 20 programs successfully run by recovering alcoholics.

When it comes to counselors and volunteers the balance is clearly tipped in favor of recruiting recovering alcoholics under the premise that the experience gained in undergoing treatment for alcohol dependence gives them a valuable insight that can be used to advantage.

All volunteers are very carefully screened by directors and counselors. Although the issue was not formally explored the desirable characteristics were outlined by many directors. They usually desire mature individuals who are capable of interacting with compassion and sensitivity without entering into close personal relationships. A sound knowledge of alcoholism is necessary either through long-term AA association or specialized training. A tolerance for both rejection by clients and ambiguity in counseling results also appears essential. More illuminating are the types of behaviors that will cause a rejection from consideration as a volunteer resource person. These have usually been quoted in terms of pejorative labels, the flavor of which we have hoped to retain. Rejected are: The "self-interested" typified by graduate students gathering data for a paper; "bleeding deacons", defined as old time AA members (my way, the AA way, is the only way - this clinical stuff is nonsense); "bible thumpers" and "pipelines to God" (if only you would believe you can be saved from demon rum); members of dry movements (drink is evil, therefore, outlaw it); those with fixed moral opinions on alcoholism; those with short sobriety (let's dry out the world!); those with high expectations (instant success); and lastly, those who get drunk. In short, those with narrow, rigid opinions who must impose these beliefs on others do not make counselors.

The qualifications expressed for key personnel have some interesting associations with other program variables.

Where it is required that the director be experienced in counseling or a related field, the survey results show a higher percentage of clients being referred by union officials (DIRTEXPR, UNIONREF, $r = .599$); a corresponding lower percentage of client referrals from supervision (DIRTEXPR, SUPERREF, $r = -.661$); and a low utilization of pamphlets as an information media (DIRTEXPR, INFOPAMP, $r = -.564$). The requirement that the director have a formal education corresponds to an unwillingness to have the director or counselor make specific recommendations for the reinstatement of employees caught drinking on the job (DIRTORED, REINSTAT, $r = -.517$). Where it is preferred to have a director that is a recovering alcoholic one expects to find counselors that are recovering alcoholics (DIRALCH, COUNALCH, $r = .577$); the clients will be under program surveillance longer (DIRALCH, TIMEPROG, $r = .522$);

mailings to home addresses will not be utilized as an information media (DIRALCH, INFOMAIL, r = -.577); and it is less likely that there will be an educational effort for union officials (DIRALCH, UNONEDU, r = -.577).

Where the requirement is expressed that the counselors should be recovering alcoholics the number of employees referring themselves to the program is likely to be less (COUNALCH, SELFREF, r = -.786); information will probably not be mailed to employees' homes (COUNALCH, INFOMAIL, r = -.722); and there is an indication that statistical data on past clients such as a breakdown by job category will not be developed (COUNALCH, BREAKJOB, r = -.577). Where the demand for experienced counselors is expressed, the program is likely to use volunteer personnel (COUNEXPR, VOLUSED, r = .577).

Availability

As a measure of availability, the ratio of employees to staff personnel was calculated for each program where the target population could be defined. The mean value was 6157 employees per staff counselor with a standard deviation of 3292, N = 15. A range of 1797 to 13,500 was encountered. The only correlation of meaning was that to the total number of employees indicating that the larger corporations have, for the most part, hired counselors in proportion to the size of the workforce (EMPLSTAFF, TOTEMPLP, r = .657). The ratio of employees to staff taken by itself has not proven to have a significant relationship to penetration rate as a measure of program effectiveness for those surveyed.

Funding

The commitment to start and continue an employee assistance program entails considerable expense. The range of costs within the industry appears to range from $2.00 to $10.00 per employee per year where an entire railroad is covered. Counselor salaries range from $13K to $20K per year, program director salaries range between $15K and $30K upward to $40K per year depending on background, qualifications, and size of the program. In addition, there are the ancillary expenses for offices, travel, and educational materials. The general practice within the industry is to bear this as an operating expense, although the precise source varies as much as the other inter-program aspects. There is no case in which a union bears any direct part of the expense. The corporate departments and functions from which the funds are derived are most commonly the personnel and administration groups, although medical departments, safety departments, casualty prevention, training and administration of the office of the Vice-President also appear as sources. There is one program funded entirely under NIAAA grants. The grants for this pilot program are due to expire in September 1976.

Insurance Coverage

The costs of treatment to rehabilitating an employee are most commonly paid by insurance programs. Without this essential ingredient, the success of the programs would be severely hampered. Treatment would then be limited to the informal types of counseling offered through AA groups, special populations being afforded VA hospital treatment or other public facilities. With coverage for chemical dependency, medical attention can be obtained in most locations for the general working population subject, however, to some severe limitations.

Coverage for the Treatment of Alcoholism

All of the twenty program directors interviewed indicated that some form of medical coverage for the treatment of alcoholism was prevalent although the particulars of the coverage varied by type of employee, and specific corporation or agreement. Three hospital associations were encountered, each having different coverages. Three program directors of the twenty indicated that while their contract employees had coverage the non-contract employees did not, although this seems to be rapidly changing. This leads in some cases to secondary diagnosis being used in order to obtain treatment payment for the employees without alcoholism coverage.

The most prevalent policy in effect at the time of writing will cover in-patient treatment, including some physician expense and costs incurred up to 365 days with an 80% coverage of expenses over $1000. However, out-patient treatment and out-patient counseling are not covered; neither is payment to specialized clinics for the treatment of chemical dependencies unless the clinic meets the criteria for a "hospital" as currently defined by the insurance carrier. This occurs even though these clinics have a much lower failure rate for their patients, offer better supportive counseling, and cost markedly less. Most of the program directors have expressed opinions, some very strong, that clinics of this type can produce better results for the costs in the range of $400 to $700 for a three to four week stay than costs $3000 to $4000 in a hospital with an alcoholism unit. It follows that less costly treatment could be obtained by changing the criteria for facilities utilized in the treatment of alcoholism, particularly since only 10% to 25% of alcoholic clients seem to require the full facilities of a hospital.

Aside from occupying expensive hospital facilities that are not always necessary, another questionable practice has developed. The practice of installing clients in a hospital facility with the thought that other strictly medical problems will also be uncovered during the client's hospital tenure was noted. While this may be highly beneficial to the individual employee, it seems to be supplying unnecessary amounts

of medical service (and perhaps undesired amounts) beyond the needs of the client and original intent of the program. Admittedly, it is difficult to argue over cases where tumors, high blood pressure, or diabetes have been found; but some of these findings could also be made in the clinics.

On some railroads, there are policies obtained through other insurance carriers that will allow payment to certain screened rehabilitation clinics. These are not prevalent for contract employees and coverage of this type varied by railroad for non-contract employees.

Those programs which have access to hospital associations have yet another set of complications. The employee and his family may very well come under completely separate types of coverages. It has been seen where a hospital association may allow payment to an alcoholism clinic for the employee yet the spouse is left with only medical coverage under an independent carrier. Moreover, not all employees are included in the hospital association within a given corporation.

A clear need is seen in re-defining coverage limits and criteria for facility payment throughout the industry. Since all of these plans and agreements are negotiable entities, a near-term solution appears possible to level the scattering of coverages.

Coverage of Behavioral Disorders and Drug Addictions. Coverage of treatment costs via third party payment was indicated by 17 of the 20 program directors interviewed. The same variety in requirements and extents of coverage exist in this category as in the treatment cost of alcoholism. Where the coverage is not extended to behavioral disorders, employees are left to state and federally funded facilities unless they can stand the burden of large out-of-pocket expenses. Even where the costs are covered by the health plans, residual expenditure of between 20% to 35% of the treatment costs must be paid by the employee.

Experience has not been as extensive in this area for most of the directors. Ten of the twenty do not involve themselves with behavioral disorders and, of those who do, mental dysfunctions account for a minor portion of the workload.

Estimated Economic Loss

An attempt was made to enter the topic of cost effectiveness of these programs by asking the program directors what sort of estimate of loss was used for an unidentified alcoholic, problem drinker, or other drug abuser.

The result proved to be somewhat surprising, as shown in Table 20. In brief, there has not yet been an economic analysis made of the railroad industry programs. Seven program directors had not used a

figure and felt that they had no basis for an estimate. Three consistent patterns emerge as to the origins and treatment of the estimates.

TABLE 20

ESTIMATED ECONOMIC LOSS PER ALCOHOLIC PER YEAR

Amount	Number of Programs
$4000 and more one year	2
$3000 and $4000/year (25% of Gross Pay)	8
$1500 to $3000/year (Less than 25% of Gross Pay)	3
Do not know - cannot estimate	7 (N = 20)

Two directors have based their estimates on material published by NIAAA starting with 26 extra leave days each year then adding on a figure for performance decrement. This technique develops the highest figure. The most common estimate appears to have its origins elsewhere, perhaps the National Council on Alcoholism. This estimate simply takes 25% of an individual's gross take-home pay. Three directors have felt this figure to be too high and consequently have derated it to "make it more believeable for management".

The reasons why more attention has not been given to this aspect, even as a "selling point", are varied. Many quite simply do not have sufficient time, being very understaffed as it is. Others feel the present accounting systems do not allow an accurate reflection of true causes for leave and therefore a study based on pre- and post-treatment absenteeism would not be accurate. A distinct minority of two feel that given a centralized payroll accounting system an adequate study could be started and that now might be the time to do so.

Those railroads not having programs are very quick to point out the lack of within-industry-cost-figures displaying expenditures vs. benefits.

Facilities

Program Offices

All programs provide secluded office space for the counselors or else allow them to work out of their homes. The most common arrangement

is to budget the office rental at a location away from company offices or property (12/20). This is usually done in the cause of preserving anonimity of the clients. Some directors have gone so far as to have very elaborate criteria for counseling office selections. A sampling of criteria would include: large amounts of pedestrian traffic in the locality, easily accessible parking facilities, a "pleasant professional atmosphere", a highly populated public area or building, front and rear entrances easily accessible. There are 3/20 programs that are operated primarily from individual counselors' homes. The interviewers have not seen these locations.

The opposite viewpoint is that of preferring to locate program offices on the railroad property; there are five such of the twenty seen. Arguments for doing so are also very cogent. Doing so lowers the cost of the program or allows more productive utilization of allocated funds. It has been quoted "that is where the people are" and that it is a visible reminder of the managerial commitment to this type of activity. Further, it facilitates contact with those providing funds and the personnel and supervision that must help make the program operate. Confidentiality is felt to be uncompromised in these situations although some directors half jokingly feel their clients look both ways before entering. The argument seems to be futile - the only correlation of any significance is that the total number employed is negatively related ($r = -.540$) to having offices off the property. The larger corporations prefer using company facilities.

The number of offices correlates almost perfectly to the number of counselors or counseling teams. Location within the system tends to parallel major workforce population centers such as towns with region or divisional offices. Each is staffed with at least one counselor or team operating in a highly autonomous manner. In essence, full service is provided from each locality except those few programs which have a licensed clinician on the staff.

Treatment and Counseling Resources Utilized

With the exception of some of the counseling for alcoholics, all programs are dependent on the infra-structure of mental and physical health facilities in their areas. The types of facilities used seem to run the gamut except possibly half-way houses. A partial listing of types is presented below:

Public and Private Hospitals with Alcoholism Units
Private Alcoholism Clinics
Veterans' Administration Hospitals
Controlled Environment Residential Homes
Regional Mental Health Centers
Emergency or Crisis Shelter Houses
State Mental Hospitals
Alcoholics Anonymous
Alcoholics Anonymous Service Centers

The sequence of utilization depends largely on the intake condition of the client. If detoxification is necessary they might first be referred to a hospital with an alcoholic rehabilitation unit followed by outpatient counseling at the hospital or a mental health center. This would be concurrent with being sponsored in Alcoholics Anonymous while periodically being counseled by program personnel. More frequently, hospitalization is not required and treatment can consist of counseling internal and external to the program followed by AA sponsorship or continued group therapy at a mental health facility.

Screening of Facilities and Standing Agreements. Of the twenty program directors interviewed five have indicated that they screened the facilities to which they might refer their client and have subsequently entered into informal agreements covering admission and/or payment with the administrations of these facilities. This is most commonly done on an informal basis without corporate involvement, except possibly where a hospital association has rented part of a hospital's physical plant or has entered into a fee per patient agreement.

Another four have screened the facilities available to them and thereby have arrived at a list of preferred treatment resources. This list is not adhered to rigidly, however.

The majority (11/20) rely primarily on accreditation by external sources and groups, although informal preferences are built up through the course of normal operation.

Admissions. The vast majority of the program directors (19/20) report little difficulty in finding space or gaining admissions in public treatment facilities; the longest wait quoted was one week. Rare instances of waiting lists for private clinics are reported and only one director reported any difficulty over proof of insurance coverage or financial responsibility (and this at only one hospital).

Alcoholics Anonymous. Although this organization may not always be considered a treatment facility it forms the largest single source for continuing group therapy and social support for the "recovering" alcoholic. All program directors strongly recommend that their alcoholic clients actively participate in this organization; the majority of clients do so to varying degrees.

The interviewers have attended some of the "closed" meetings of this organization. (Closed in the sense here indicates not open to the public). The discussions may be started on the pretext of a selected topic but as one might suspect, the conversations begin to center around problems of social-behavioral adjustment of all sorts with surprising depth and insight in addition to the primary issue of avoiding a recurrence of the consumption of alcohol. The meetings resemble group therapy sessions.

Although the groups seen were not as homogenous with regard to the types of personalities, socio-economic levels and backgrounds of the participants as expected, this type of leveling can and apparently does occur in some areas. There is also a wide variance in other qualities of these groups. There are elements of some rigidity in social control in that AA is set up on a basis of a series of relatively inflexible principles and a set of behavioral expectancies for alcoholics by which comments and activities of participants are evaluated (although not always openly) by other adherents of the group. There are religious overtones that could be emphasized or diluted depending on the group character.

Because of these and other reasons there are individuals who cannot tolerate this approach to a continuing state of social adjustment. Very few alternatives are endorsed by the program directors. Some individuals have had success through religious conversion syndromes or increased church activity; others utilize continual periodic counseling from regional clinics or program counselors. Instances have been cited where employees or a family have formed their own support group similar to an AA chapter.

The Problem of Outlying Employees

Unique to transportation industries is the problem of communication and control with a workforce scattered over several thousand miles. This difficulty spills over into the counseling efforts of the programs that have been examined. Almost all the railroads that operate employee assistance programs have clusters of employees located in some very remote areas. Isolation in a geographic sense does not isolate these people from the debilitating effects of alcoholism or behavioral dysfunctions; service is still needed. All programs that have been under inquiry do make an attempt to aid these individuals, even the geographically limited programs. There is considerable variance in the means employed; table 21 displays highly compressed descriptions of the techniques most commonly used. A particular counselor may do any or all of these, depending on the situation, time, and budget.

TABLE 21

MEANS EMPLOYED TO ASSIST OUTLYING EMPLOYEES

No Outlying Areas	4
Transport Employee	5
Transport Counselor or Employee, Depending	2
Transport Counselor or Refer to Local Facility	1
Transport Counselor	1
Use Volunteer	1
Use Volunteer or Refer to Local Facility	1
Utilize AA Network	4
Refer to Public Facility	1

(N = 20)

The easiest grouping to discuss is that of "No Outlying Areas". This represents the smaller rail corporations with route lengths not much more than 150 miles. In these cases an excellent program can be operated with one or two people and a few volunteers. The proximity of all the employees to the counselor's location allows a high component of direct personnel contact for almost all cases.

There is still a lack of adequate treatment facilities in many parts of the country. This has precipitated the technique of transporting employees to counseling and treatment. In some cases this has been greatly facilitated by Amtrak passes wherever such service is available. Transporting the employee is also held to be more efficient in terms of counselor time utilization. Transporting a counselor places them in "suspended animation" for considerable time periods, especially where the counselor already has to travel locally. As a result, where it is possible, the employee is moved.

There are those directors who strongly feel that immediate personal contact is the primary consideration, and therefore will, whenever possible, move themselves or a counselor to the employee's vicinity. An alternative is to use a highly experienced, trustworthy volunteer for initial contacts although this is not the norm.

It is interesting to note dependency on Alcoholics Anonymous as a resource in four programs. This, however, is a condition that appears to occur in those operations of limited resources rather than in well-funded programs.

It should be remembered that this is a simplification of a complex decision making process into which the condition of the employee, timing, travel funds, local facilities, and other variables all take a part. All directors would much prefer to keep the individual clients close to their own homes wherever possible and tend to do so unless there are compelling reasons to move them. Nevertheless, railroads, being what they are, will always have people in remote areas; the problem of obtaining services and counseling for these people will continue to plague these assistance programs.

Information and Education

All the programs surveyed have advertised their existence by several common methods. Unique to alcoholism counseling is the large content of factual information on alcoholism that is also disseminated. The need for this is generated by the lack of knowledge and prevailing misinformation in the general population on the subject of drug dependence.

Two grades of informative material seem to be utilized; these may be loosely defined as (a) information delineating the eligibility for and availability of services, who to contact, where to call, etc, that is directed at the service recipients and (b) education for program participants that covers not only the information aspects, but also the etiology of alcoholism and other chemical dependence and how to handle potential clients.

Printed Information

Pamphlets. The brochures or pamphlets common in these programs take two distinct forms. First, there is the self-generated informative brochure directed toward the entire workforce. These usually contain policy statements from company officials, a short discussion of alcoholism or other problems and data as to how an individual may request service. The second type of pamphlet has been adopted from other sources, these being AA, NIAAA, and insurance companies. The content of this is usually more educational in nature, ranging from discussions on alcoholism per se, how to live with an alcoholic to information on various types of AA groups. These pamphlets are used primarily as handouts to specific individuals although some are general enough for broad distribution. Thirteen of the twenty programs utilize pamphlets or brochures to some degree, Table 22.

TABLE 22

PAMPHLET UTILIZATION
(Frequency Counts)

Distribute Pamphlets?	
YES	13
NO	7

How Distributed?

Mailed to Employees	7
Passed at Training and Safety Meetings	4
Regional and Division Offices	3
Passed Through Supervisors	2
Handed to Specific Employees	2

Updating of pamphlet materials takes place on an irregular schedule; most programs are not sufficiently old to have experienced this need. Only one program was detected that featured any material in Spanish.

Bulletin Board Information. Utilization of posters and the like is less prevalent than other methods of dissemination; only nine of the twenty programs utilize this method. As a rule, the content includes information on who to contact and how, if service is desired. If volunteers are used or if several counselors are employed, a placard displaying portraits and phone numbers may be used. Some directors utilize posters printed by other organizations of the catch phrase type coupled with an informative overprint or placard. There is only one program with sufficient budget to develop its own artwork.

Servicing and distributing bulletin board data can, in some cases, be a project of considerable magnitude. One of the larger corporations estimated that it had close to 6000 bulletin boards throughout the system.

Information Mailed. This is the dissemination method held to be one of the most effective because it reaches the immediate family, often without knowledge of an alcoholic employee and without having the employee act as a censor or forgetful transmitter. Unfortunately, this method is also one of the most costly, particularly with the advent of 13 cent postage.

The mailing utilization pattern is displayed in Table 23. The general pattern seems to be one of parsimony, this method being reserved for significant events during the program life. Those that have pilot programs or have programs operated on a semi-autonomous

TABLE 23

UTILIZATION OF MAILINGS

Have Mailed Information to Home Addresses	
Yes	7
Yes, Limited Areas	4
No	9
If Yes, How Often Were Mailings Used?	
One Time	8
When New Office Opens	1
Yearly	1
Three Times (Quarterly)	1
What was Sent?	
Letter Describing Program	8
Pamphlet Describing Program	3

divisional basis have not mailed to the entire workforce but rather have mailed only to the areas affected. Mailings seem to be in disfavor with the larger railroads; it is easy to see why when one considers that the cost of postage alone, to reach 60,000 employees, could almost equal 6 months take home pay for a counselor! Even the smaller railroads have backed away from mailings in favor of other methods such as articles in company magazines and paycheck leaflets.

Information in House Publications. After the mailing to home addresses, the company magazine is rated as the most effective means of reaching the workforce. Since most of these publications are mailed they enjoy the same directness of delivery as a letter, and are usually scanned carefully to see if a familiar name is in print. Moreover, these have the advantages of being offered on a recurrent scheduled basis and do not cost the program anything more than the price of time required to prepare copy. Utilization of this media is high in the industry program, 19 of the 20 having had an article published, 17 of the 20 on a continuing schedule of differing frequency and 3 having a continuously running notice or article (Table 24). The contents of the articles vary considerably. Strictly informational notices are used as are hypothetical cases, changes in coverage notices, articles on progress, symposium coverage, and parts of the annual program report.

TABLE 24

HOUSE PUBLICATION USAGE

Have Utilized House Publications	
Yes	19
No	1
If Yes, the Frequency of Articles	
Monthly	3
Quarterly	6
Semi-Annually	4
Yearly	2
One Time (in 2 years)	2
As Desired	2

There seems to be an increased amount of interest in these publications, directly attributable to increased postage costs. The utilization of the company magazine has turned up as one of the factor groups (Factor 9) with a high (.79) loading although only 5% of the variance is accounted for by the factor.

Information Passed Through Union Media. There is apparently only one union organization that has made it a policy to publish information on the various employee assistance programs. This has been done on a national level through the union magazine in which an article is run each time a new program is started or an old one is significantly expanded. Newsletters or publications are not usually generated at the general chairman levels. Nevertheless, 25 of the 39 general chairmen interviewed have participated in disseminating information on the programs in some manner. Of these 25, eleven have posted open letters on the subject, another eleven have entered into discussions or made statements at local meetings, three others have deliberately placed the data in quarterly and yearly financial reports which by law must be read aloud at local meetings.

Other Methods Utilized

Various other means of conveying information are utilized in the programs surveyed. These might also, in some cases, be categorized as instructional aids or techniques, since they are incomplete without additional data delivered by a publication, lecture or meeting with a counselor.

Audio Visual Aids. The utilization of audio-visual aids for enhancing educational presentations is prevalent in fifteen of the twenty programs. The most common technique is to utilize all or portions of 16 mm sound films that deal with various dramatized aspects

of alcoholism. One railroad has gone so far as to make its own "movie" with professional actors - an excellent production geared directly to the rail population. The usual sources of these films are government agencies or special interest groups.

Four program directors have made video tapes or sound-on-slide presentations specific to the operation of their own programs. These are designed for presentation to union and management personnel.

The use of audio visual materials seems to occur more often in union education programs rather than management education (UNIONEDU, INFOADVZ, r = .612), (MANAGED, INFOADVZ, r = .29).

Word of Mouth. This means of spreading information is one over which the program director has no control - it transmits both in a positive and negative data - a disgruntled client can have negative synergistic effects far beyond the proportion of his or her complaint or dissatisfaction. The transmittal of positive comments and data occurs only after a program is in operation for about a year which allows sufficient time for the results to become obvious. Quite often former clients become the best advocates and transmitters. However, it has been seen that misinformation is transmitted with equal facility; in effect this is a highly unreliable channel.

Other Media. Two of the program directors have experimented with paycheck leaflets as a replacement for mailings. While the cost is relatively low and the coverage close to 100% of the population, the probability of the information reaching the family of an alcoholic employee is low. The employee has the opportunity to act as a censor.

There have been instances in two separate programs where a director and a counselor have appeared on a local TV talk show. From the response to this it was judged to be very productive, not only in reaching more of the employees' families but also in improving the general corporate image.

Five of the corporations have either encouraged or allowed their directors and counselors to make outside speaking engagements to interest community groups, time and budget permitting.

One director has a bi-monthly newsletter sent to local and general chairmen that contains educational material on drugs and alcohol and reprints from professional journals. Another prints a monthly newsletter based on AA homilies that is sent to his client population and other interested parties.

Educational Efforts

The program directors most frequently identified education as their primary responsibility. Through the interviews it was learned

that this also often included a continued selling of the program. These claims are borne out by the responses on the types and qualities of the educational efforts made. We have defined an educational effort as being a planned presentation tailored to a specific audience in the corporation and time period. The other essential ingredient is having a lesson plan, syllabus, or planned objective by which the material is presented. The educational presentation and programs may be divided into three distinct audience groups: management, union officials, and the workforce.

Educational Programs for Management and Supervision. Fifteen of the twenty programs have included or scheduled a series of presentations, seminars, or classes tailored to various levels of management. Two very young programs were included in this tabulation since there had been very little time, 3 months or less between start up and the interview, and definite plans had been laid. Five programs do not have a real continuing education program. The content of these presentations vary very little overall. The directors try to include:

The etiology of alcoholism and other drug addictions.

Problem recognition techniques.

Referral techniques and what not to do.

Program policy and operation.

Successes and some failures.

Examples by hypothetical cases or film presentations.

Legal aspects of drug abuse.

Elimination of cover-up and excuses for inaction.

How to use the program.

As could be surmised,the quality of presentation varies considerably from a three-stage,well-planned syllabus for incremental exposure to information, down to unstructured chats which rely heavily with AA terminology and anecdotes. A universal problem encountered by all directors is the need to reshape concepts of what alcoholism is, to overcome the misinformation and ignorance so prevalent in the population at large.

Educational Efforts for Union Officials. Of the twenty programs surveyed thirteen have educational efforts of a continuing nature either in effect or planned. This count is confirmed by responses of the general chairman. The content is much the same as that given to the

management and supervisory groups. In many cases the information has been presented in joint meetings which insures uniformity of the material presented. Other directors have tailored the union material to better fit the needs of an employee representative. The handling of "Rule G" cases may be emphasized and information on metabolic alcohol consumption rates may be explored.

The seven that have not set up a continuously available educational plan do not necessarily deny information; it simply must be sought by the interested party. The reason for this is apparent in six of the seven; the program resources are so thin as to force a choice between counseling activity and education. In these six, counseling has won.

Educational Programs for the Workforce. Although specific questions were not directed in this area, nine program directors had attempted exposing parts of the general workforce to educational materials on alcoholism and their program services. These attempts are usually hampered by limited available time and limited availability of the working population in general. Short safety meetings seem to be the most popular source; union meetings are also popular exposure places, although the attendance leaves much to be desired. Three directors have commented that the available films are too long. There appears to be a need for a short high impact 16mm film for this type of audience and opportunity.

Where Clients First Learned of the Program. Questions were directed to program personnel to explore this topic. Little of value was derived. The same type of question was included in the individual questionnaire with better results. Frequency counts are shown in Table 25. These data are offered with trepidation since extreme bias due to sampling anomalies, maturation and confusion of categories are prevalent. Nevertheless, there is an indication that personal contact is the best information media, especially from an authority figure. The second best is the company magazine. Caution should be taken in further interpretation because of the extreme sampling bias.

Records and Confidentiality

All programs claim to operate with strict confidentiality with regard to identification of the participants and disclosure of personal information. There are, however, degrees of confidentiality that are experienced not only between programs but within programs as well.

The methods for safekeeping of records vary somewhat; a few use elaborate case numbering schemes to avoid name identification; others simply keep identifying material locked up with access allowed only to program personnel. Difficulties do arise depending on the point of referral. It is obvious that strict confidentiality cannot be maintained if an individual is referred by or seeks help through his supervisor or union representative. Similarly, a client who is also

TABLE 25

Employee Information Source

Where did the employee first learn of the program?
(Frequency of Employee Responses)

	Programs*									
Source	D	Q	H	F	R	G	E	L	A	TOTALS
Volunteer Counselor	1	1		1		1		1	1	6
Fellow Employee	1	6	5		2		1			15
Union Official	3	3	1				1	1		9
Supervisor	1	2		7	3		2		1	16
Medical Personnel		2		1				1		4
Counselor or Director	5			3			6	2	1	17
Posters			1							1
Pamphlets	1									1
Mailing to Home			3						1	4
Audio Visual Presentation			1			1				2
Union Notice	2		1							3
Company Magazine	3		2			1	1	1	1	9
Court Probation							1			1

*Based on individual questionnaire responses from 9 of the 20 programs reviewed.

involved with discipline under Rule G cannot expect complete anonymity by virtue of the hearing process.

Variety is again the keyword in the handling of records and information; the major topics within this section will give some indication of what is found in the industry. Regardless of the variance, all programs seemingly safeguard their clients,to a high degree,from external pressures and the curious; if they did not, collapse might follow in a matter of months.

File Content

The keeping of records is essential for any sort of counseling program, not only for the counselor's benefit, but also for the purpose of reporting activity and success/failures to the management that authorizes funding. These two classes of information may be defined as client records and statistical data.

Client Records. Common to all programs is an essential core of information kept on individual clients. These records include:

Biographical Data including items such as age, name, address, phone numbers, marital status, union representative, years of service, job classification, and immediate supervisor.

Counselor Notes including brief record of conversation, contact dates, conclusions after visitation or counseling appointments, salient disclosures, disposition of the case, information from secondary sources and a recommended approach to therapy, treatment or rehabilitation.

Records of Treatment and Progress containing notes and correspondence with treatment facilities, and notes regarding progress (or lack of) in treatment or therapy.

Aside from this basic essential core it has been found that some directors keep additional biographical data including such things as detailed biographies of the individual client, self-report letters of abstinence, transcripts of taped interviews or interview notes, correspondence and the individual's AA sponsor (if the sponsor is willing), and reports of police investigation and court proceedings.

It is not surprising that this type of information is generated and kept; more disturbing is the implication that there is little concern about disposing of this material when it is outdated or becomes meaningless. Given several thousand clients over many years, the records can become voluminous. Only one program director has proposed a system of disposal and reduction. After two years, identifying data, notes and details would be destroyed, and a minimal record for statistical purposes would be retained on a small card.

Other Records. The larger programs have a need to keep additional statistical data. Where several offices are involved, expenses and individual counselor performance and workload are also monitored. Thus, it is found that additional files are kept which are not always of a "confidential" nature. These include, but are certainly not limited to the following:

Records of educational presentations

Counselor performance material

Client input by region, division, occupation, etc.

Cost data on treatment facilities

Program costs for mileage, travel, report, etc.

Data on resource people

Historical files of past reports, newletters, educational material, etc.

File Location and Access

In all cases, access to client records is strictly controlled; the only variability is in the number of non-program personnel who have access. There are very few full-time secretaries in these programs, only 1 in 20 surveyed. It is very common for the directors and counselors to do their own clerical work, utilizing outside secretarial pools are used for typing client information; coded file systems are in effect. The disclosure of client information by the secretarial grapevine seems well controlled.

A summary of who has access to the files and where they are kept is shown in Table 26. As implied by the table, the records kept in the medical files seem to have the largest number of people who have access.

Extensive counselor notebooks were prevalent in five programs. These portable listings contained almost a complete current file of client data in short notations.

TABLE 26

RECORD LOCATION AND ACCESS

(Responses from 20 Directors)

Where are the files kept?

Counselor-director offices on company property	5
Counselor-director offices off company property	9
Counselors' homes	3
In individual medical records	2

Who has access to the files?

Counselors and directors only	16
Counselors, director and secretary	1
Resource people only (counselors)	1
Director, medical department personnel and secretaries	2

Information Release

Occasions do arise where it may be necessary or beneficial for a client-employee to have information from the program files released to outside parties. This most usually occurs in the process of disciplinary hearings or in court proceedings where proof of treatment progress can influence a decision in favor of the employee. Almost all the programs have made some provision for this eventually. In the case of those operating under an NIAAA model, the burden of requesting and directing disposition of this data becomes the responsibility of the treatment facility, the employee and sometimes his union representative. For the majority of programs the director and counselors are directly involved.

A summary of the conditions prevalent in the industry for the release of information is displayed in Table 27. The majority of programs have a policy of allowing the individual employee control over what will be released. Express permission is not always the practice, the decision being retained by the program personnel.

A split is seen on the requirement to have the employee fill out and sign a release statement; there are 10 that request release permission verbally or not at all. The release permission is usually obtained either just at the start of treatment or as a request for needed data.

TABLE 27

RELEASE OF INFORMATION

Who determines what information will be released?

Director or counselor by employee request and permission	12
Director or counselor alone	7
Medical director alone	1

Is a signed release statement obtained?

Yes	10	No	10

If yes, when is the signed release obtained?

As the request or need arises	4
Depends on circumstances	1
When starting a treatment program	5

Is this a blanket release?

Yes	4
No	5
Yes, for 90 days only	1

(N = 20 programs)

It should be remembered that in cases where an individual is referred to an outside treatment facility, the program director or counselor must be specified as a recipient for information from the treatment facility. Consequently, program personnel are very quick to obtain this permission. The practice of obtaining blanket releases (without specifically as to what and to whom data may be disclosed) is still a common practice although there is evidence of this diminishing.

There were two cases cited of courts issuing subpoenas for individual counselors' records. In one the records were subpoenaed from a public facility to which the individual had been referred. The second case was averted through consultation with the client's lawyer. This problem will doubtless occur again and should be given serious thought by program personnel.

Reporting

All program directors,with the exception of one,are required to submit reports to management on the progress of their programs. The scope and frequency of the reports vary considerably. The types of reports range from montly briefs to detailed annual summations. In the one case where a report is not submitted, a company vice-president is in charge of the program and ostensibly feels sufficiently well-briefed to answer questions raised at the executive level.

The character of these reports may be described as statistical summaries with plans and commentary included. The quality of data varies with the quality of record keeping in the program. As one might expect, there is no uniformity between programs in the types of variables or presentations made. A sampling of content is listed below:

Activity in terms of:

Contacts made
Referrals processed
Clients counseled
Educational talks given
Area covered
Public appearances made

Statistical summaries of:

Client ages
Client years of service
Number of successful intervention
Client input by division, region or department
Client demography
Rule G cases

Commentary on:

Plans for expansion
Redirection of policy
Additional or replacement counselors
Alcoholism and other dependencies
Estimated savings from policy changes
Methods for better service

Union Perceptions of Confidentiality

The vast majority of the general chairmen interviewed (36/39) were satisfied with the degree of confidentiality in the program with which they were familiar. The three exceptions include two who felt they could not comment effectively and one who felt that the handling of people still in active service had not been sufficiently well defined. The latter comment appeared to the interviewer to be a problem of communication rather than a breech of stated program policy.

Only five recollected being designated as the recipient of data on a release form although 18 have utilized program data. Two others made comments as to the desirability of having signed release forms to preclude awkward situations; in both cases, the program practice was not to use signed releases. Two more commented on the desirability of obtaining periodic reports of the program and copies of the directors' recommendations concerning individuals they have to represent.

Seven general chairmen have commented that there are conditions where an individual does not enjoy confidentiality which must realistically be allowed. For example, supervisors do need to know what has happened to an employee who has disappeared for an extended period of time to undergo treatment. Further, general chairmen often learn of specific individuals who have entered the program by means of union referral. The general chairmen are also aware that there is correspondence between the program people and treatment agency specialists, copies of which may be provided to the union in instances where labor relations are involved. Generally, the representatives feel the systems are adequate to protect their membership.

Leaks

There are real world conditions that preclude operating in an atmosphere of absolute secrecy. People referred by supervision as the result of poor job performance do not enjoy total anonymity. Even less anonymity is left to cases of Rule G violation or other discipline where chemical dependency is a factor. Under these conditions the person is identified to co-workers and supervision by their behavior over long periods of time. The same is true of those referred by law enforcement agencies. Nevertheless, it appears that data on these people are as rigidly controlled as those who volunteer without referral.

There are means of subverting the confidentiality systems, usually outside the span of control of the program directors. Payroll data and leave records have been mentioned as sources of illicit data. Fortunately, this type of activity seems to be rare, confined to a few overly curious individuals.

It is the opinion of the researchers that the programs do a very adequate job of protecting the individuals who refer themselves or are referred by co-workers and family. The potential for leaked information is very small in these instances.

Interestingly enough, the greatest source of leaks seem to be from the individuals themselves. From comments made by the directors and the experience with the individual questionnaires, many of these people have experienced such a dramatic change in their lives that they feel compelled to tell the world of their experience. In spite of all attempts to avoid individual identification on the questionnaires, many returns were sent with lengthy personal notes and return addresses written on the form or on the return envelope.

Client Population

In describing the population of those seeking and obtaining services of railroad employee assistance programs, some sorting of categories must first be accomplished. The largest single group of clients in all programs can be described as being alcoholic. It is this group with which we are primarily interested. There are, however, ten programs that have provisions for referring or counseling

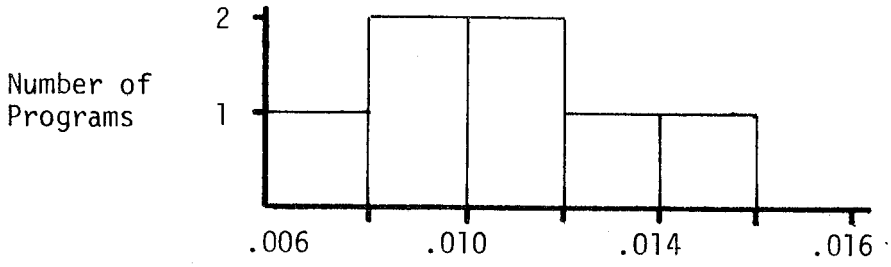
those seeking assistance for a broad spectrum of human problems. The client population that seeks assistance in controlling their problems related to drugs,other than alcohol,is relatively small overall. It is apparent to the researchers that the number of people thus afflicted,which have sought assistance through a railroad program,is sufficiently small to preclude all but the most gross generalizations from being made. Therefore, the interviews were not very productive of information in this classification.

Rate of Program Utilization, Broad Coverage Programs

One first has to consider the coverage of the program. As expected, those offering counseling and referral, just as service for many problems other than alcoholism or chemical dependency,have a larger percentage of the workforce seeking assistance. Not all these broad coverage programs can be legitimately used for comparative purposes. One program is limited to one geographic area and, further,has developed a confused population grouping by the practice of extending service to outlying employees who make a request. Another has been in existence only a few months -- too soon to make a meaningful summation. The remaining eight met the criteria of time,of at least a year,and coverage extended to the entire system. Additionally, since most of the programs are little over two years old, we have been limited to a single year's intake occurring in a time period approximating the calendar year 1975. The input per year expressed as a decimal fraction of the workforce is shown in figure 5.

FIGURE 5

Program Utilization Rate
(Broad Coverage Programs)



N = 8
X = .01057
S = .00252

These, of course, cover alcoholism, other drug dependency, behavioral and other problem areas. Alcoholism was found to account for 61% of the caseload in the broad coverage programs.

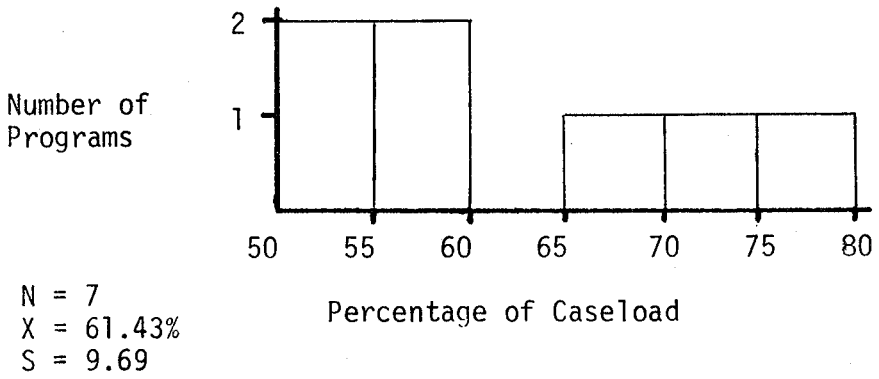
Seven of the ten broad coverage programs have amassed sufficient data to allow a meaningful breakdown of the types of human problems encountered. These estimates are drawn from periods of time usually greater than one year. In some cases the breakdown supplied was from the entire program operational period. In others, the material was taken from annual reports covering an accumulated period from one to four years.

The breakdown is hopefully free from cross category contaminations; each category corresponds to the primary diagnosed difficulty that needed treatment.

Alcoholism. The largest category overall was that of alcoholism and related problems. The average rate was 61.43% of the caseload. Details are given in figure 6.

FIGURE 6

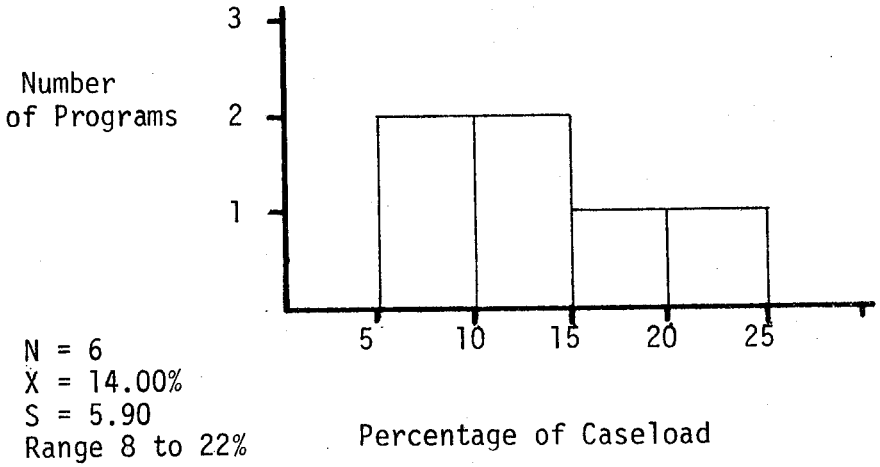
Caseload of Alcoholism and Related Problems
(Broad Coverage Programs)



Behavioral Disorders. Within this grouping there is a very minor amount of non-behavioral contamination such as a few health related cases, and child rearing advice. The vast majority of the count can easily fall under the broad term of deviant social behaviors or mental health. This represents the second largest problem area after alcoholism per se. The frequencies quoted are shown in figure 7. Once again the sample is diminished by means of confused categories.

FIGURE 7

Caseload of Behavioral Disorders
(Broad Coverage Programs)

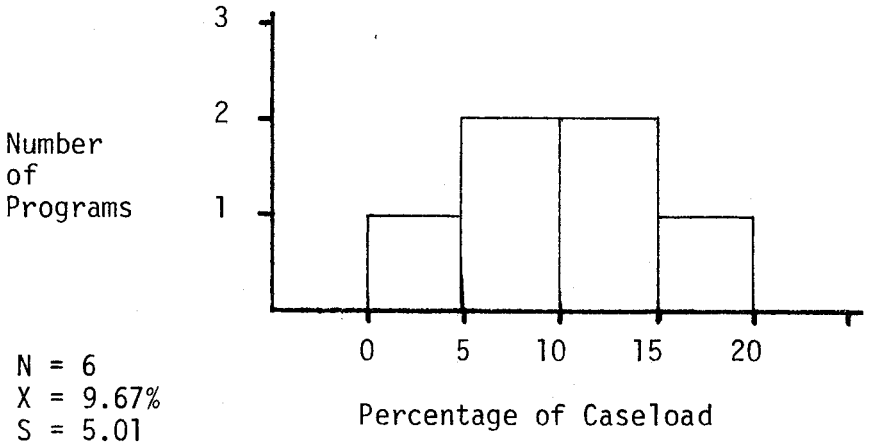


N = 6
X = 14.00%
S = 5.90
Range 8 to 22%

Marriage Counseling. This is the third populous grouping of problems after alcohol and behavior. This accounts for 9.7% of the program intake on the average. Except in the rare instances where a qualified clinician is on the program staff, these people are referred to external agencies or individual counselors. The sample size here drops to six because of non-uniformity in program data. Figure 8 displays the reported experience.

FIGURE 8

Caseload of Marital Counseling
(Broad Coverage Programs)

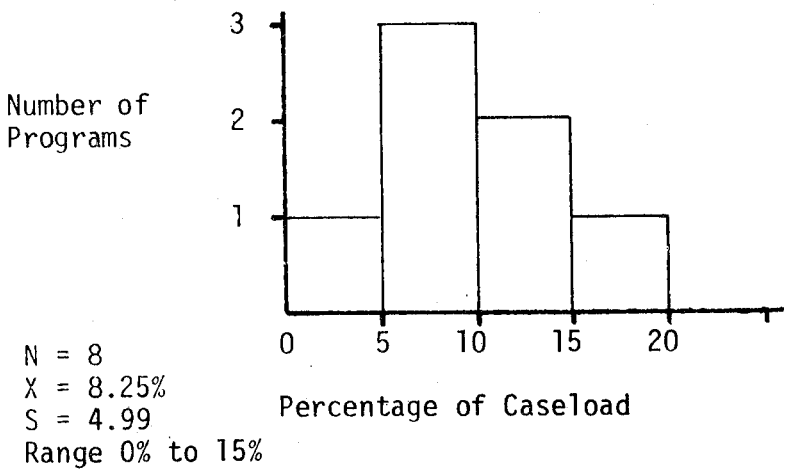


N = 6
X = 9.67%
S = 5.01
Range 2 to 15%

Illegal Drugs. Included in this category are addictions or use of substances such as marijuana, cocaine, amphetamines, LSD, that are illegally produced and marketed and generally have no therapeutic value. Heroin addiction has not been observed as a problem in the railroad population although it periodically will be seen, most frequently around the larger cities. Figure 9 displays the reported frequency of encounters of problems related to illegal drugs. These cases are invariably referred to public facilities for treatment.

FIGURE 9

Caseload of Illegal Drug Consumption
(Broad Coverage Programs)

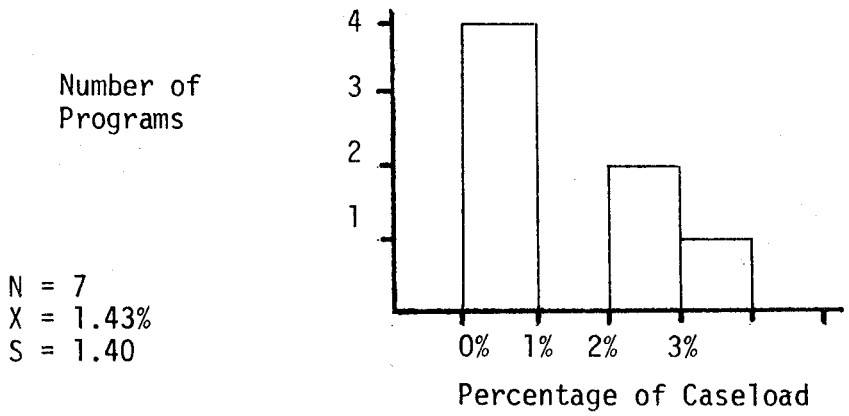


Prescription Drugs. Taken as a grouping by itself, this area encompasses a very minor portion of the caseloads. Prescription drug abuse is defined here as improper use, for mood and behavioral changing purposes, of those subtances that can be legally purchased for therapeutic purposes. Figure 10 contains the reported rate of occurence in the broad coverage programs. Tranquilizers amount for the vast majority of drugs in this grouping.

The most common manifestation of this problem is a combination of alcohol addiction and the tranquilizer consumption; this has, in some programs, occurred in as many as 5% of the alcoholics counseled. It presents a particularly difficult situation to effectively treat. A reduction of alcohol consumption to near zero seems to trigger a soaring intake of tranquilizers. There is some anecdotal evidence that would indicate the combination is found more frequently with female alcoholics; more investigation would be needed to draw firm conclusions. The researchers are of the opinion that this problem

FIGURE 10

Caseload of Prescription Drug Abuse
(Broad Coverage Programs)



has not yet fully come to light, that additional education of the general population will surface many more such cases. Currently, it is very easy to reside under the blanket of a physician's prescriptions long after the need for tranquilizer consumption has passed.

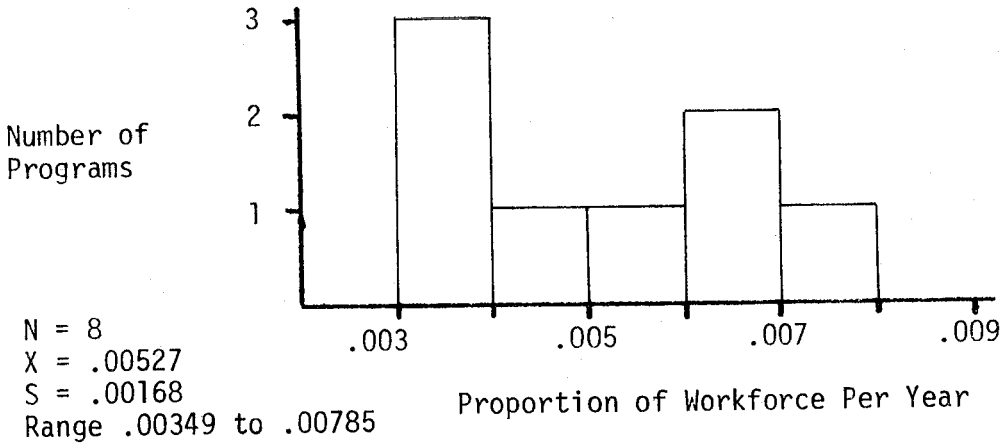
Miscellaneous Categories. There are small amounts of other types of problems that will surface in these referral service programs; together they make less than 10% of the total workload. Two of these minor areas were surveyed; financial planning amounts to a 2.1% average and referrals for legal assistance account for only a 1.2% average.

Rate of Program Utilization, Chemical Dependence Programs

Applying the data analysis techniques to chemical dependence (alcohol only) programs produces the distribution in figure 11 for total intake from the workforce. This includes a residual amount of other drug dependencies. The same deletions of area limited and short life programs have been made here as in the section on broad coverage programs. This gives a sample size of eight from the ten programs covering chemical dependencies.

FIGURE 11

Program Utilization
((Chemical Dependency)



N = 8
X = .00527
S = .00168
Range .00349 to .00785

The proportion of alcoholics is extremely high in these programs, the mean being 96.38% (S=3.11, N-8). Problems with other drugs alone are commensurately small; illegal drugs averaging 1.2% of the input, prescription drug abuse averaging less than 1%.

Employees vs. Family Members

The total intake in all programs consists almost entirely of employees except, of course, the ancillary counseling of affected family members. Although only one will not counsel or refer an employee's family member as the primary client by policy, it was found that five other programs have 100% employees in their intake. On the average the client population contains 94.95% employees (N=19, S=6.78, Range 75-100%).

Breakdown by Job Classification

Inquiry in this area was not as productive of usable data as expected. Only seven of the twenty programs have compiled information of this sort. The additional difficulty is in the non-uniformity of reporting categories of jobs in summary statistics. In table 28 the unsummarized data are presented. While we do not have information on the population distribution of job categories in the corporations that have compiled this data, through conversation with general chairmen and the program directors, there appears to be a bias toward including a larger proportion of operating employees in the programs. This does not mean that there are more alcoholics in the operating groups. It may show an operating characteristic of the programs on which further study is needed.

Only two of the defined categories in Table 28 are relatively free from cross-category contamination; supervision-management is defined within the title. Operating employees include engineers, firemen, switchmen, brakemen, and conductors. The other categories defy a meaningful consistent definition since some are based on a "by department model" and other lists are sorted by individual category by definitions developed by the program director. It is obvious that a consistency in reporting would help comprehension of reported data, not only to external groups but also between programs in the exchange of techniques and information.

TABLE 28

Client Breakdown by Job Category
(A Sampling of Data from 7 Programs)

Program D

Operating Employees	60%
Non-Operating Crafts	17%
Shop Crafts	17%
Clerical-Administrative	5%
Supervision-Management	1%

Program V

Operating Employees	56%
Non-Operating Crafts	6%
Shop Crafts	21%
Clerical-Administrative	6%
Supervision-Management	11%

Program C

Operating Employees	59%
Non-Operating Employees	31%
Supervision-Management	10%

Program M

Operating Employees	60%
All Other Employees	25%
Supervision-Management	15%

Program T

Operating Employees	34%
Skilled Labor (Crafts)	25%
Non-Skilled Labor	22%
Clerical	8%
Supervision-Management	11%

Program A

Operating Employees	38%
Maintenance of Equipment	15%
Maintenance of Way	27%
Other Employees	15%
Supervision-Management	5%

Program K

Operating Employees	34%
Laborer	32%
Clerical	23%
Supervision-Management	11%

Of the other programs:

7 Do not or have not made breakdowns
1 Does not disclose breakdowns by union request
1 Does not disclose breakdowns by practice/policy
4 Feel they have insufficient data to date.

The Primary Group, Alcoholics

Thus far two categories of programs have been discussed. The separation has been based on the program policies of offering broad coverage or coverage limited to chemical dependency. When the numbers of new alcoholics admitted in a year to each type of program were compared, no significant difference was found. Table 29 presents some of the details. The data have been screened to eliminate programs of less than one year duration and those that have confused population figures of limited area coverage.

If the hypothesis is made that there is no difference in the average yearly intake between the two groups, it is found that this assumption cannot be refuted on the basis of a "t" test at the .05 level of risk of making an incorrect conclusion. Indeed,if action were to be taken on the basis of this data,one would have to accept a risk in the order of .15 of making incorrect decisions. It is felt that the larger variance in the broad coverage group has accounted for this indecisive result. The implications of these fundings are not altogether clear.

One may notice that penetration rates of the alcoholic portion of the workforce may be readily made,using whatever fractional estimates are felt to be appropriate as a divisor applied to the values quoted. Further descriptions of the alcoholic population counseled will be based on a combined population.

TABLE 29

Yearly Addition of Alcoholics to Broad Coverage and Limited Coverage Programs

Broad Coverage Proportion of Workforce		Limited Coverage Proportion of Workforce	
.005600	.00700	.003454	.006693
.006563	.00489	.006619	.005517
.005882	.01168	.007854	.003040
		.004152	.003810
X = .006923		X = .005142	
S = .002455		S = .001777	
N = 6, Df = 5		N = 8, Df = 7	

F = 1.813
t = 1.457 (Not Significant at P .05)

The Average Age of Alcoholics Counseled. Values representing the average age of alcoholics counseled have been quoted in a range from 38 to 49 years of age. The average of these values is 43.57 years. This underlines the observation that alcoholism tends to be a long-term development, although this is not a binding truism. There are young and old components in the alcoholism syndrome; the ranges that make up this population were quoted as being from 18 to 65 and over. Several breakdowns were obtained describing the age distributions; however, they suffer from differing decile break points and contamination with other types of clients. A representative of the breakdowns is displayed that is free of contamination in Table 30. An "alcohol only" program of employees only, with two years of data included, is listed as Program T. The other two are contaminated with a small percentage of non-alcoholic clients.

TABLE 30

Age Distribution of Clients
(Primarily Alcoholics)

PROGRAM M

Age	% of Clients
Under 25	19
26-35	21
36-45	29
46-55	22
Over 55	8

PROGRAM K

Age	% of Clients
18-20	2
21-30	26
31-40	17
41-50	21
Over 50	34

PROGRAM T

Age	% of Clients
17-30	9
31-40	19.4
41-50	38.4
51-60	28.8
61-65	4.4

Unfortunately, the researchers were not able to obtain a corresponding breakdown of the corporation employee population with the same decile break points such that a comparison of expected inputs could be made. From visual inspection, however, it is apparent that the program inputs do not parallel the workforce distributions, particularly in the younger ages where program input is much lower than the number of employees might warrant. The average

age of alcoholics counseled is an important indicator of effectiveness since it was found that the average age of alcoholics counseled was lower for programs with the higher penetration rates (ALKAVAGE, PENETRAT, r = -.657).

Percentage of Males. It was planned to determine if the number of male alcoholics counseled paralleled the number of males in the corporation population. This would also give an indication if the female portion of the workforce was being reached by the programs. Based on the available data no significant difference was found between the number of males counseled and the quantity expected. Twelve of the twenty programs had amassed data that could support this analysis. As usual the five programs of confused population coverage or short duration have been eliminated. Unfortunately, three others had data so contaminated as to make comparisons unreliable. The comparison is displayed in Table 31, using a Chi squared statistic with a sample size of twelve.

TABLE 31

Number of Male Alcoholics Counseled per Year
vs
Expected Number to be Counseled

	A	B	C	D	F	J	N	Q	R	T	U	V
Observed	19	665	75	98	21	22	30	26	66	512	45	59
Expected	19	665	72	96	21	22	28	23	66	486	37	55

$X^2 = 3.8957$
df = 11

(Not Significant at P .05)

The expected values were obtained by multiplying the corporation population by the fraction of males in that population by the proportion of the workforce taken in as alcoholic during CY 1975. The number of ties raises the suspicion that the program directors may have used the same method in preparing their data. If the hypothesis is that there is no significant difference between the observed and expected intake of male alcoholics, the hypothesis cannot be refuted. Consequently, a tentative acceptance of that hypothesis is taken.

Length of Time in Program. An attempt was made to explore the time that alcoholic clients stay in the programs. The responses varied enormously. Mixed with times quoted are many of the practices and policies of the individual directors. Table 32 displays the

results. The responses of "until he dies or retires" indicates a continuing follow-up system. After an individual proceeds toward continuous sobriety he is called or interviewed at least once a year for the duration of his employment. Of the three responding with very short time periods (2-4 months) one does not have a formalized system of follow-up. The other two have quoted treatment times with the client, during which contact is frequent (every week usually), after which contact is much less frequent, being in the order of 1 to 3 month intervals.

TABLE 32

Length of Time in Program

Time	Number of Programs
2 to 4 months	3
6 months	1
9 months	1
1 year	3
2 years	4
Until they die or retire	3
Too early to establish	4
Determined by treatment agency	1

(N = 20 programs)

If there is a discernible mode it would have to be a 1 to 2 year time period of frequent interviews during which it is hoped that the individual client develops a stabilized behavior pattern and after which infrequent contact might be adequate to assure continuance of that behavior.

In reality, most of the program directors are still feeling their way (remembering that many programs are still 1-2 years old), trying to balance the workload of continuing the desirable follow-ups against the current funding and personnel resources. Consequently, a fixed practice has not evolved. Moreover, the quantity of counseling sessions allowed an individual varies according to the perceived need; this being so, a fixed time period may be an unreal concern.

Follow-Up. All programs have some form of follow-up built into their policy and practice. Most have a timed tickler system of some sort. There are three programs that have not established a formalized follow-up system. One of these relegates this to the public and private facilities to which their clients are referred; the other two do not actively seek information on all their clients although there are some individuals with whom a continued reporting is established.

The techniques utilized to gather information are nearly uniform throughout the industry; almost all director-counselors utilize formal interviews, visits, phone calls to the individual and family, third party information, supervisory evaluation and follow-up letters. A few others try correspondence with AA sponsors, who require self-report letters or sobriety, and current autobiographies. All of these are, of course, in addition to reported treatment progress received from the agency to which the individual may have been referred.

The frequency of follow-up contact varies greatly. It appears that most programs have planned for at least two years of frequent contact followed by a greatly diminished number of checkups. One director has planned to randomly sample approximately 10% of his clients after a two year follow-up period. Others maintain a schedule of contact for the duration of employment. Table 33 contains the follow-up frequencies that were reported. Those programs where a definite pattern had not been established are summed with those that do not have a defined practice of follow-ups under the "variable" category.

TABLE 33

Frequency of Follow-Up Contact
(Number of Programs Reporting)

1st Year After Treatment		2nd Year		Following Years	
Weekly	3	Weekly	2	Weekly	2
Bi-Weekly	1	Bi-Weekly	1	Bi-Weekly	0
Monthly	7	Monthly	5	Monthly	0
Bi-Monthly	1	Bi-Monthly	1	Bi-Monthly	1
Quarterly	2	Quarterly	4	Quarterly	2
Semi-Annual	1	Semi-Annual	2	Semi-Annual	2
Variable	5	Variable	5	Annual	1
				10% Sample Annually	1
(N = 20)		(N = 20)		(N = 9, Not All Follow Clients after 2 Years, Some Programs Less than 2 Years Old)	

During initial treatment or referral to the AA the normative contact rate seems to be at least once per week.

Multiple Entries. All programs have recognized the potential for recidivism of an alcoholic population as part of the entire syndrome. All programs allow re-entry as many times as necessary as long as a second Rule G case is not involved (except the one program that does not allow any Rule G violators by company policy). There may be limits on the quantities of treatment paid by third parties, however. By way of example, one hospital association limits paid treatment to 45 days per year; in another case a major insurance carrier limits an individual to two treatment periods for alcoholism per lifetime.

Range of Pay Levels. As an estimator of the range of economic levels, within a corporation, that a program has penetrated, the directors were asked to estimate the average range of pay levels of their cases. Only 8 could estimate an average; 7 could estimate a range with some overlap between groups. Table 34 displays the information received. The reader is cautioned these data are, for the most part, estimates rather than average calculated from recorded values. Further, some of the estimates were given in hourly or daily rates which have been leveled to a yearly rate.

Proportion Involving Family in Counseling. It is held desirable that the family members of an alcoholic also be counseled as an important segment of the overall plan of action. This, as indicated in table 35, does not always happen. The responses may be categorized into two sets resulting from different interpretations that the directors placed on the questions. The upper two levels have indicated that yes, wherever a family exists, an attempt is indeed made to bring these people into the counseling cycle. The second set of responses were from those who placed a different interpretation on the question. The lower percentages underscore a fact apparent in some of the annual reports that have been reviewed; although many of these clients have been married or are still married on paper, some of their marriages are in various states of disarray and derangement. The number of divorces accomplished or in process, separations of a legal or de-facto variety, widows and widowers, seems large in the client population. From comments of the directors, even where the marriages are intact, the relationship is often so strained and uncommunicative as to make the cooperation of the spouse in counseling uncertain in all cases.

Distances Traveled. From the individual questionnaires an estimate of the distance individual clients have had to travel to obtain counseling and treatment was obtained. The distribution of responses to both questions is shown in Table 36 for 78 respondents from nine rail corporations. The majority have not had to travel large distances; the median to reach the program counselor falls in

TABLE 34

Estimated Averages and Ranges of Client Annual Pay Levels (to the Nearest Thousand)

PROGRAMS

	F	V	E	C	L	T	A	K	Q
Average Estimate		$15K		$15K	$10-14K	$12K	$16K	$15K	$16K
Low Estimate	$9K		$8K	$12K		$12K	$10K	$14K	$12K
High Estimate	$26K		$40K	$36K		$25K	$30K	$40K	$20K

(N = 9, 11 Programs had not estimated)

TABLE 35

Participation of Family in Counseling

Percent of Family Members Participating	Number of Programs
"High", "All Encouraged"	8
100%	4
91-99%	0
81-90%	1
71-80%	3
61-70%	3
51-60%	1

(N = 20)

the 0-5 mile span while the median travel to obtain the treatment recommended would be in the 6-10 mile category.

TABLE 36

Distributions of Reported Distances Traveled for Counseling and Treatment
(From Individual Client Questionnaires)

Miles	To Reach Program Counselor (Number Reporting)	To Reach Recommended Treatment Location (Number Reporting
0-5	42	34
6-10	10	16
11-20	12	10
21-30	3	4
31-50	5	5
51+	6	9
	N = 78	N = 78

A further question that might be answered is whether clients from small railroads or limited area programs travel the same amount as those from programs of wide area coverage. To answer this, two tables were constructed (Table 37) dividing the mileage traveled into groups of 0-20 and 21 and more miles, and further dividing the respondents by small railroads lumped with limited area coverage programs (N=6) vs. those from programs that covered a large geographic area (N=3).

Based on the sample taken, programs in a limited geographic area and programs spread over wide areas do not have clients reporting any significant differences in the distances traveled to reach the program personnel. There is a significant difference in the distances traveled to obtain the recommended treatment; the programs spread over a large area have more clients reporting greater distances. As before, caution must be taken in interpreting the results from individual questionnaires because of the sampling distortions.

Program Experience in Referrals

A breakdown of how their alcoholic clients were referred was asked of the program directors. Table 38 displays the categories listed in rank order by percent of cases. The two short-duration programs have been deleted from this listing. Non-uniformity of recordkeeping has necessitated differing sample sizes throughout the table.

TABLE 37

Client Travel Classified by Area of Program and Number of Clients Reporting Within Mileage Ranges

Travel to Program Counselor

Mileage	Large Area	Small Area	Totals
0-20	24	40	64
21+	6	8	14
Totals	30	48	78

$X^2 = .458$

Travel to Recommended Treatment

Mileage	Large Area	Small Area	Totals
0-20	20	40	60
21+	10	8	18
Totals	30	48	78

$X^2 = 3.904$*

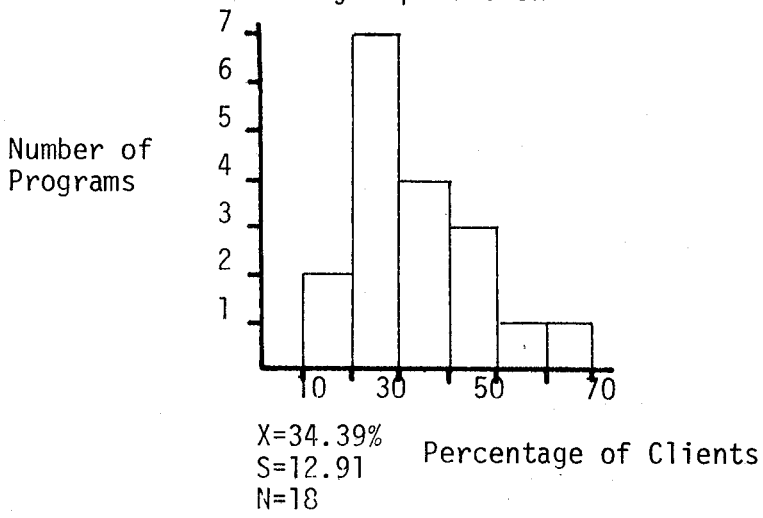
* Significant at p .05

(X^2 corrected for continuity)

TABLE 38

Percentages of Clients with Alcohol-Related Problems Referred by Different Means

Referred by Supervision



Self-Referral

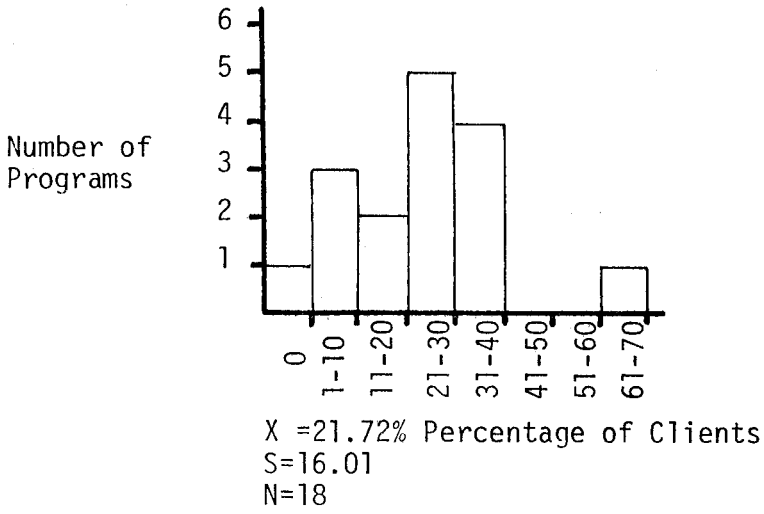
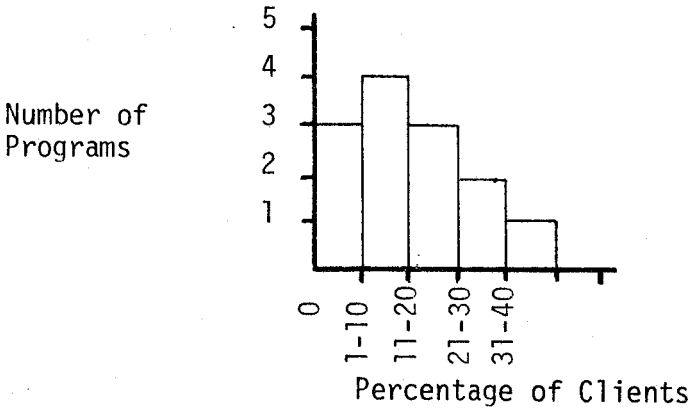


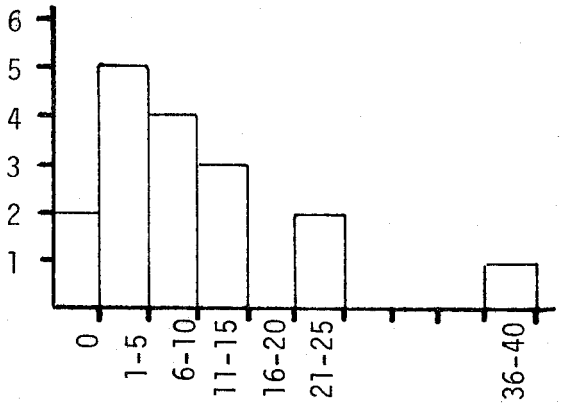
TABLE 38 (continued)

Referred by Rule G Violation



X = 12.79%
S = 11.15
N = 14

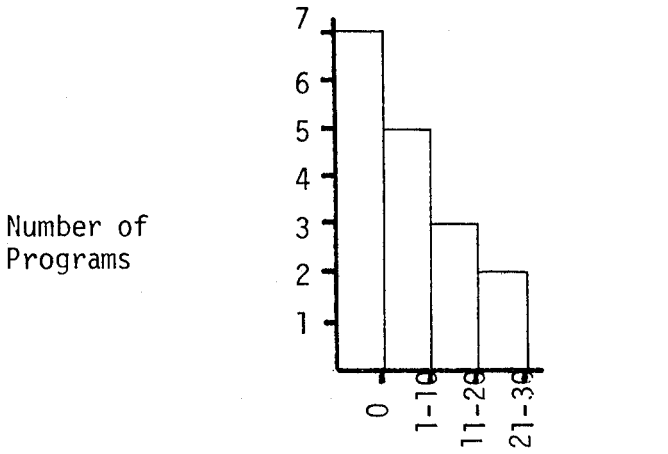
Referred by Union Officials



X = 9.52%
S = 10.29
N = 18

TABLE 38 (continued)

Referred from Medical Departments



Referred by Fellow Employee

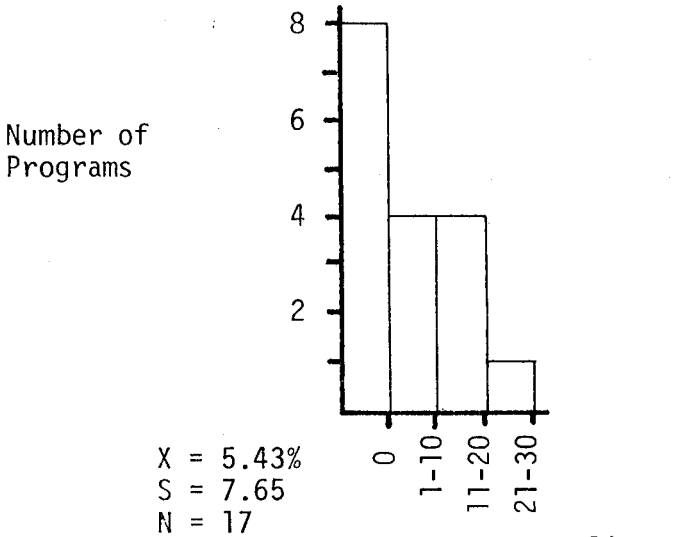
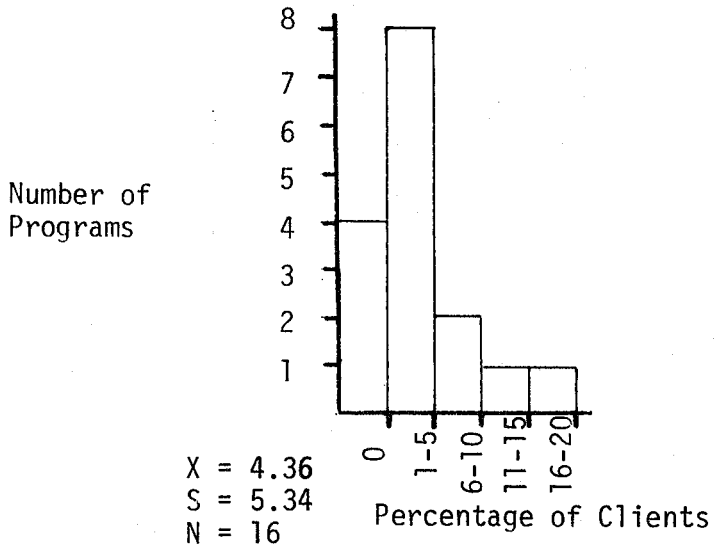


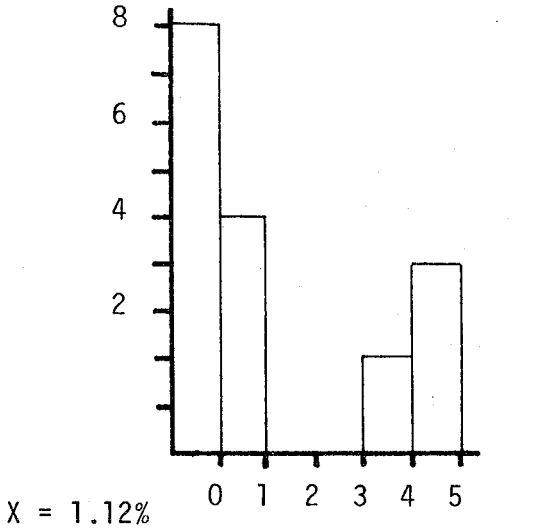
TABLE 38 (continued)

Referred by Family Members



X = 4.36
S = 5.34
N = 16

Referred by Law Enforcement Agencies



X = 1.12%
S = 1.76
N = 17

The predominance of supervisory referrals and self-reports in the tabulation tends to confirm the stated objectives of most programs. Participation by supervision is stressed and encouraged by having the responsible managers identify possible problem employees on the basis of job performance. Self-reports evolve through information and education to the effect that help is available without charge or for a small residual charge for treatment, reinforcing the emphasis on education stressed by so many program directors.

There is undoubtedly cross-category contamination; individuals do turn themselves in, but often after being cornered by their supervisors, threatened by union representatives, and harassed by their families. There are also cases where help is sought through the supervisor. It is unlikely that unitary referral sources are the norm.

There are associations between the percentages of referrals from different sources and to other variables. Where self-referrals are predominant one can expect to find a program that has mailed information to the home (SELFREF, INFOMAIL, r = .551); a lower percentage of men in the population being counseled (SELFREF, ALKMENPC, r = -.516); and active surveillance of the individuals counseled being shorter (SELFREF, TIMEPROG, r = -.589). The participation of unions in the program will also be high (SELFREF, PARTUNON, r = .703).

A higher number of referrals from fellow workers will be associated with fewer supervisory referrals (FELOWREF, SUPERREF, r = -.521), and more referrals by union officials (FELOWREF, UNIONREF, r = .610). Where the number of supervisory referrals is high, the number of union referrals is low (SUPERREF, UNIONREF, r = -.681).

The presence of referrals from law enforcement agencies corresponds highly to the penetration rate (LAWREF, PENETRAT, r = .710). Nine programs do not have any referrals from this source. However, the higher penetration does not seem to be explained strictly by having another referral source since the percentages of law enforcement referrals are so low. It is the opinion of the authors that where this type of referral occurs it is an indication of high counselor informative and educational activity. This type of referral cannot be expected unless the existence of the program is made known to local police, prosecutors, judges, and probation officers.

Union Experience

A majority (56%) of the general chairmen interviewed had referred people from their membership to the program. Another 10% had done so while they were still local chairmen. The general chairmen also have

a majority experience (54%) with the membership referring individuals to them or to their office to "check out the program" before the individuals turn themselves in or have the general chairman accompany or re-refer them.

Inquiries from family members are much less frequent, only 33% of the chairmen ever having had this experience. This usually manifests itself as a wife checking the legitimacy of a program prior to encouraging or referring her husband.

These experiences are usually infrequent for general chairmen for two primary reasons: (1) the total caseload of Rule G and alcohol-related problems is small compared to the overall grievance workload; (2) most of the interactions with the membership takes place at the local chairman's level; only gross cases and novice local chairmen tend to seek the board of adjustment level. Several of te general chairmen related that they, as local chairmen, were more active in the referral process. Most of the referrals made now were not reported to higher union echelons once the individual had entered a counseling program. They were aware that the local chairmen were still referring people. It can be concluded from these remarks that if a true measure of union thought and input is desired, local chairmen should be interviewed in any future evaluation.

The degree of participation is also dependent on the personality of the individual; most of the chairmen take the referral business as it comes but there are a few who are extremely active participants and advocates of counseling programs.

The Relationship to Discipline

General Attitudes

All railroad employees are prohibited from being intoxicated or using intoxicants while on duty or on corporate property. The specific rule covering this prohibition is found as part of the Consolidated Code of Operating Rules, General Rules Item G, more commonly known as "Rule G".(1) The vast majority of railroad employees are held responsible to this particular rule as being a part of their negotiated agreements. There are a few non-operating employees who are held to slightly different rules with the same intent; the effect is the same overall. The specific punishment levied for violation is not specified in the basic rule, this being left to individual agreements, the most usual being termination of employment. In past years, the railroad

(1) RULE G. The use of alcholic beverages or narcotics by employees subject to duty is prohibited. Being under the influence of alcoholic beverages or narcotics while on duty or on Company property is prohibited. The use or possession of alcoholic beverages or narcotics while on duty or on Company property is prohibited.

corporations have depended solely on the enforcement of this rule to prevent the occurrence of intoxication in the workforce. There are many that still do.

All those interviewed considered this type of rule essential and proper, stating and fully recognizing that a carrier has every right to protect itself from intoxicated behavior and performance. But, there exists different opinions on how to best achieve the goal and how to administer this particular rule. There is reason to suspect that Rule G alone is insufficient.

The Effect of Severe Discipline. It is generally conceded that punishment and severe measures will control human behavior if one has sufficient monitors to insure the desired results. From the interviews with program directors and general chairmen it was ascertained that railroad employees, particularly in the operating and maintenance-of-way crafts, are not always under strict supervisory control for much of their working hours. As one might surmise, this allows ample opportunity for consumption of intoxicants if the individual is so compelled or inclined. While spot checks and "breath sniffing" are done, the probabilities are such that detection can be avoided for very long periods of time with only minimal skill and precaution on the part of the employee. Such avoidance techniques are also axiomatic bits of predictable human behavior in the presence of potentially strong disciplinary measures.

Recurrent anecdotes throughout the series of interviews indicate that there are also activities and mechanisms utilized by employees to mitigate and render disciplinary measures ineffective. For example, a supervisor who is perceived by his subordinates as being too enthusiastic in the enforcement of work rules can find himself emeshed in endless grievances, quantities of late starts, stuck engines, and other occurrences.

More frequently, supervisors are reluctant to mete out dismissals of long-term employees for simple humanitarian reasons as well as avoidance of the administrative pain of a hearing. As a consequence, there exists a tendency to avoid detecting intoxicated behaviors and conditions until the employee's habits become obvious, in which instance a Rule G case is precipitated to the detriment of all parties.

The third lowest referral rate of alcoholics in the employee assistance programs is that from fellow employees, with family members and law enforcement agencies at the bottom. It is a well established custom of our culture that one does not "squeal" on a fellow worker. This can be carried to extremes; the program directors have related anecdotes of individual cases of operating crews that have covered up for a non-functioning alcoholic for literally years until the burden became unbearable. Many directors

have observed that at the outset of their programs there was a surprising number of alcoholics in advanced stages who were referred to them. As the program aged these types of cases became fewer and the average age of the incoming clients dropped. These individuals were being hidden by supervision and their peers, hopefully until the individual's retirement relieved them of the burden.

All of this tends to reinforce the avoidance aspect of the alcoholic syndrome; the chemically dependent individual cannot admit to alcoholism in order to continue consumption with its set of reinforcements, cannot admit to alcoholism for fear of social ostracization and finally cannot admit to alcoholism for fear of job loss and concomitant loss of the drug supply.

The insertion of a policy that recognizes the psycho-physical compulsive aspects of alcoholism and provides a mechanism whereby treatment may be obtained without threat of job loss, being labeled for life and shut out from career advancement, offers an acceptable path away from the dangerous dilemma that otherwise exists. The provision of counseling and referral service is an additional implementing benefit. The demands of Rule G seem to have a better chance of being met under these conditions where the avoidance of punishment is possible through the acceptable means of treatment and change in lieu of avoidance through denial and hiding.

Opinions Expressed on Rule G. The practical application of Rule G has generated some interesting cases and circumstances. The general chairmen who were interviewed expressed a wide variety of observations and opinions, some with heated vehemence, on their experiences in representing their membership on charges stemming from this regulation.

First, there is absolute acceptance of objectives of Rule G, that is to insure that good, sober, working behavior is obtained from the workforce.

Of the thirty-nine general chairmen interviewed, eleven held no particular opinions or declined to discuss the workability of Rule G. Eleven others were of the opinion that it was a workable regulation and had no unsatisfactory experience during their tenures. Of the others, four comments were recorded on the unworkability of some of the definitions or lack of them, centering around what "on call" meant or being "subject to duty". In some instances operating employees are almost always in this condition, especially where attrition of the workforce has been allowed over a period of years. Consumption of even small quantities of alcoholic beverages can technically be in violation of this rule if the individual responds to a call, particularly the smell of alcoholic beverages is the common practice of detection. This difficulty seems to occur where a dispatcher has run through the normal subject-to-duty list and has found it necessary to find a crew from those supposedly not subject-to-duty.

Four other chairmen alleged discriminatory application of Rule G, noting cases where supervisors and corporate staff could consume alcohol, particularly at lunch time, whereas Rule G was applied to the contract employees with rigor and diligence. It particularly irked these people to see the disparity in tolerance attitudes during afternoon meetings with corporate officials.

The concept of a graduated scale of punishment was discussed at length by three chairmen. The schemes they had proposed differed but had a central theme similar to 90 to 120 days off on the first offense; six months to one year for the second offense; and dismissal on the third. At least one of these chairmen had made attempts to enter this concept into negotiated agreements at various times,theorizing that the first and second layoff might be sufficient to jar the alcoholics into treatment but further claiming that the present state of negotiating reinstatements left far too much to personalities and therefore constituted unfair treatment.

Numerous other comments were made which underscore the difficulty in working with this rule. A summary of some of the feelings on the subject was best shown by the transcript of one interview.

INTERVIEWER: How do you feel about Rule G?

CHAIRMAN: I think Rule G has been a big cause of the problem. Rule G has always acted to conceal and hide the problem. I think to that extent it's caused most of the trouble. I tell them that it causes the problem, and people don't accept that fact. Supervisors can't watch the men all the time so I think we should come up with some other approach. I've suggested these approaches, but they've lived a long time with Rule G. I think the railroad should recognize that Rule G has not worked -- I've given some estimates on percentages of people laying off on Mondays, paydays, what part is played in job performance, accidents; people don't hide it from us like they do the management. We can't afford to take the chance that operating crews are drunk. I think part of our problem is that the average individual knows it's a gamble and the odds are that he isn't going to get caught, but people don't gamble if the odds are against you ever winning so I've told them what they should do is to reduce the odds to the point where if the man drinks -- he'll know that he's bound to get caught -- that he can't cover up. On the railroad it's an unwritten rule that you don't report someone and get him fired --

CHAIRMAN (con't) if you do, no one will ever speak to you. So, Rule G is not going to work. Occasionally, someone will stub his toe and we'll catch him, but I know they don't catch 1% of the Rule G violators. They don't know what part it (drunkenness) plays in the safety/accident factor. If a man comes to work drunk, he knows the others will protect him. So let's change the system, let's make the ones who protect him the goat! It's irrational -- if you try to come up with a common sense answer it never works when they think irrationally. Of course, people who are on the railroad are comfortable because they didn't make Rule G -- I'm convinced we do have the means to deal with the problem in an effective way. If we prevent our emotions from short circuiting our process of reasoning and logic we could see the facts like they are and deal with them.

Program Operation with Rule G.

Discipline Policy. The standard procedure in the industry is to strictly separate disciplinary matters from program operation. An individual is still held responsible for adherence to Rule G whether he is in a program or not. There are exceptions to this general policy; Table 39 outlines the procedures undertaken on Rule G by five railroads that review Rule G cases prior to a hearing. The one stand-out exception is the policy where an individual charged with a Rule G violation may request to participate in the assistance program and avoid a hearing and possible disciplinary action under the following conditions: (1) he must be diagnosed as an alcoholic; (2) the rights to a hearing must be waived; (3) a plan of treatment is agreed upon by the counselor and the employee and is signed as an agreement by the employee; (4) active participation in the treatment plan and progress must be accomplished. This scheme is offered to all employees of the corporation. Since inception of the plan some significant observations have been made. Employees are becoming less willing to hide an alcoholic manifested by either turning in the alcoholic who turns up drunk to the counselor or supervision, or refusing to work with him on a crew while the individual is intoxicated. No Rule G cases have been recorded for two years. Discipline is still maintained in that there have been cases where the individual did not follow the agreed treatment and was subsequently fired. There are other corporations that have occasionally allowed a similar practice although this has not been a general policy.

TABLE 39

Disposition of Rule G Violators

Program Directors

Evaluate Rule G cases prior to hearing	YES - 5 NO - 15

Those Responding Yes

Choice of Investigation or Agreed Treatment Plan if Rights are Waived and if Alcoholism is Diagnosed	1
A Few Cases - Allowed Treatment rather than Discipline	1
Possible - Action depends on Seriousness of Charge	1
A Non-Operating Employee may be allowed to Enter Treatment with Discipline in Abeyance	1
Evaluate - but have only Advisory Powers	1

General Chairmen

Evaluate Rule G cases (with counselor) prior to hearing

YES - 10*
NO - 26

*8 of these ten represent non-operating crafts.

The third exception is one where a practice exists of allowing an alcoholic to enter a program in lieu of discipline as long as that individual is not an operating employee. This practice was confirmed by the general chairmen representing employees on that particular railroad.

It was found that non-operating employees were more likely to obtain treatment as opposed to discipline in some other programs also. Eight of the ten general chairmen who responded affirmatively to decisions on alternative action represent non-operating crafts.

It is felt to be significant that where Rule G cases are evaluated prior to hearings, the penetration rate is higher (EVALRULG, PENTRAT, $r = .525$) and where alternative actions to Rule G discipline are offered, penetration is also positively larger (ALTRULG, PENETRAT, $r = .516$).

Participation in Programs by Rule G Violators. All but one program allows former employees who have been terminated for violation of Rule G to participate in the counseling and treatment services offered. Evaluations and conditions are laid down. In all cases this includes: (1) must be addicted to alcohol or some other substance; (2) must realize that reinstatement is not automatic or mandatory even if they improved markedly; (3) must adhere to the treatment scheme or be dropped out. The one company that does not take Rule G violators also does not reinstate or rehire them. Of the nineteen that do, 13 make no special evaluations; the individual must simply volunteer. Three programs have a routine of contacting the discipline cases by letter offering the assistance. The three remaining do screen the requests to eliminate those who have displayed criminal behaviors (i.e., assaults, fraud, and theft) or were involved in "extreme incidents" such as notorious wrecks.

Policy and Practice on Reinstatement. There are twenty different policies or practices on reinstatement or rehiring of Rule G violators if all the nuances and conditions are considered. With some compression a list of twelve has been made centering on the variables of negotiation, time period, and program or counselor authority (Table 40). The usual process is for the individual to appeal through his union representative.

The impact that input from the employee counselors has on reinstatement varies according to precedent and practice of the individual corporations. Five levels of authority seem to emerge:

(1) Reinstatement on the basis of counselor authority and responsibility occurs in only two programs, and then only for the first Rule G violation. This type of authority represents the zenith of program power which might still be overridden in extreme cases.

(2) The second level of authority and responsibility is where a specific recommendation to reinstatement is considered during the appeals. Recommendation as used here is a projection of good risk potential expressed by the counselors as their opinion.

(3) The third level of responsibility and authority is the most common in the industry. A counselor evaluation will be taken under advisement. This seems not to have the same strength as a recommendation and so is noted separately.

(4) Continuing to the next level listed as "describing progress of treatment only" in the table, it is found that no opinions, judgments, or endorsements are made by the counseling staffs. Only a factual reporting of what the individual client has experienced and done is presented to the interested parties. In the two programs where this occurs, the specific purpose is to draw management and union representatives into greater responsible involvement in the decisions to return individuals to work.

TABLE 40

Policy and Practice on Reinstatements of Rule G Violators Participating in Rehabilitation

Practice	Number of Programs
Reinstatement upon counselor recommendation, claims waived No specific periods out of service.	2
By appeal, no specific time out of service, counselor evaluates	6
By appeal, out of service from 3 months to 2 years maximum counselor evaluates	3
By appeal, one year out of service for operating crafts, variable time for non-operating crafts, counselor evaluates	1
By appeal, no specific time period, counselor recommends	2
By appeal, 6 to 9 months out of service, counselor recommends	1
By appeal, no specific time out of service, progress of treatment described	1
By appeal, 18 months minimum out of service for operating crafts, variable out of service time for non-operating crafts. Progress of treatment described.	1
By appeal, 6 to 9 months out of service, counselor must verify sobriety	2
No reinstatements or rehires on a leniency basis with or without proof of rehabilitation	1

(5) The nadir of responsibility and authority occurs in two programs where the counselors are required to "verify" and document the abstinence of Rule G violations prior to the decision to return them to work. The use of railroad policy to occasionally perform investigations occurs in at least one of these programs. Apparently the ability to make changes in an alcoholic's behavior is not thoroughly accepted.

The time periods during which the former employee is held out of service varies greatly. Of the eight cases that have quoted specific periods, five seem to have a degree of rigidity one might expect from a policy -- the others and those that have not specified an out-of-service time seem to allow sufficient time lapse to show some permanence in behavior change.

False Referrals and Errors. A false referral has been defined as a "problem employee" referred to the program counselors on the basis of poor job performance or other disciplinary difficulties that may not be related to chemical dependence or a behavioral problem that cannot be handled by first level supervision. It was found that this is a very minor problem overall. The vast majority of general chairmen had never heard of it happening; the two who did were satisfied with the resolution that developed from the screening performed by the counselors.

While all directors would admit to the potential for this happening, ten could recollect specific incidents; none appeared to have had any cases that were not eventually screened out. The most common problem is one of an individual who gets spectacularly drunk but is not alcoholic. These cases seem to be readily screened out. Closely aligned is a problem with supervisors who do not adequately monitor job performance in a manner sufficient to document sub-standard performance and behavior. A referral made on the basis of job performance under these conditions can amount to a false referral.

Rule G Case Workload. The general chairmen were asked to estimate as best they could the fraction or percentage of their caseload made up by Rule G violations. Twenty-five of the thirty-nine could quantify their estimates within a range of 0% to 10% skewed towards the lower end with a modal response in the order of 4% to 5%. Others who could not quantify a response gave statements such as "very low" and would agree to less than 5% when this was suggested to them.

All seem to remember their cases vividly; many amplified their remarks with specific incidents drawn out of their files during the interview. A Rule G case seems to be an unrewarding, unpleasant experience. Usually the case against the employee is very strong, lives and 20 year careers are on the line and seldom, if ever, is there an opportunity to claim unfair practice by which they might bargain a reinstatement.

The inception of rehabilitation programs has assisted the process of gaining reinstatement or rehire. Eighteen of the general chairmen had been designated recipients of information from program files on their represented employee. Thirteen of these found the data to be highly useful in gaining their objective of reinstatement. Apparently documented observations of reduced drinking behavior make a far better case than simply good performance, long service, and appeal to humanitarian feelings. The programs also remove the chairmen from the dilemma of having,by force of law,to represent employees that they know will not rehabilitate over a long period of time. A definite course of action is open to the representative which he can recommend on the basis of success in reinstatement and success in rehabilitation.

Effectiveness

Two major indicators of how well these programs are meeting their objectives of interceding with the alcoholic component of the workforce have been examined. The first, penetration rate, measures the degree to which the programs have reached and involved the portion of the population to which they are directed. The second is that of the number or fraction of successful interventions of those counseled. While the second is easier to define, it is much more elusive to evaluate confidently. There are other measures such as availability of service and cost evaluation that could be applied; these, however, are ancillary to the two central issues and might be subjects in a more detailed evaluation.

The two indicators will be examined in their own light and related to other information or variables collected in this study. Only the population counseled for problem drinking is explored in this section

Penetration Rate

Penetration rate may be defined as follows for an industrial alcoholism program:

$$Pr = \frac{Nc}{Ne \times Fa}$$

where Pr = penetration rate

Nc = number of new people counseled in a given time period

Ne = number of people employed in the same given time period

Fa = the fraction of those employed estimated to be alcoholic

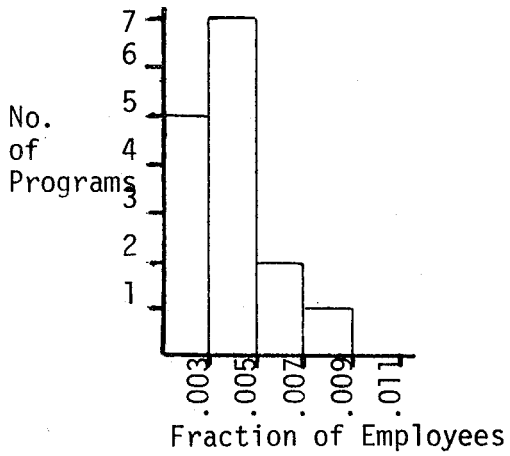
This may be expressed as a percentage by multiplying the quantity obtained by 100. Penetration in this report is expressed in terms of a fraction of the employed population. The estimates of the number of

alcoholics in the workforce (Fa) range from 2% to 10%. Calculating penetration on the basis of the entire workforce does not endorse a possibly erroneous value and gives a figure based on a readily defined headcount. For comparisons to other data, the penetrations quoted in this report may be divided by the selected decimal fraction estimator of alcoholics in the population of interest.

Penetration rate does have major loading in factor 5, Appendix D. Figure 12 displays a histogram of the penetration rates.

FIGURE 12

Penetration Rates
Fraction of Employed Population



$\bar{x}$ = .0060
s = .0021
n = 15

Range .0036 to .011

The penetration rate for alcohol abuse problems in a railroad employee assistance program can be predicted by a combination of certain other variables measured. Ninty-five percent of the penetration rate variations between programs can be accounted for by the variables that are listed in rank order of importance.

(1) The percentage of referrals from law enforcement agencies (LAWREF).

(2) The use or non-use of signed release forms (SIGREL).

(3) The age of the program (PROGAGE).

(4) The percentage of those counseled that are still drinking (NUMWET).

(5) The percentage of referrals from the medical staff (MEDICREF).

The means used to identify these was that of a stepwise multiple linear regression, details of which are contained in Appendix E.

The variables that have been identified are predictive only for the railroad programs using the equation generated. They do not always represent controlling factors that can be changed by themselves to increase the penetration rates. For example, simply instituting a system of signed release forms alone will very likely do anything but increase the paperwork. These variables are themselves indicators of preceding actions, commitments or policies made by the corporations. The use of signed release forms most likely shows a high degree of concern for the rights and privileges of the clients that has existed from the start of the program. One can also hypothesize that the very small number of referrals obtained from law enforcement agencies does not greatly increase penetration rates. This, rather, may be an indicator of counselor activity or possibly part of a complex relationship of events brought about by state laws decriminalizing public intoxication.

Successful Intervention

A successful intervention has been defined for this survey as those clients who have reached a stage of control sufficient to satisfy the directors and counselors that alcohol consumption is under control. As one might expect, the criterion levels for this state vary between programs. A further complication is the three way classification of the population into "successful", "non-successful", and "don't know" categories. The last category can include a few abstinent people, some that continue consumption under a more sophisticated cover-up scheme, mostly those that might have made an adjustment in consumption patterns to a more acceptable frequency or intensity but still consume alcohol to some extent and finally a few on which information is simply lacking. The common denominator in the "don't know" group is that all have not presented recurring behavioral or disciplinary problems that have come to the attention of program personnel or the referral sources. It is noted that 7 of the 15 programs with adequate data for analysis use three-way breakdowns.

The type of criteria used also affects how one will compartment the client population. If success is defined as total abstinence for all cases in combination with other criteria, then a report of any possible alcohol consumption defines that case as non-successful (with some allowance for early "slips"). Under AA precepts a person defined as alcoholic cannot adjust drinking behavior to the acceptable societal norms; if indeed this does ever occur, the person was not alcoholic).

Further difficulties arise from the problems in following the continuing behavior of people over a long period of time, often at several hundred miles distance. None of the programs have sufficient staff to adequately define long-term sobriety or other behavior with confidence. The success seems to be defined within a two-year period by continual AA group attendance and lack of workplace alcohol consumption.

Given this condition, the rate of success may better be defined by the complement of the number still drinking, that is, the failures. Continued or recurrent drinking behavior is more readily detected and is eagerly reported by supervisory personnel.

It is in this area of effectiveness that more study and definition is necessary before full conclusions can be stated. Because of the confusion of criteria and overlapping groups, we have chosen to display four means of defining success or the compliment, non-success.

Percent Successful. This group includes those who the directors felt confident had achieved control of their alcohol consumption. The primary criteria used in determining which clients would be included in the category are displayed in Table 41. Caution should be taken in that these are not the only factors mentioned but are those given emphasis. Others such as refusal of treatment, poor AA attendance were also mentioned frequently. It is evident that there is considerable subjectivity given in some evaluations. Some liberties have been taken in trying to compress 20 detailed criteria listings into a comprehensible table. The AA term of sobriety has been equated with unlabeled operational definitions amounting to renewed life involvement without alcohol consumption.

TABLE 41

Primary Criteria for Successful Intervention
(Number of Directors Reporting)

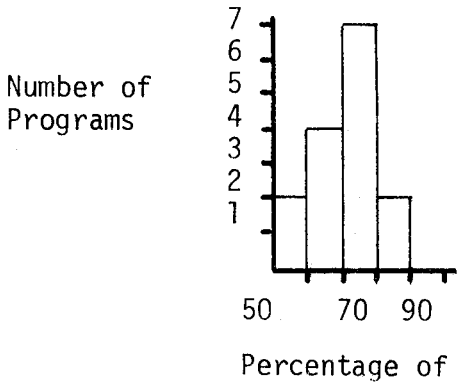
Improved Life Style (Sobriety)	10
Abstinence	6
Behavior Change at Work	3
Any of the above and Medical Clearance	1

The interesting category is that of improved workplace behavior. This was picked up from three programs of vastly different nature and represents a reluctance on the part of the corporation to delve too deeply into their employees' lives for whatever reason. These programs have lower than average penetration rates.

Over the fifteen programs with sufficient operating time and population coverage, the average success rate came out to be 68.7% of the alcoholic client population with a standard deviation of 9.69%. The distribution is shown in Figure 13.

FIGURE 13

Successful Intervention of the Alcoholic Clients Counseled



$\bar{x}$ = 68.7%
s = 9.69%
N = 15
Range = 50% min.
84% max.

The percentage of successful interventions can also be predicted by other variables studied. These variables were collected by means of a stepwise multiple linear regression; the details of the regression are shown in Appendix E. Better than 95% of the variations in the success rates between railroad employee assistance programs can be explained by the proper combination of the following variables listed in order of importance:

(1) The screening or non-screening of facilities to which clients are referred (SCRENFAC).

(2) The percentage of referrals made by family members. (FAMLYREF)

(3) The evaluation of Rule G cases by counselors prior to the hearing. (EVALRULG)

(4) The number of months clients are in the program. (TIMEPROG)

(5) The availability of an option to enter a counseling program in lieu of Rule G discipline, if addicted to alcohol. (ALRULG)

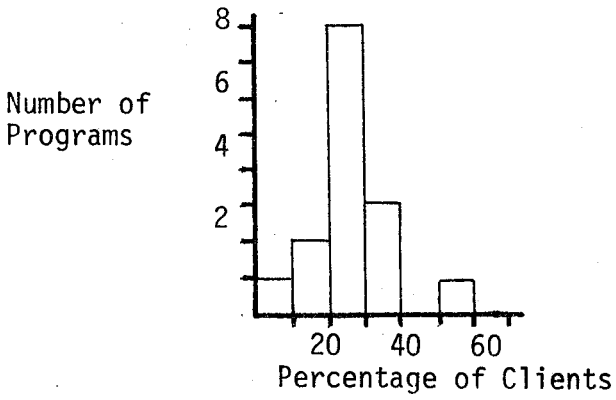
(6) The average age of the alcoholic clients counseled. (ALKAVAGE)

The same type of cautionary notes are evoked here as in interpreting the results of the regression equation for penetration. That is, the variables may not have a direct controlling relationship. Reference is made to the loading of the percent successful (NUMDRY) in factor 7, Appendix D.

The Percentage of Failures. As a correlative predictor of success rate, the percentage of failures may also be examined. The criteria for this grouping are the opposite or absence of the behaviors quoted for successful intervention. The average values and distributions for the fifteen continuing programs are displayed in figure 14.

FIGURE 14

Percentage of Failures of the Alcoholic Clients Counseled



$\bar{x}$ = 24.2%
s = 9.85%
n = 15

Range - 8% min.
50 % max.

The shifting of criterion for degree of abstinence can radically affect this distribution as shown by the outlier at 50%, an obviously stringent evaluation.

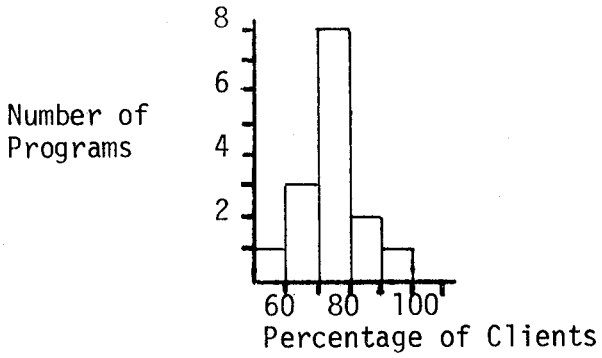
A regression equation has also been developed for predicting the percentage failures in these programs (Appendix E).

The Percentage of Positive Changes. In seven of the fifteen programs with full data, a three way breakdown was quoted. There appears to be two ways of compensating for those clients with questionable drinking behaviors. The first would be to shift the criteria so that one considers the questionable category in a positive light. This assumes that a change was made,as a result of contact with the program,that could be considered successful even though strict abstinence cannot be established.

Essentially this amounts to adding the questionable group to those established as being sober. This gives a population shown in Figure 15.

FIGURE 15

Percentage of Positive Changes of Alcoholic Client Counseled
(% Sober + % Questionable)



$\bar{x}$ = 79.7%
s = 9.85%
n = 15

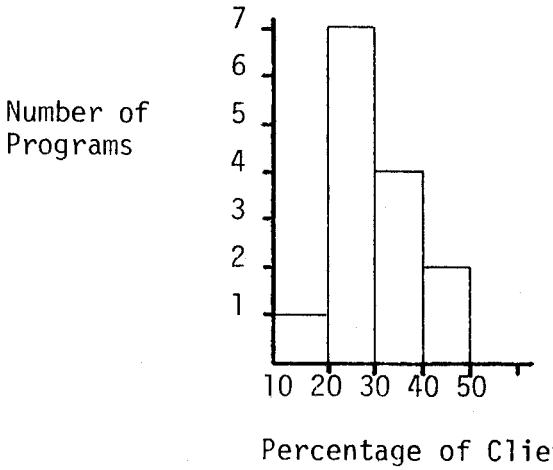
Range - 50% min.
92% max.

The percentage of positive changes has an exceedingly high negative factor loading on factor number 2, "still drinking" (Appendix D under the mnemonic "CHANGE").

The Percentage of Non-Successes. Taking the strict interpretation of success vs. abstinence would add the questionable category into the failures group. The population so derived is shown in Figure 16.

FIGURE 16

Percentage of Non-Successes in the Alcoholic Population Counseled
(% Drinking + % Questionable)



$\bar{x}$ = 31.3
s = 9.69
n = 15

Range - 16% min.
50% max.

A high positive factor loading is observed for this variable (Appendix D under the mnemonic DRINK) in factor 7 "failure vs. successes".

Railroads That Do Not Have Programs

Officials of five corporations that do not have employee assistance programs were interviewed to sample and ascertain their reasoning for not doing so. One of these corporations was represented as having a rehabilitation program; however, the interview disclosed that only the concept of alcoholism as a disease had been accepted. None of the other attributes of an employee assistance program were present (i.e., referral service, confidentiality, para-professional counseling). As a consequence reclassification was necessary. This represents one of four general response categories.

Two corporations have established opinions that assistance programs might be beneficial, their reasons for not implementing a program center on available funds.

The remaining two feel that (1) the problem of alcoholism is under control by current practices and (2) the problem of alcoholism and drug use is of such minor magnitude as to not warrant special attention.

Problems with Funding. One of the two corporations that have reached the opinion that assistance programs are desirable is bankrupt. Means of implementing a program at absolute minimum cost have been explored, such as the use of volunteers or a fee by client basis paid to the programs of other railroads in proximity. Whether these expenses will be allowed by the trustees is an unanswered question. Since at the time of this writing the railroad has continued to lose money, it is doubtful that the expenses for a program will be allowed in the foreseeable future.

The second corporation is in much better financial shape but still found itself short of sufficient available funds due to the 1975 recession. Plans had been formulated to start a program on a region-by-region basis starting in the area where they considered the employees to be the most cohesive and receptive to innovation. The intent is to closely model a program on one of the most successful currently in existence "if business improves".

Considered-Rejected. Serious consideration had been given to starting a program by another corporation. It had not been started for several reasons which were enumerated and explained. The proposed program was in competition for funds that were ultimately spent on other safety related measures; grade crossing improvements were cited as an example. It was felt that the problem of drug and alcohol consumption was, although a reality, at least under control by disciplinary

measures and detection in periodic physicals. It was claimed that punishment for Rule G violations was not overly strict although enforcement was rigorous. A violator could appeal for reinstatement and probably would be reinstated if some proof of rehabilitation could be furnished. As an unwritten practice, two violations by the same individual could be appealed depending on circumstances; the third time could not be appealed.

There was an additional feeling that a corporation had no business counseling alcoholic employees, that this really should fall in the category of social responsibilities of a corporation "for which purposes a foundation had been set up". The corporate staff was fully aware of how to go about setting up a program but had declined to do so by management decision.

Problem Not Observed. Yet another corporation has not given serious consideration to a program claiming to have experienced only five Rule G violations in three years from about three thousand in the workforce. Four of these had been reinstated by appeal. The prevalent feeling was that the supervision was capable of adequately detecting violations. There were two cases where individuals were furnishing information as to their continuing sobriety. There was also awareness of instances where supervision had sent individuals home who reported for duty while drunk,as well as some awareness of the practice of "laying out",which was cited as proof of problem control. The corporation had been approached regarding setting up a pilot assistance program by NIAAA; this was turned down.

Identify and Control. The final of the five had established a policy on alcoholism that recognized it as controllable with proper treatment. An individual suspected of being alcoholic could be required to "undergo medical assessment at his own expense, and furnish confirmation or proof that his problem is not related to alcohol abuse or dependence". Alternatively, the employee could be requested to appear before a company-appointed medical examiner.

An employee voluntarily entering a treatment program "will be allowed to resume their duties commensurate with their progress on authorization from the Chief Medical Examiner . . . this will necessitate reports at regular intervals from the employee's own physician confirming total abstinence and adherence to AA or other alcoholic control programs".

Operating employees would be held out of service for approximately two years if they failed to provide "continuing, convincing proof of abstinence". It is clear that the policy is one of identifying the individual alcoholic and keeping him under surveillance through the process of "constructive coercion". The employees may be given some referral service on an informal basis; however, they are encouraged to seek their own treatment. Confidentiality is not particularly guaranteed, neither is promotional opportunity nor job security.

Programs in Other Transportation Industries

A brief sampling by interview has been made of programs for alcoholic rehabilitation that are run by segments of other transportation industries. Four of these are presented below in a synopsis form so that the major qualities may be compared to those programs run by the rail corporations. As information was derived from some of these programs under the guarantee of anonimity, none will be identified specifically.

It is apparent that the railroad industry is clearly in the forefront in developing rehabilitation programs in spite of the deficiencies cited in this report. The openness with which program directors in the rail industry have discussed their programs has not been found elsewhere. There is apparently a much greater fear of publicity, disclosure, and ridicule in other transportation industries.

Program 1.

One major union has run a program for 3 1/2 years that currently is limited to a single large metropolitan area as a center for operation. The program is primarily one for handling alcohol-related problems although cases involving other drugs are handled on a referral basis to public facilities. Coverage is limited by informal policy to members of the union although family members have also been counseled on a non-priority basis if they have a group medical policy or other means of payment for treatment. There is no formal policy statement. The staff currently consists of one full-time counselor and one part-time volunteer, both with long years of AA experience. Payment for treatment is arranged through group medical plans. Payment to specialized clinics, detox centers, and controlled living facilities is possible. In addition to general hospital expenses, counselor salaries and expenses are paid by the union.

The primary means employed for announcing the existence of the service is a continuing bulletin published in the newsletters of all the locals in the area. Information placards are also used for bulletin boards. Business agents and secretary-treasurers of the locals have been made aware of the service and the means by which individuals may be referred. The counselors feel that personal referral (by word of mouth) is the most effective secondary information distribution means from what their clients have reported.

Annual reports or other aggregate statistics were not made available to the interviewers. The staff indicated that 20 to 25 calls are made to them each day, two or three being of a crisis nature upon which some action might be taken. The client population averages 90% male in the age bracket of 42 to 43 years. The yearly client admission rate was not offered.

Facilities to which their clients are referred range from general hospitals with alcoholic rehabilitation units, publicly funded detox centers, rehabilitation clinics, and controlled living environment facilities. No problem exists in the quantity or qualities of the resource available in the area. In addition to referring their clients to local AA units for continuing support, the counselors also run a weekly meeting on AA guidelines, using facilities of a union hall.

The referral system seems to be largely a voluntary one although a few referrals from employers are made, usually via a local business agent. The program does not seem to have a relationship with employer disciplinary procedures that have been defined. There is interaction between local courts and the program on handling union members arrested on charges stemming from intoxication.

Plans for expansion are only vaguely formulated; it is felt that support from the national headquarters is the needed impetus for further growth.

In summary, the program is highly voluntary in nature and has been set up almost strictly on AA guidelines. There is also a tendency to keep the clients strictly within the purview of the union.

Program 2

A public transportation facility in another metropolitan area has run a rehabilitation program since 1956. Coverage is extended to approximately 48,000 employees who run the system.

The program is currently located within the personnel department and employs nine full-time counselors and a director -- all with active heavy AA involvement. The staff and expenses are paid from facility funds. Treatment costs are covered by group medical plans. Prior to having coverage for alcoholism the program operated a zero interest loan and weekly payback system to cover hospital costs. The individual would have to take leave without pay for the treatment period. Treatment would be paid by the program, after which the individual would repay the program by weekly personnel report, conveying approximately $25 per week until the total amount was recovered. If the individual started to default, his pay center was transferred to the program office. In the fifteen or so years of operation $100 was lost by defaults. This scheme is now defunct by virtue of group medical coverage extended to alcoholism.

Information is spread largely through the supervisory levels. A formal course of 2 1/2 hours duration is given to all new supervisors during their training. Less formal education consisting of 1 1/2 hour presentations given throughout the system were abandoned because of the difficulty encountered in reaching all of the supervisory

population in an adequate manner. Emphasis is now made on the indicators of alcoholism, and the mechanisms for utilizing the program services.

Approximately 300 cases are handled each year; this gives a penetration of .00625 of the workforce, close to the average of the railroad corporation programs. The client population is 93% male which matches the 93% male composition of the workforce. The average client age is 41.9 years, somewhat older than the workforce at 39 years. Emphasis is placed on participation in Alcoholics Anonymous. Numerous treatment facilities are available in the area.

The system of referrals, discipline, and program operation are intimately interwoven. Self-referrals (5%), union (5%) and family referrals (15%) are relatively few. The primary referred means seems to be through the process of supervisory (50%) or special agent (police) referral (10%) by virtue of violation of rules prohibiting consumption of, or intoxication because of, alcohol taken during or before coming on duty.

Individuals so identified are taken out of service and are required to undergo a blood/alcohol concentration determination if this occurs during the normal work week. The individual is then required to interview the program counselor. Discipline can stop at a hearing with a maximum of three days suspension, depending on the response to proposed treatment and past record, or may proceed to a trial board for critical incidents. At this point the decision on the case may be reserved or held in abeyance, depending on the individual's responses and participation which is verified by the employee counseling services. Refusals to participate or accede to the requirements precipitates direct disciplinary action without program involvement. This process is obviously not confidential. The referrals from other sources are held in strict confidence, however.

A successful intervention rate of 65% over the life of the program is claimed on a "sobriety" criterion. A graduated follow-up interview system is maintained for two years after entry into the program.

In summary, this program exhibits a penetration and success rate close to the averages of those covered in this report. A strong emphasis on AA participation was detected. A greater utilization of constructive coercion is also evidenced than in most of the railroad programs studied. The program compares very favorably in most qualities to those run by the railroad corporations.

Program 3

Federal funds have been granted to a union to establish a rehabilitation program on a trial basis. This program has been in existence

approximately 18 months and differs, in many respects, from the more usual type of industrial counseling effort.

The coverage is limited to the operating crafts in the industry. The staff consists of two full-time counselors holding master's degrees in alcoholism counseling, and two part-time personnel who devote an average of 13 hours each per week of their time. One of the part-time personnel is a physician; the other acts as an administrative officer. Additionally, there are two full-time secretary-receptionists and a program coordinator, the latter being a full-time union official who has averaged 90 days per year working on behalf of the program.

Confidentiality is enforced to an almost extreme extent, presumably to circumvent the draconian disciplinary measures of the corporations. Program personnel would not enter into discussions concerning the client population except to indicate that the client population was all male at an average age of 43 years and had thus far displayed a recidivism rate of 5% in the limited time. It was vaguely insinuated that they had approximately 100 participants thus far.

Because of the extreme anonomity required by this program, identification and referral becomes a distinct problem. Apparently, most individuals in these crafts suffering from alcoholism either successfully hide their difficulty until irrepairable physical damage requires their retirement or they, by themselves, recognize the extent of their illnesses and discretely seek help on their own without the company gaining information. It is a common practice for these people to seek treatment facilities which are geographically removed from the area in which they live.

Treatment costs are apparently paid out of pocket; insurance coverage for alcoholism has not been made available.

Referral through peer identification is emphasized. Members of the same crafts are given a 2 1/2 day seminar involving 20 hours of instruction covering the aspects of alcoholism as an illness, intervention techniques, and the volunteer workers' roles and procedures in after-care. The union will pay some expenses if this proves necessary; many attend on their own time without salary recompense.

The program provides diagnostic and referral services for the individuals as well as a follow-up coordination. Alcoholics Anonymous is not recognized as a treatment or after-care resource; there is an apparent attempt to build a supportive network of individuals within the peer groups of the crafts that might perform the same function. Information is spread via word of mouth through interested individuals in the crafts.

Follow-up is performed through volunteers in the crafts and to some extent by the program director.

Program 4.

This particular program has been run for approximately five years by a corporation; the program is located organizationally in the medical department. At least two separate segments were detected, the employees being separated on the basis of job category. Discussion was allowed only on the operation of one segment.

The staff consisted of one counselor of AA background hired on a half-time basis. Administrative duties and some of the counseling load were handled on a part-time basis by two other personnel from the medical and labor relations departments.

Payment for treatment is through group medical coverage. Clients are referred not only to local facilities but also to some of the well known alcoholism clinics located outside the particular area. Discussion on the description of the client population was declined.

Apparently, most of the referrals to the program come from supervisors as the result of intolerable job performance and behavior or by violation of intoxication regulations. The penetration rate has averaged .0047 of the workforce per year over the program's existence; considerably lower than the average for the railroad programs. Records on the individual cases are kept in medical folders and, for some cases, in personnel folders also.

The relationship to discipline is ambivalent; reinstatement for infractions of intoxication regulations have never occurred; however, dismissals for intoxication are seldom evoked. The program does receive many who technically have violated the company rule, but there seems not to be a system of constructive coercion that utilizes the rule as leverage.

Recommendations

Two classes of recommendations are forwarded; those for improving the current or future programs based on the findings of the survey and secondly, a series of recommendations slanted toward assuring effective measures in any future evaluative efforts.

Program Improvement

Much improvement can be made by following the examples of those programs held in high repute within the industry. A leveling of qualities seems necessary. This undoubtedly will take some further commitment on the part of the corporate management. There are action

items for union officials as well, particularly in educating their personnel and in the negotiation of insurance coverage.

Program Policies. It has become apparent that the formulated policy statements themselves do not always cover issues important to the potential clients and in some cases do not even exist. It is felt that open, widely distributed statements of commitment intent and practices cannot but help to allay the fears and suspicions of the workforce. Joint statements with union and management input might be helpful. At the minimum, the practices to be followed on the following issues should be covered:

Alcoholism as a Controllable Syndrome

Relationship to Discipline

Confidentiality of Information

Policy on Continuation in Service

Use and Participation of Corporation Medical Examiners to the Program

The Types of Service Offered

Eligibility Requirements

Leave Policy during Treatment

Policy on Promotional Opportunities

Policy on Job Security

It is recommended that the practice of referring individuals to corporate medical departments for treatment and diagnosis should be deleted wherever it exists since this is a threat to continued employment for many potential clients.

Wherever possible a broad coverage of problems,primarily by referral to outside agencies,should be undertaken. While the evidence in this report indicates only a trend toward greater intake of alcoholics, the reality is that for every three alcoholics in a broad coverage program, two other seriously disturbed persons have also been detected or volunteered to come forth.

It is further recommended that eligibility be extended to the immediate family of the employees. While most programs do allow this, a few still do not. The experience has been that 94% of the admissions, on the average, will be employees; one may expect only a small initial incremental increase in workload. The benefit is large to the employee in knowing that there is a place to turn for advice and counsel on the disturbed members of the household.

Records and Confidentiality. It is highly recommended that all program directors and corporations examine the practice involved in releasing information and allowing employee control over this process. There are a number of programs which release and gather information without the client's knowledge. The relationships to the Privacy Act and Freedom of Information Act should be reviewed to see if the program practices comply. Further examination of the practice of keeping records continuously should be undertaken. It is felt that much of the data collected by some of the counselors is outdated, or of little value, after the passage of several years. Additional benefits can be derived from a more standardized system of record keeping. Comparisons on how a program is doing suffers from confusions of criteria and categories.

The Relationship to Discipline. There is some evidence that allowing entry into treatment, in lieu of a disciplinary hearing for Rule G violators, does improve the overall penetration rate. It is further evidenced that discipline can still be maintained under this option. Further extension of these schemes should be considered.

Alternatively, a graduated scale of punishment might be installed but only where a counseling program exists as an alternative to the route of escalation of the alcoholic syndrome.

It is recommended that program operation not become involved in negotiated agreements. An individual's response to treatment and counseling is too widely variable to meet the rigorous demands of unflexible contractual legalisms. Bluntly stated, one cannot negotiate a cure.

Information and Education. Although a direct association between the effectiveness measures and the presence of educational efforts was not detected, it appeals to logic that one cannot expect cooperation and input from unions or supervision if they do not know of the program. Where informative training efforts are not made, they should be initiated. It is also felt by the researchers that there is a general deficiency among the union officers in knowing very much about the program and in disseminating information about them. Greater involvement and interest could be beneficial to those whom they represent and facilitate handling of Rule G cases when they do occur. All programs seem to suffer from misinformation prevalent in the general population. Greater emphasis on educating the workforce on problem drinking might have long-term benefits.

Staffing. The three railroads that have geographically limited programs have plans for expanded coverage that should be encouraged. There are others that apparently should add counselors to their staffs although, from the data gathered, it is difficult to recommend a figure or ratio of employees to staff. Ratios in order of 3,000 to 5,000 employees per counselor might be considered.

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Treatment Cost Coverage. A strong effort should be made throughout the industry to achieve near uniformity in third party payment for alcoholism treatment costs. Additionally, effort should be made to allow payment to alcoholism clinics utilizing a different set of criteria than for hospitals. Considerable cost savings seem to be possible on this latter point.

Future Evaluations

From observations in this study, an evaluative measure of effectiveness will depend on the quality, validity, and accessibility of program records. The quality and validity of data are suspect on many programs, due to minimal staffing and emphasis on direct counseling where a forced choice has to be made between that and administrative duties. Even in the better programs the degree of follow-up is hampered by the general shortage of staff since almost all programs seem to be operating at their full capacity.

Success Rate. Further unraveling of the interrelations between adequacy of follow-up, criteria for success, and program bookkeeping in terms of employees, family members, and non-alcohol cases will be necessary to fully define the rates of success. There is a small amount of cross-category contamination in this report that could be strained out given more time to fully explore the records of some programs. Serious consideration might also be given to defining success rate in terms of the complimentary failure rate, since the failures seem to be more readily detected and easily defined. This category of problems must be solved before any other meaningful measures, such as cost effectiveness, can be undertaken.

Cost Effectiveness. This study has not been directed toward comparing costs vs. success rate or penetration rates. This type of measure should be made to include not only take home pay as an estimator but also overhead costs of running a program, calculation of training and recruitment costs for replacement of employees discharged because of alcoholism, costs incurred through early medical or disability retirement for reasons typical to alcoholism. In essence, the entire cost structure should be examined rather than using superficial estimators.

Counselor Activity Levels. The correlations obtained in this study seem to lead toward another variable set that was not explored, that of counselor effectiveness. In future evaluation attention should be given to the proportions of time a counselor allots to various activities, such as counseling, follow-up duties, education, and contacts with related agencies. It is felt that how a counseling staff goes about its business, in terms of the quantities of time apportioned and the quality of service given, can drastically affect penetration rates and possibly success rates as well.

Educational Quality. While most of the programs claim to have educational programs, and some cite instances of behavior change in the population to which the material is presented, estimates of real coverage and evaluation of the effectiveness were not possible. These should be topics in an evaluative study. The particular area of interest is that of supervisor behavior measurable in terms of referral rates or attitude change on the topic of alcoholism. Similar measures should also be applied to management and union officials since those, too, are keys to the successful operation of a program.

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APPENDIX A

INTERVIEW FORMATS
AND
INDIVIDUAL QUESTIONNAIRE

QUESTION CONTENT OF THE INTERVIEW FORMAT

FOR

PROGRAM DIRECTOR

ON

RAILROAD EMPLOYEE ASSISTANCE PROGRAM

PREPARED BY

Human Engineering Division
Applied Sciences Department
Naval Weapons Support Center
Crane, Indiana

SPONSORED BY THE

Federal Railroad Administration
Department of Transportation

1.0 GENERAL

1.1 Name of Railroad _____

1.2 Headquarters Location _____

1.3 Office Having Jurisdiction Over Employee Assistance Program _____

_____

1.4 Department (Locate in Organizational Structure) _____

_____

1.5 Name of Program Director _____

1.6 Office Location _____

1.7 Director's Phone Number _____

1.8 Date of Program Start-Up _____

*1.9 Total Number of Employees in the Railroad Company _____

*1.9.1 % Males _____

*1.9.2 % Females_____

*1.9.3 Average Age of Employees _____

*1.9.4 Range of Ages of Employees _____

*1.9.5 Minimum _____ Maximum _____

*1.9.6 Distribution of Ages (i.e., histogram or standard deviation or interquartile ranges or intercentile ranges)

2.0 POLICY

*2.1 Is there a written policy governing the functions and purposes of the program? Would it be possible to see this document after the interview? (If not, discuss the unwritten policies under which the program operates).

2.2 Is the program . . . . . .

Management initiated and administered with little or no union input? ( )

2.3 Management initiated and administered with the unions giving concurrence and currently cooperating with the program procedures? ( )

2.4 Jointly initiated under management and union ageis with current management administration and union cooperation, concurrence, and participation? ( )

2.5 OTHER (Describe)

2.6 Under the term of "alcohol abuser" do you distinguish between a "problem drinker" and an alcoholic? ( )

2.6.1 (If no, define the term used) _____

_____

2.6.2 (If yes, define problem drinker) _____

_____

2.6.3 If yes, define alcoholic _____

_____

2.7 Does your program provide services for problems other than alcohol abuse? (_____)

If yes, does it include . . . .

2.7.1 Illicit drugs ( ) Define problem area.

2.7.2 Prescription Drugs ( ) Define problem area.

2.7.3 Marital Problems ( ) Define problem area.

2.7.4 Behavioral Disorders ( ) Define problem area.

2.7.5 Financial Planning ( ) Define problem area.

2.7.6 Legal Assistance ( ) Define problem area.

2.7.7 Others ( ) Describe the problems.

2.8 To what degree if any are your company medical personnel involved in treatment and referral? (Describe the working relationship).

2.8.1 If referrals are handled by medical personnel on a routine basis, are clients routinely referred to company medical personnel for treatment? _____

2.8.2 Are clients routinely referred from company medical personnel to the program for counseling and referral? _____

2.9 Are all employees of the company covered by the employee assistance program? _____ If no, who is covered?

2.9.1 If no, why has this differentiation been made?

2.9.2 If no, are there other programs for those not included in the one which we are discussing?

2.9.3 What group does this alternative program cover?

2.10 Are family members of the employees in the assistance program covered? _____

2.10.1 If yes, what are the eligibility requirements?

2.10.2 Are family members allowed the same services as the employee could obtain? _____

2.10.3 If no, what services are allowed?

3.0 STAFF

3.1 How many staff people are employed in the program? _____

3.1.1 Of these, how many are full time employees? _____

3.1.2 How many have other duties not related to the program?_____

3.1.2.1 If other duties are included, what percentage of time is devoted to the program duties? (this may be broken out by type of job, i.e., director, assistant, counselor)

3.2 What job titles are included in the staff?

3.2.1 How many are there in each category?

3.3 Are there formal job descriptions? _____ (Obtain job descriptions or resumes if possible for directors and counselors).

3.3.1 What are the major duties of the program director?

3.3.2 What are the major duties of the counselors?

3.3.3 What are the major duties of other defined key personnel?

3.4 What do you feel qualifies a person to be a Program Director in terms of:

3.4.1 Degrees (Formal Education)

3.4.2 Years Experience in Social Work or Related Fields.

3.4.3 Types and Quantity of Additional Training.

3.4.4 Other Qualifications such as being a former alcoholic.

3.5 What do you feel qualifies a person to be a counselor in terms of:

3.5.1 Degrees (formal education)

3.5.2 Years of experience in social work or related fields.

3.5.3 Types and quantities of additional training.

3.5.4 Other qualifications such as being a former alcoholic.

3.6 What do you feel qualifies a person to be a volunteer resource person within the program (company employee) in terms of:

3.6.1 Formal Education

3.6.2 Types and quantity of experience in fields of work

3.6.3 Types and quantity of specialized training.

3.6.4 Other experience or qualifications such as being a former alcholic

NOTE TO INTERVIEWER: If additional job categories have been defined that require contact with clients as the duty of prime importance, the questions on qualifications in education, experience, training, and other attributes should be repeated for the additional job categories. Space is provided for notes at the end of the format.

3.6.5 Describe the training of volunteer and other non-professional personnel. (Cover the content, time, and organization that gives the training).

4.0 FACILITIES

4.1.1 Are the facilities on company property? _____

4.1.2 Off company property? _____

4.1.3 A mix of both? _____ (define)

4.1.4 How many centers are there? _____

4.1.5 In which cities are they located?

4.1.6 What services are provided at each?

4.1.7 How is each one staffed in terms of assistant directors, counselors, volunteer personnel?

*4.2 By the distribution of centers that you have, what percentage of the eligible population do you estimate can readily obtain services (define distance from center).

4.3 How do outlying employees obtain service?

4.4 What plans are there, if any, for expansion?

5.0 FUNDING

5.1 Are funds for the employee assistance program identified as a separate item in the budget? _____

5.1.1 If no, is it funded under some other department function?

5.1.2 If yes, which department, what function?

5.2 What expenses are defrayed by these funds?

5.3 Is direct insurance coverage available for the treatment of alcoholism? _____

5.3.1 If no, how is coverage obtained indirectly?

5.4 Is direct or indirect insurance coverage used to defray treatment expenses for other problems such as behavioral disorders or drug addiction? _____

5.4.1 If yes, is it obtained indirectly as a medical expenditure? (describe)

5.5 Do employees pay portions of treatment costs? _____

5.5.1 If yes, how much for what types of treatment?

5.6 Are state or federal funds utilized? _____

5.6.1 If yes, for which portions of the program?

5.6.2 What percentage or portion of the budget is so derived?

*5.7 What is the estimated economic loss per untreated or unidentified alcoholic, drug abuser, or problem drinker?

6.0 INFORMATION

6.1 We would like to explore how employees are informed of the availability of employee services:

6.1.1 By pamphlets?

6.1.1.1 How are they distributed or placed?

6.1.1.2 How often are they renewed, updated, or changed?

6.1.2 By poster?

6.1.2.1 Where are they placed?

6.1.2.2 How often are they renewed or updated?

6.1.3 By mailings to home addresses?

6.1.3.1 How often are mailings made?

6.1.3.2 What is sent?

6.1.3.3 What part of the workforce receives the mailings?

6.1.4 By audio-visual materials?

6.1.4.1 What types are used?

6.1.4.2 To what population are these shown?

6.1.4.3 How often are they shown?

6.1.4.4 Where and at what time are they shown?

6.1.4.5 Have these been renewed or updated?

6.1.4.6 How often do you plan to update these?

6.1.5 By notice in-house publications?

6.1.5.1 What types of notices are used?

6.1.5.2 How often are these renewed?

6.1.5.3 How often are these printed?

6.1.6 By notices in union publications?

6.1.6.1 What types of notices are used?

6.1.6.2 How often are these printed?

6.1.6.3 How often are these renewed and updated?

6.1.7 By other means? (Describe)

6.2 What do your clients report to you as being the source of their information?

6.3 Do you have an information and education program for management and supervisors?

6.3.1 Describe this program

6.4 Do you have an information and education program for union officials?

6.4.1 Describe this program

7.0 CONFIDENTIALITY OF RECORDS

7.1 Describe how you maintain confidentiality of your records and client information.

7.2 What information do you maintain on your clients? (Obtain a form or list if possible)

7.3 Where do you keep the records?

7.4 Who has access to the file?

7.5 Who determines what type of information will be released?

7.6 Do you require a signed release statement from clients? _____

7.6.1 If yes, when during the period of client contact is this release obtained?

7.6.2 If yes, does the release specify what information and to whom it may be released?

7.7 Have you ever had your records subpoenaed? _____

7.7.1 If yes, what brought this about?

7.8 What type of reports do you make to management?

7.8.1 How often are these submitted?

7.8.2 To what level of management are they sent or proposed?

7.8.3 What do these reports summarize? (List categories or types of information)

8.0 CLIENT POPULATION

8.1 How do you define the term "contact"? (or similar term meaning an information request or transfer)

8.2 How do you define the term "client"? (or similar term meaning a service relationship established with a specific person)

* 8.3 How many total clients do you see in a year?

* 8.4 If your program includes other problem areas, what portion of the clients' problems would fall into the following categories?

8.4.1 Alcohol _____%

8.4.2 Illegal Drugs _____%

8.4.3 Prescription Drugs _____%

8.4.4 Marital _____%

8.4.5 Financial _____%

8.4.6 Legal Assistance _____%

8.4.7 Other _____%

Define Others

*8.5 Do you have a breakdown of any of the above by job classification?

8.6 Concentrating now on those that have alcohol related problems:

8.6.1 How many do you see as clients each year? _____

8.6.2 How many of these with alcohol problems are employees?

Of those that you see that are employees:

*8.6.2.1 What is the mean or median age?

*8.6.2.2 What is the range or measure of distribution? (ascertain the type of distribution measure)

*8.6.2.3 What percentage of these are male? _____ %

*8.6.2.4 What is the average length of time in the program?

*8.6.2.5 How many or what percentage of these are multiple entries?

*8.6.2.6 What is the average pay level?

*8.6.2.6.1 Pay level range?

*8.6.2.7 What do you estimate is the average distance traveled to obtain service?

*8.6.2.8 How many or what percent have involved the family as part of the treatment plan?

NOTE TO INTERVIEWER: The set of questions 8.6.1 through 8.6.2.8 are directed toward the alcohol abuse population. The questions may be repeated for those having drug related problems if the program includes these.

8.7 How do you define a successful intervention or treatment for an alcoholic, problem drinker, or drug abuser?

8.8 How do you define non-successful intervention or treatment?

8.9 What is your system if any for following the progress of your clients?

8.9.1 How often do you recontact these people?

8.10 Of the contacts or calls for information, what percentages would you estimate develop into the client category?

8.11 Of the clients having an alcohol abuse problem, what percentage would you estimate develop into the successful intervention or treatment category?

8.12 Of the clients having an alcohol abuse problem, what percentage would you estimate develop into the non-successful category?

8.13 Have you experienced recedivism of the successful category (define recedivism).

8.13.1 With what frequency?

8.14 What is your policy on multiple entries into the program? (define multiple entries).

NOTE TO INTERVIEWER: Return to questions 8.7 through 8.12.1 for drug abusers if they are included in the program.

9.0 REFERRAL SYSTEM

NOTE TO INTERVIEWER: Questions 9.1.1 through 9.1.9 are primarily directed to alcohol abuse problems. The questions may be repeated for other drug related problems.

9.1 Of the alcohol related clients that you have seen how many or what percentage have been referred by the following means:

9.1.1 Percent of referrals by self reports _____

9.1.2 Percent of referrals by fellow employees _____

9.1.3 Percent of referrals by supervisors_____

9.1.4 Percent of referrals by law enforcement agencies (in house also)

_____

9.1.5 Percent of referrals by union officials _____

9.1.6 Percent of referrals by family members _____

9.1.7 Percent of Rule G violation _____

9.1.8 Percent of medical personnel _____

9.1.9 By other means _____

9.2 How are the supervisors instructed in problem detection and referral techniques?

9.3 Are any union personnel used in detection and referral other than volunteer resource people?

9.3.1 How are union personnel trained in detection and referral techniques?

9.4 How do volunteer personnel and counselors handle the referral process?

10.0 RESOURCES USED

10.1 Aside from general hospitals, what treatment facilities are used?

10.1.1 Do you have standing agreements covering admission and payment with these facilities?

10.1.2 Have you experienced difficulties in gaining admission to treatment facilities for your clients?

10.2 How often do you refer your alcoholic clients to Alcoholics Anonymous?

10.3 What can you do about people in outlying areas where few if any treatment services are available?

10.4 How much counseling do you or your staff do?

11.0 DISCIPLINE

11.1 Are you afforded the opportunity to evaluate rule G violations by union and management request prior to disciplinary action being taken?

11.2 What is your company's policy for re-instatement of rule G violators?

11.3 Do supervisors tend to refer employees as a result of job performance difficulties or initiate rule G proceedings first?

11.4 Are rule G violators allowed in the program?

11.4.1 Under what conditions?

11.4.2 After Rule G violators have received treatment, do you or one of the counselors make recommendations on reinstatement?

11.4.2.1 In what form is the recommendation made?

11.4.2.2 Do you describe the progress of treatment?

11.4.2.2.1 What is included in the description?

11.5 Have you had difficulties with "problem employees" being referred to the program without proper justification (those that are primarily discipline problems)

12.0 EXPLORATORY AREAS

1. Feasiblity of joint programs with other railroads within geographic areas.

2. Attitudes toward joint union and management programs.

3. Personal efforts of directors and counselors.

4. Portion of time spent in counseling and administration.

5. Insurance coverage for the treatment of alcoholism per se.

QUESTION CONTENT OF THE INTERVIEW FORMAT

FOR

GENERAL CHAIRMAN

ON

RAILROAD EMPLOYEE ASSISTANCE PROGRAMS

PREPARED BY

Human Engineering Division
Applied Sciences Department
Naval Weapons Support Center
Crane, Indiana

IN COOPERATION WITH

Federal Railroad Administration
Department of Transportation

1.0 GENERAL

1.1 Unions and Number of Locals Represented _____

1.2 Name of General Chairman _____

1.3 Office Location _____

1.4 Chairman's Phone Number _____

1.5 Total Number of Members in Group Represented _____

1.6 Name of Railroad _____

1.7 Headquarters Location _____

1.8 Total Number of Employees Represented _____

2.0 POLICY

2.1 Are you aware of a written policy governing the function and purposes of the program? _____

If not, discuss the unwritten policies under which the program operates.

Is the program . . . . .

2.2 Management initiated and administered with little or no union input? _____

2.3 Management initiated and administered with the unions giving concurrence and currently cooperating with the program procedures? _____

2.4 Jointly initiated by management and union action. _____

2.5 Other (Describe)

2.6 Does this program provide services for problems other than alcohol abuse? _____

2.7 To what degree are the company medical personnel involved in treatment and referral? _____
(Describe the working relationship)

2.8 Are family members of members covered?

3.0 FACILITIES

3.1 Have you been to the service facilities?

3.2 Where are they located?

3.2.1 Is this on or off company property?

3.2.2 Where would you have located them?

3.2.3 Why would you have located them there?

3.3 (If the answer to 3.1 is yes) What do you think of the facilities (size, appearance, correct location)?

3.4 Are you aware of any plans for expansion?

3.4.1 Have you been consulted about any plans for expansion?

4.0 INFORMATION

4.1 Have your members been informed of the availability of services by your union? (other than with information provided to all employees)

4.1.1 If yes, what means were employed?

4.2 Has there been an information and education program for union officials?

4.2.1 If yes, of what did the program consist?

5.0 CONFIDENTIALITY OF RECORDS

5.1 What is your understanding of the confidentiality aspect of the program?

5.2 Are you satisfied with the system?

5.2.1 If no, what should be improved?

5.3 Have you been designated as recepient of information on any individual's release form?

5.4 Do you think the system of releasing information is adequate and proper as now constituted?

5.4.1 If no, how should it be changed?

6.0 MEMBER POPULATION

6.1 Have your people availed themselves of the program for alcohol related problems to the extent you think they should?

6.1.1 (If the answer is no) What do you think are the reasons for their not doing so?

7.0 REFERRAL SYSTEM

7.1 Have you referred people to this program?

7.1.1 How often has this occurred?

7.2 Do you get referrals from fellow members?

7.2.1 Is this prevalent?

7.3 Have family members contacted you?

7.4 Have you or any of your members participated in confrontations along with the fellow member having a problem and company personnel?

7.4.1 How is this done?

8.0 RESOURCES UTILIZED

8.1 Have any of your members complained of inadequate treatment facilities or slow response time?

8.1.1 If yes, what were the conditions?

9.0 DISCIPLINE

9.1 Are you afforded the opportunity to evaluate rule G violations prior to disciplinary action being taken?

9.2 What is the company's policy for reinstatement of rule G violators?

9.3 What is your policy for reinstatement of rule G violators?

9.4 Do supervisors tend to refer employees as a result of job performance difficulties or initiate rule G proceedings first?

9.5 Have you suspected that "problem employees" are being referred to the program without proper justification?

9.5.1 If yes, how prevalent is this activity and under what conditions does it seem to occur?

9.6 Have you used released information from the program in gaining reinstatement of rule G violators?

9.6.1 Has this information been useful?

9.7 How much of your workload consists of processing rule G violations?

10.0 EXPLORATORY AREAS

10.1 Feasibility of joint programs between railroads within geographic areas.

10.2 Changes to rule G.

10.3 Insurance coverage for the treatment of alcoholism per se.

QUESTIONNAIRE FOR INDIVIDUAL CLIENTS
ON RAILROAD EMPLOYEE ASSISTANCE PROGRAMS

From what source of information did you first learn of the employee assistance program? (Check one)

Program Volunteer Counselor ( )

Fellow Employee ( )

Union Official ( )

Supervisor ( )

Company Medical Personnel ( )

Program Counselor or Director ( )

Posters ( )

Pamphlets ( )

Mailing to Home Address ( )

Audio-Visual Presentation ( )

Notice in Union Publication ( )

Notice in Company Publication (

OTHER (Please specify) _____

How far did you have to travel to obtain the services from program personnel? (Check one)

0-5 miles ( )

6-10 miles ( )

11-20 miles ( )

21-30 miles ( )

30-50 miles ( )

51 or more ( )

How far did you have to travel to obtain treatment from groups, organizations, or facilities that were recommended to you by the program personnel? (Check one)

0-5 miles ( )

6-10 miles ( )

11-20 miles ( )

21-30 miles ( )

30-50 miles ( )

51 or more ( )

In your estimate was the treatment or service recommended or obtained for you _____(Check one)

( ) Very helpful

( ) Helpful

( ) Somewhat helpful

( ) Of minor help

( ) Of no help at all

What did the recommended treatment consist of?

(Check as many as apply)

General hospital detoxification	( )
Controlled living detoxification	( )
Out patient medical treatment	( )
In patient medical treatment	( )
Group therapy sessions	( )
Individual psychiatric therapy	( )
Individual psychological therapy	( )
Alcoholics Anonymous	( )
Social counseling	( )

OTHER (Please specify) _____

Appendix B

Variable Definitions

Computer File Content

Summary of Program Characteristics

Variable Definitions and Values

(Listed by alphabetical order by the mnemonic used in the computer file)

ALKAVAGE - The average age of the alcoholic clients counseled in a program to the nearest whole year. This may be based on total program experience.

ALKMENPC - The nearest whole percent of males in the alcoholic clients counseled in a program.

ALKPERYR - The number of new alcoholic clients counseled during a year (usually CY 1975).

ALTRULG - The presence of a practice or policy where a rule G violator may be allowed treatment and counseling in lieu of punishment under certain specified conditions. (Yes = 1, No = 0)

BREAKJOB - An attempted measure of knowledge of the population determined by whether a breakdown of clients by job classification had been made. (Yes = 1, No = 0)

BROADCOV - The existence of a policy of referring or counseling people with problems not related to drug/alcohol dependence, for instance behavioral dysfunctions. (Yes = 1, No = 0)

CHANGE - The percentage of potentially successful interventions of the alcoholic clients counseled obtained by summing those considered to be not drinking significantly

(NUMDRY) with those who may be drinking but have not returned as a problem case (NUMDONOK).

COUNALCH - A firm expression of the conviction that a counselor should be a recovered alcoholic.
(Yes = 1, No = 0)

COUNEXPR - Expression of the requirement that a counselor should have experience either in counseling or a related field as a qualification for being hired.
(Yes = 1, No = 0)

DIRALCH - A firm conviction that a program director must be a recovered alcoholic.
(Yes = 1, No = 0)

DIRTEXPR - Expression of the requirement that a director should definitely have proven experience in counseling programs or related fields.
(Yes = 1, No = 0)

DIRTORED - An expressed requirement that a program director should have a formal college education in an applicable field.
(Yes = 1, No = 0)

DOLRLOSS - Estimated economic loss given for each unidentified alcoholic in the workforce expressed in dollars per year. (Non-responsive programs were assigned the average of all programs giving a figure for the purposes of handling missing data in correlation and regressions).

DRINK - The percentage of the alcoholic clients counseled that may still be drinking obtained by summing those known to have failed (NUMWET) to those known to be drinking but have not recurred as a problem case (NUMDONOK).

EMPLREL - The condition where the employee or individual counseled has control over the release of information from their file.

EMPLSTAR - The ratio of employees to counseling staff. Half-time counselors were taken as in the calculation of their ratio. Husband and wife counseling teams were taken as 2.

EVALRULG - The practice of evaluating rule G uses and either advising or taking alternative action prior to the hearing on the case.

FAMILY - The expressed policy of allowing the same counseling services to an employee's family members that are allowed the employee.
(Yes = 1, No = 0)

FAMLYREF - The percentage of case referrals from family members.

FELOWREF - The percentage of case referrals attributed to fellow employees.

FUNDFED - The use of federal funds or grants in a program.
(Yes = 1, No = 0)

FUNDSEP - Program funds are identified as a separate line item in the corporate budget.
(Yes = 1, No = 0)

GSINPROG - The policy of allowing rule G violators the services of the program after they have been disciplined.
(Yes = 1, No = 0)

INFOADVZ - Utilization and/or generation of audio visual materials for education of management, union officials and the workforce.

INFOMAG - Use of the company magazine to spread program information.
(Yes = 1, No = 0)

INFOMAIL - Mailings of program information to home addresses.
(Yes = 1, No = 0)

INFOPAMP - The use of pamphlets to spread program information.
(Yes = 1, No = 0)

INFOPOST - Use of posters to advertise the program.
(Yes = 1, No = 0)

LAWREF - The percentage of case referrals attributable to law enforcement agencies (police of all sorts, prosecutors, probation officers, judges, etc..).

MANAGED - The organization and use of a syllabus or presentation to inform management and supervisors on program intent, policies, etc.
(Yes = 1, No = 0)

MEANAGE - The average age of the entire workforce eligible for the program services

MEDINVOL - Active involvement of the corporate medical department as detected by a working relationship of consultation between program and medical personnel and referrals from the medical department to the program. (Yes = 1, No = 0)

MEDICREF - The percentage of case referrals attributed to the corporate medical staff or an individual's doctor.

MEDREF - The policy of referring cases from the program to corporate medical personnel for screening and diagnosis. (Yes = 1, No = 0)

NUMDONOK - A percentage of the alcoholic clients identified as possibly drinking but who have not displayed a re-currence of major problems.

NUMDRY - The percentage of the alcoholic clients counseled identified as having discontinued drinking and other alcoholic behaviors. (See NUMDONOK, NUMWET, CHANGE DRINK)

NUMOFF - The number of program offices or centers.

NUMWET - The percentage of alcoholic clients that have failed to make a significant change in drinking behavior. (See NUMDONOK, NUMDRY, CHANGE, DRINK)

OFFPROP - The policy and practice of locating counseling offices away from company property. (Yes = 1, No = 0)

PARTUNON - The degree of union participation in setting program policy and overseeing operations. (Company only = 1, Company with union cooperation = 2, Joint company-union oversight = 3.)

PENETRAT - Penetration rate expressed in this report as a decimal fraction of the workforce (ie .006) reached by the program in a year. This may be converted to a percentage of the problem drinking portion of the workforce by dividing the values quoted by the decimal fraction estimator of problem drinkers. For example, if it is estimated that 5% of the workforce have problems in which a penetration of .006 has been made then .006 divided by .05 = .12 or 12% of the problem drinkers have been reached in a year (or some other fixed time).

PERCMALE - The percentage of males in the corporations' workforce.

PROGAGE - Program age to the nearest year.

RECCONF - A measure of the remoteness from corporate property of the program record location. (On the property = 1, an office off the property = 2, at the counselors home = 3)

REINSTAT - A measure of program power or authority in the reinstatement of rule G violators. (At counselors' direction = 5, at counselors' recommendation = 4, with positive counselor evaluation = 3, description of treatment progress only = 2, program required to "verify" abstinence = 1)

RULEGREF - The percentage of case referrals obtained as a result of rule G violations.

SCRENFAC - The presence of a practice of having the director or counselors screen facilities personally to which clients might be referred.
(Yes = 1, No = 0)

SELFREF - The percentage of case referrals attributable to the individual client volunteering.

SIGNREL - The policy or practice of using forms for release of information authority to be signed by the client if he so desires.
(Yes = 1, No = 0)

STAFSIZE - The total of directors and counselors in a program, not non-counseling employees, i.e., secretaries, administrative assistants and doctors practicing medicine only are excluded.

STANDAGR - The practice of directors entering into informal standing agreements with various treatment facilities concerning admission and handling of their clients.

SUPERRFF - The percentage of case referrals attributed to supervisory personnel.

TIMEPROG - The average length of time an individual client is kept under active surveillance by program personnel expressed in months. Responses like, "Until he dies or retires" were assigned a value of 20 years or 240 months.

TOTEMPLD - Total employees of the corporation eligible for program services.

TYPEPOL - A measure of policy formality and binding intent. (No policy, practices only = 1; informal policy, letters of intent = 2; a formal policy statement = 3.)

UNIONEDU - The presence of an operative education effort to inform union officials as to the policies, intents, and practices of the program on survey addiction data. (Yes = 1, No = 0)

UNIONREF - The percentage of case referrals attributable to union officials.

VOLUSED - The utilization of volunteer personnel in some capacity other than as AA sponsors only. (Yes = 1, No = 0)

COMPUTER FILE CONTENTS

CONTENTS OF CASE NUMBER 1

KEYCARD1	A1	TOTEMPLD	3200.	PERCMALE	90.	BROADCOV	1.	MEDINVOL	0
MEDREF	0	FAMILY	1.	DIRTORED	1.	DIRTEXPR	0	DIRALCH	0
COUNEXPR	0	COUNALCH	0	VOLUSED	1.	OFFPROP	1.	NUMOFF	1.
EMPLSTAF	3200.	FUNDSEP	0	FUNDFED	0	DOLRLOSS	2000.	INFOPAMP	1.
INFOPOST	1.	INFOMAIL	1.	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	0	EMPLREL	1.	SIGNREL	1.	BREAKJOB	1.	ALKPERYR	21.
ALKAVAGE	41.	ALKMENPC	91.	TIMEPROG	4.	NUMDRY	70.	NUMWET	30.
NUMDONOK	0	SELFREF	35.	FELOWREF	25.	SUPERREF	30.	UNIONREF	7.
LAWREF	0	FAMLYREF	0	RULEGREF	3.	MEDICREF	0	SCRENFAC	0
STANDAGR	0	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00656
MEANAGE	41.	STAFSIZE	1.	PROGAGE	1.4	PARTUNON	3.	RECCONF	1.
REINSTAT	3.	TYPEPOL	3.	CHANGE	70.	DRINK	30.		

CONTENTS OF CASE NUMBER 2

KEYCARD1	B1	TOTEMPLD	94500.	PERCMALE	95.	BROADCOV	1.	MEDINVOL	1.
MEDREF	0	FAMILY	1.	DIRTORED	0	DIRTEXPR	0	DIRALCH	0
COUNEXPR	1.	COUNALCH	1.	VOLUSED	1.	OFFPROP	0	NUMOFF	7.
EMPLSTAF	13500.	FUNDSEP	0	FUNDFED	0	DOLRLOSS	3000.	INFOPAMP	1.
INFOPOST	1.	INFOMAIL	0	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	1.	EMPLREL	0	SIGNREL	0	BREAKJOB	0	ALKPERYR	630.
ALKAVAGE	45.	ALKMENPC	95.	TIMEPROG	12.	NUMDRY	70.	NUMWET	30.
NUMDONOK	0	SELFREF	18.	FELOWREF	9.	SUPERREF	35.	UNIONREF	8.
LAWREF	1.	FAMLYREF	3.	RULEGREF	22.	MEDICREF	7.	SCRENFAC	1.
STANDAGR	1.	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00667
MEANAGE	45.	STAFSIZE	7.	PROGAGE	1.0	PARTUNON	3.	RECCONF	2.
REINSTAT	3.	TYPEPOL	3.	CHANGE	70.	DRINK	30.		

CONTENTS OF CASE NUMBER 3

KEYCARD1	C1	TOTEMPLD	25000.	PERCMALE	95.	BROADCOV	0	MEDINVOL	1.
MEDREF	0	FAMILY	1.	DIRTORED	0	DIRTEXPR	1.	DIRALCH	0
COUNEXPR	0	COUNALCH	1.	VOLUSED	1.	OFFPROP	1.	NUMOFF	4.
EMPLSTAF	6250.	FUNDSEP	1.	FUNDFED	0	DOLRLOSS	3500.	INFOPAMP	0
INFOPOST	0	INFOMAIL	0	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	1.	EMPLREL	0	SIGNREL	0	BREAKJOB	1.	ALKPERYR	87.
ALKAVAGE	43.	ALKMENPC	99.	TIMEPROG	6.	NUMDRY	75.	NUMWET	10.
NUMDONOK	15.	SELFREF	16.	FELOWREF	5.	SUPERREF	17.	UNIONREF	7.
LAWREF	1.	FAMLYREF	0	RULEGREF	36.	MEDICREF	18.	SCRENFAC	0
STANDAGR	0	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00348
MEANAGE	43.	STAFSIZE	7.	PROGAGE	2.3	PARTUNON	2.	RECCONF	1.
REINSTAT	5.	TYPEPOL	3.	CHANGE	90.	DRINK	25.		

CONTENTS OF CASE NUMBER 4

KEYCARD1	D1	TOTEMPLD	17946.	PERCMALE	97.	BROADCOV	0	MEDINVOL	0
MEDREF	0	FAMILY	1.	DIRTORED	1.	DIRTEXPR	1.	DIRALCH	0
COUNEXPR	0	COUNALCH	1.	VOLUSED	1.	OFFPROP	0	NUMOFF	2.
EMPLSTAF	8973.	FUNDSEP	0	FUNDFED	0	DOLRLOSS	3500.	INFOPAMP	1.
INFOPOST	0	INFOMAIL	0	INFOADVZ	1.	INFOMAG	0	MANAGED	1.
UNIONEDU	1.	EMPLREL	0	SIGNREL	0	BREAKJOB	1.	ALKPERYR	99.
ALKAVAGE	43.	ALKMENPC	99.	TIMEPROG	240.	NUMDRY	65.	NUMWET	15.
NUMDONOK	20.	SELFREF	1.	FELOWREF	18.	SUPERREF	21.	UNIONREF	21.
LAWREF	1.	FAMLYREF	2.	RULEGREF	36.	MEDICREF	0	SCRENFAC	0
STANDAGR	0	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00352
MEANAGE	43.	STAFSIZE	2.	PROGAGE	1.0	PARTUNON	2.	RECCONF	2.
REINSTAT	1.	TYPEPOL	3.	CHANGE	85.	DRINK	35.		

CONTENTS OF CASE NUMBER 5

KEYCARD1	E1	TOTEMPLD	41000.	PERCMALE	95.	BROADCOV	0	MEDINVOL	0
MEDREF	0	FAMILY	1.	DIRTORED	0	DIRTEXPR	0	DIRALCH	1.
COUNEXPR	0	COUNALCH	1.	VOLUSED	0	OFFPROP	1.	NUMOFF	5.
EMPLSTAF	4823.	FUNDSEP	1.	FUNDFED	0	DOLRLOSS	3000.	INFOPAMP	1.
INFOPOST	0	INFOMAIL	0	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	1.	EMPLREL	0	SIGNREL	0	BREAKJOB	0	ALKPERYR	322.
ALKAVAGE	38.	ALKMENPC	95.	TIMEPROG	240.	NUMDRY	60.	NUMWET	25.
NUMDONOK	15.	SELFREF	15.	FELOWREF	0	SUPERREF	50.	UNIONREF	2.
LAWREF	5.	FAMLYREF	5.	RULEGREF	33.	MEDICREF	0	SCRENFAC	1.
STANDAGR	0	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00785
MEANAGE	40.	STAFSIZE	11.	PROGAGE	25.0	PARTUNON	2.	RECCONF	3.
REINSTAT	3.	TYPEPOL	3.	CHANGE	75.	DRINK	40.		

CONTENTS OF CASE NUMBER 6

KEYCARD1	F1	TOTEMPLD	1797.	PERCMALE	98.	BROADCOV	1.	MEDINVOL	1.
MEDREF	0	FAMILY	1.	DIRTORED	0	DIRTEXPR	0	DIRALCH	0
COUNEXPR	0	COUNALCH	1.	VOLUSED	0	OFFPROP	1.	NUMOFF	1.
EMPLSTAF	1797.	FUNDSEP	0	FUNDFED	0	DOLRLOSS	3000.	INFOPAMP	1.
INFOPOST	1.	INFOMAIL	1.	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	1.	EMPLREL	1.	SIGNREL	1.	BREAKJOB	0	ALKPERYR	26.
ALKAVAGE	40.	ALKMENPC	99.	TIMEPROG	24.	NUMDRY	75.	NUMWET	25.
NUMDONOK	0	SELFREF	15.	FELOWREF	0	SUPERREF	50.	UNIONREF	0
LAWREF	5.	FAMLYREF	15.	RULEGREF	10.	MEDICREF	5.	SCRENFAC	0
STANDAGR	1.	EVALRULG	1.	ALTRULG	1.	GSINPROG	1.	PENETRAT	.01169
MEANAGE	43.	STAFSIZE	1.	PROGAGE	12.0	PARTUNON	2.	RECCONF	1.
REINSTAT	5.	TYPEPOL	3.	CHANGE	75.	DRINK	25.		

CONTENTS OF CASE NUMBER 7

KEYCARD1	J1	TOTEMPLD	5540.	PERCMALE	95.	BROADCOV	1.	MEDINVOL	1.
MEDREF	0	FAMILY	0	DIRTORED	1.	DIRTEXPR	0	DIRALCH	0
COUNEXPR	0	COUNALCH	0	VOLUSED	0	OFFPROP	1.	NUMOFF	1.
EMPLSTAF	5540.	FUNDSEP	0	FUNDFED	1.	DOLRLOSS	2000.	INFOPAMP	1.
INFOPOST	0	INFOMAIL	1.	INFOADVZ	0	INFOMAG	1.	MANAGED	0
UNIONEDU	0	EMPLREL	0	SIGNREL	0	BREAKJOB	1.	ALKPERYR	23.
ALKAVAGE	46.	ALKMENPC	95.	TIMEPROG	12.	NUMDRY	84.	NUMWET	8.
NUMDONCK	8.	SELFREF	32.	FELOWREF	5.	SUPERREF	42.	UNIONREF	0
LAWREF	0	FAMLYREF	16.	RULEGREF	0	MEDICREF	5.	SCRENFAC	0
STANDAGR	0	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00415
MEANAGE	46.	STAFSIZE	1.	PROGAGE	1.0	PARTUNON	3.	RECCONF	2.
REINSTAT	3.	TYPEPOL	3.	CHANGE	92.	DRINK	16.		

CONTENTS OF CASE NUMBER 8

KEYCARD1	K1	TOTEMPLD	25000.	PERCMALE	95.	BROADCOV	1.	MEDINVOL	0
MEDREF	0	FAMILY	1.	DIRTORED	0	DIRTEXPR	1.	DIRALCH	0
COUNEXPR	1.	COUNALCH	0	VOLUSED	1.	OFFPROP	0	NUMOFF	6.
EMPLSTAF	3571.	FUNDSEP	1.	FUNDFED	0	DOLRLOSS	3000.	INFOPAMP	0
INFOPOST	1.	INFOMAIL	0	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	1.	EMPLREL	1.	SIGNREL	1.	BREAKJOB	1.	ALKPERYR	140.
ALKAVAGE	45.	ALKMENPC	94.	TIMEPROG	24.	NUMDRY	69.	NUMWET	24.
NUMDONCK	7.	SELFREF	34.	FELOWREF	11.	SUPERREF	30.	UNIONREF	5.
LAWREF	0	FAMLYREF	10.	RULEGREF	15.	MEDICREF	0	SCRENFAC	1.
STANDAGR	0	EVALRULG	1.	ALTRULG	1.	GSINPROG	1.	PENETRAT	.00560
MEANAGE	42.	STAFSIZE	8.	PROGAGE	3.3	PARTUNON	2.	RECCONF	2.
REINSTAT	4.	TYPEPOL	2.	CHANGE	76.	DRINK	31.		

CONTENTS OF CASE NUMBER 9

KEYCARD1	M1	TOTEMPLD	19000.	PERCMALE	90.	BROADCOV	1.	MEDINVOL	1.
MEDREF	0	FAMILY	1.	DIRTORED	1.	DIRTEXPR	1.	DIRALCH	0
COUNEXPR	1.	COUNALCH	0	VOLUSED	1.	OFFPROP	1.	NUMOFF	2.
EMPLSTAF	6333.	FUNDSEP	1.	FUNDFED	0	DOLRLOSS	2000.	INFOPAMP	1.
INFOPOST	0	INFOMAIL	1.	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	1.	EMPLREL	1.	SIGNREL	1.	BREAKJOB	1.	ALKPERYR	133.
ALKAVAGE	42.	ALKMENPC	79.	TIMEPROG	24.	NUMDRY	50.	NUMWET	25.
NUMDONCK	25.	SELFREF	38.	FELOWREF	7.	SUPERREF	26.	UNIONREF	11.
LAWREF	1.	FAMLYREF	5.	RULEGREF	15.	MEDICREF	7.	SCRENFAC	1.
STANDAGR	1.	EVALRULG	1.	ALTRULG	0	GSINPROG	1.	PENETRAT	.00700
MEANAGE	43.	STAFSIZE	3.	PROGAGE	2.2	PARTUNON	3.	RECCONF	1.
REINSTAT	2.	TYPEPOL	3.	CHANGE	75.	DRINK	50.		

CONTENTS OF CASE NUMBER 10

KEYCARD1	N1	TOTEMPLD	4482.	PERCMALE	95.	BROADCOV	0	MEDINVOL	1.
MEDREF	1.	FAMILY	1.	DIRTORED	1.	DIRTEXPR	1.	DIRALCH	1.
COUNEXPR	0	COUNALCH	1.	VOLUSED	0	OFFPROP	1.	NUMOFF	5.
EMPLSTAF	2240.	FUNDSEP	0	FUNDFED	0	DOLRLOSS	3000.	INFOPAMP	1.
INFOPOST	1.	INFOMAIL	0	INFOADVZ	1.	INFOMAG	1.	MANAGED	0
UNIONEDU	0	EMPLREL	0	SIGNREL	1.	BREAKJOB	0	ALKPERYR	30.
ALKAVAGE	43.	ALKMENPC	99.	TIMEPROG	12.	NUMDRY	50.	NUMWET	50.
NUMDONOK	0	SELFREF	24.	FELOWREF	11.	SUPERREF	35.	UNIONREF	9.
LAWREF	0	FAMLYREF	0	RULEGREF	15.	MEDICREF	4.	SCRENFAC	1.
STANDAGR	1.	EVALRULG	1.	ALTRULG	0	GSINPROG	1.	PENETRAT	.00669
MEANAGE	42.	STAFSIZE	4.	PROGAGE	4.0	PARTUNON	3.	RECCONF	2.
REINSTAT	4.	TYPEPOL	3.	CHANGE	50.	DRINK	50.		

CONTENTS OF CASE NUMBER 11

KEYCARD1	Q1	TOTEMPLD	6825.	PERCMALE	95.	BROADCOV	0	MEDINVOL	0
MEDREF	0	FAMILY	0	DIRTORED	0	DIRTEXPR	1.	DIRALCH	1.
COUNEXPR	1.	COUNALCH	1.	VOLUSED	1.	OFFPROP	0	NUMOFF	1.
EMPLSTAF	6825.	FUNDSEP	0	FUNDFED	0	DOLRLOSS	3000.	INFOPAMP	0
INFOPOST	0	INFOMAIL	0	INFOADVZ	0	INFOMAG	1.	MANAGED	1.
UNIONEDU	0	EMPLREL	0	SIGNREL	0	BREAKJOB	1.	ALKPERYR	26.
ALKAVAGE	44.	ALKMENPC	99.	TIMEPROG	240.	NUMDRY	64.	NUMWET	20.
NUMDONOK	16.	SELFREF	2.	FELOWREF	3.	SUPERREF	20.	UNIONREF	8.
LAWREF	0	FAMLYREF	2.	RULEGREF	10.	MEDICREF	15.	SCRENFAC	0
STANDAGR	1.	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00381
MEANAGE	43.	STAFSIZE	1.	PROGAGE	2.7	PARTUNON	1.	RECCONF	2.
REINSTAT	3.	TYPEPOL	3.	CHANGE	80.	DRINK	36.		

CONTENTS OF CASE NUMBER 12

KEYCARD1	R1	TOTEMPLD	19400.	PERCMALE	99.	BROADCOV	0	MEDINVOL	0
MEDREF	0	FAMILY	1.	DIRTORED	0	DIRTEXPR	0	DIRALCH	1.
COUNEXPR	0	COUNALCH	1.	VOLUSED	0	OFFPROP	1.	NUMOFF	2.
EMPLSTAF	9700.	FUNDSEP	0	FUNDFED	0	DOLRLOSS	3500.	INFOPAMP	1.
INFOPOST	0	INFOMAIL	0	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	0	EMPLREL	0	SIGNREL	0	BREAKJOB	0	ALKPERYR	67.
ALKAVAGE	49.	ALKMENPC	98.	TIMEPROG	240.	NUMDRY	74.	NUMWET	26.
NUMDONOK	0	SELFREF	21.	FELOWREF	7.	SUPERREF	53.	UNIONREF	5.
LAWREF	1.	FAMLYREF	5.	RULEGREF	15.	MEDICREF	27.	SCRENFAC	1.
STANDAGR	1.	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00345
MEANAGE	42.	STAFSIZE	2.	PROGAGE	10.0	PARTUNON	2.	RECCONF	3.
REINSTAT	4.	TYPEPOL	1.	CHANGE	74.	DRINK	26.		

CONTENTS OF CASE NUMBER 13

KEYCARD1	T1	TOTEMPLD	77500.	PERCMALE	95.	BROADCOV	0	MEDINVOL	1.
MEDREF	1.	FAMILY	0	DIRTORED	1.	DIRTEXPR	0	DIRALCH	0
COUNEXPR	0	COUNALCH	0	VOLUSED	1.	OFFPROP	0	NUMOFF	7.
EMPLSTAF	8611.	FUNDSEP	0	FUNDFED	0	DOLRLOSS	3500.	INFOPAMP	1.
INFOPOST	1.	INFOMAIL	1.	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	1.	EMPLREL	0	SIGNREL	1.	BREAKJOB	1.	ALKPERYR	513.
ALKAVAGE	45.	ALKMENPC	99.	TIMEPROG	24.	NUMDRY	74.	NUMWET	26.
NUMDONOK	0	SELFREF	21.	FELOWREF	0	SUPERREF	61.	UNIONREF	2.
LAWREF	1.	FAMLYREF	3.	RULEGREF	0	MEDICREF	12.	SCRENFAC	0
STANDAGR	0	EVALRULG	0	ALTRULG	0	GSINPROG	0	PENETRAT	.00662
MEANAGE	41.	STAFSIZE	9.	PROGAGE	5.2	PARTUNON	2.	RECCONF	2.
REINSTAT	0	TYPEPOL	3.	CHANGE	74.	DRINK	26.		

CONTENTS OF CASE NUMBER 14

KEYCARD1	U1	TOTEMPLD	8500.	PERCMALE	95.	BROADCOV	1.	MEDINVOL	0
MEDREF	0	FAMILY	1.	DIRTORED	0	DIRTEXPR	1.	DIRALCH	1.
COUNEXPR	1.	COUNALCH	1.	VOLUSED	1.	OFFPROP	1.	NUMOFF	2.
EMPLSTAF	8500.	FUNDSEP	0	FUNDFED	1.	DOLRLOSS	3000.	INFOPAMP	1.
INFOPOST	1.	INFOMAIL	0	INFOADVZ	0	INFOMAG	1.	MANAGED	1.
UNIONEDU	0	EMPLREL	1.	SIGNREL	1.	BREAKJOB	1.	ALKPERYR	50.
ALKAVAGE	42.	ALKMENPC	90.	TIMEPROG	9.	NUMDRY	70.	NUMWET	30.
NUMDONOK	0	SELFREF	10.	FELOWREF	0	SUPERREF	50.	UNIONREF	4.
LAWREF	0	FAMLYREF	1.	RULEGREF	4.	MEDICREF	0	SCRENFAC	0
STANDAGR	0	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00588
MEANAGE	41.	STAFSIZE	1.	PROGAGE	2.0	PARTUNON	2.	RECCONF	1.
REINSTAT	3.	TYPEPOL	1.	CHANGE	70.	DRINK	30.		

CONTENTS OF CASE NUMBER 15

KEYCARD1	V1	TOTEMPLD	12477.	PERCMALE	92.	BROADCOV	1.	MEDINVOL	0
MEDREF	0	FAMILY	1.	DIRTORED	0	DIRTEXPR	1.	DIRALCH	0
COUNEXPR	1.	COUNALCH	0	VOLUSED	1.	OFFPROP	1.	NUMOFF	4.
EMPLSTAF	2495.	FUNDSEP	1.	FUNDFED	0	DOLRLOSS	4000.	INFOPAMP	0
INFOPOST	0	INFOMAIL	1.	INFOADVZ	1.	INFOMAG	1.	MANAGED	1.
UNIONEDU	1.	EMPLREL	1.	SIGNREL	1.	BREAKJOB	1.	ALKPERYR	60.
ALKAVAGE	44.	ALKMENPC	99.	TIMEPROG	2.	NUMDRY	80.	NUMWET	20.
NUMDONOK	0	SELFREF	27.	FELOWREF	14.	SUPERREF	28.	UNIONREF	14.
LAWREF	0	FAMLYREF	10.	RULEGREF	15.	MEDICREF	0	SCRENFAC	0
STANDAGR	0	EVALRULG	0	ALTRULG	0	GSINPROG	1.	PENETRAT	.00481
MEANAGE	43.	STAFSIZE	6.	PROGAGE	4.3	PARTUNON	3.	RECCONF	1.
REINSTAT	2.	TYPEPOL	2.	CHANGE	80.	DRINK	20.		

MEANS AND STANDARD DEVIATIONS OF VARIABLE VALUES

VARIABLE	MEAN	STANDARD DEVIATION	CASES
TOTEMPLD	24144.4667	27413.9500	15
PERCMALE	94.7333	2.4919	15
BROADCOV	.5333	.5164	15
MEDINVOL	.4667	.5164	15
MEDREF	.1333	.3519	15
FAMILY	.8000	.4140	15
DIRTORED	.4000	.5071	15
DIRTEXPR	.5333	.5164	15
DIRALCH	.3333	.4880	15
COUNEXPR	.4000	.5071	15
COUNALCH	.6000	.5071	15
VOLUSED	.6667	.4880	15
OFFPROP	.6667	.4880	15
NUMOFF	3.3333	2.2254	15
EMPLSTAF	6157.2000	3292.3525	15
FUNDSEP	.3333	.4880	15
FUNDFED	.1333	.3519	15
DOLRLOSS	3000.0000	597.6143	15
INFOPAMP	.7333	.4577	15
INFOPOST	.4667	.5164	15
INFOMAIL	.4000	.5071	15
INFOADVZ	.8000	.4140	15
INFOMAG	.9333	.2582	15
MANAGED	.8667	.3519	15
UNIONEDU	.6000	.5071	15
EMPLREL	.4000	.5071	15
SIGNREL	.5333	.5164	15
BREAKJOB	.6667	.4880	15
ALKPERYR	148.4667	189.2821	15

VARIABLE	MEAN	STANDARD DEVIATION	CASES
ALKAVAGE	43.3333	2.6367	15
ALKMENPC	95.3333	5.4598	15
TIMEPROG	74.2000	103.7471	15
NUMDRY	68.6667	9.6855	15
NUMWET	24.2667	9.8522	15
NUMDONOK	7.0667	8.8436	15
SELFREF	20.6000	11.3566	15
FELOWREF	7.2667	7.3724	15
SUPERREF	36.5333	13.6636	15
UNIONREF	6.8667	5.5532	15
LAWREF	1.0667	1.6676	15
FAMLYREF	5.1333	5.2626	15
RULEGREF	15.2667	12.0087	15
MEDICREF	6.6667	8.1035	15
SCRENFAC	.4000	.5071	15
STANDAGR	.4000	.5071	15
EVALRULG	.2667	.4577	15
ALTRULG	.1333	.3519	15
GSINPROG	.9333	.2582	15
PENETRAT	.0060	.0021	15
MEANAGE	42.5333	1.5523	15
STAFSIZE	4.2667	3.4323	15
PROGAGE	5.1600	6.3719	15
PARTUNON	2.3333	.6172	15
REINSTAT	3.0000	1.3628	15
TYPEPOL	2.6000	.7368	15
RECCONF	1.7333	.7037	15
CHANGE	75.7333	9.8522	15
DRINK	31.3333	9.6855	15

TABLE B-1

SUMMARY OF PROGRAM CHARACTERISTICS
(Based on Alcoholism Caseload)

Characteristic	PROGRAMS																			
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
Area Limited?	No	No	No	No	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No	No	No	No	No
Ratio Employees/ Staff x 10^3	3.2	13.5	6.3	8.9	4.8	1.8	*	*	5.5	3.6	*	6.3	2.2	*	6.8	9.7	*	8.6	8.5	2.5
Model	NCA	NCA	NCA	AA	AA	NCA	NCA	NCA	NIA	NCA	AA	NCA	AA	NCA	AA	AA	NCA	AA	NIA	NCA
Problem Coverage	B	B	A	A	A	B	A	B	A	B	A	B	A	B	A	A	B	A	B	B
Average Age Alcoholic Clients in Years	41	45	43	43	38	40	**	*	46	45	46	42	43	***	44	49	***	45	42	44
Referrals from Medical Staff?	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
Clients Control Data Release Completely?	Yes	No	No	No	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Client Time in Program (Months Average)	4	12	6	240	240	24	**	12	12	24	9	24	12	24	240	240	**	24	9	2
Education Program	M	MU	MU	MU	MU	MU	M	MU	N	MU	MU	MU	N	MU	M	M	N	MU	M	MU

TABLE B-1 (CONTINUED)

	PROGRAMS																			
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
% Supervisory Referrals	30	35	17	21	50	50	25	12	42	30	24	26	35	***	20	53	***	61	50	28
% Self-Referrals	35	18	16	1	15	15	25	65	32	34	7	38	24	***	2	20	85	21	10	27
Success Criteria	ILS	ILS	A	B	A	ILS	ILS	A	B	ILS	ILS	ILS	A	ILS	ILS	ILS	B	M	A	A
% Successful Treatment	70	70	75	65	60	75	**	90	84	**	68	50	50	***	64	74	***	74	70	80
Penetration Rate x 10^{-3}	6.6	6.7	3.5	5.5	7.8	11.7	*	*	4.2	5.6	*	7.0	6.7	*	3.8	3.5	*	6.6	5.9	4.8

*Unable to Compute from Available Data
**Information Not Provided
***Too Small a Sample for Meaningful Estimate

DEFINITIONS FOR TERMS USED IN TABLE B-1

Area Limited - An area limited program is one that is confined largely to employees in one division of the railroad that is defined by geographic boundaries.

Ratio, Employees/Staff - The number of eligible employees ÷ the number of program counseling personnel.

Model - A subjective estimate of the origins of the program policy practices and guidelines. NCA = National Council on Alcoholism, AA = Alcoholics Anonymous, NIA = National Institute on Alcohol Abuse and Alcoholism.

Problem Coverage - B = Broad Coverage Programs, A = Alcoholism and Drugs Only.

Educational Programs - M = Education Program for Management, MU = Education Programs for Management and Union Officials, N = No Formalized Educational Tasks.

Success Criteria - Primary Emphasis Given for Success in Treating Alcoholism

ILS = Improved Life Style, Sobriety
A = Abstinence
B = Improved Working Performance, Not a Problem
M = Medical Clearance Required

APPENDIX C

CORRELATION MATRIX
(Variables are defined in Appendix B)

CORRELATION COEFFICIENTS..

	TOTEMPLD	PERCMALE	BROADCOV	MEDINVOL	MEDREF	FAMILY	DIRTORED	DIRTEXPR	DIRALCH	COUNEXPR
TOTEMPLD	1.00000	.07009	-.11676	.29672	.24950	-.10970	-.08837	-.37300	-.21634	.11014
PERCMALE	.07009	1.00000	-.43667	-.00740	.04345	-.05538	-.36177	-.21463	.31330	-.36177
BROADCOV	-.11676	-.43667	1.00000	.07143	-.41931	.20045	-.05455	-.07143	-.47246	.49099
MEDINVOL	.29672	-.00740	.07143	1.00000	.41931	-.20045	.32733	-.19643	-.37796	-.21822
MEDREF	.24950	.04345	-.41931	.41931	1.00000	-.29417	.48038	-.02621	.13868	-.32026
FAMILY	-.10970	-.05538	.20045	-.20045	-.29417	1.00000	-.27217	.20045	0	.06804
DIRTORED	-.08837	-.36177	-.05455	.32733	.48038	-.27217	1.00000	-.05455	-.28868	-.38889
DIRTEXPR	-.37300	-.21463	-.07143	-.19643	-.02621	.20045	-.05455	1.00000	.09449	.49099
DIRALCH	-.21634	.31330	-.47246	-.37796	.13868	0	-.28868	.09449	1.00000	0
COUNEXPR	.11014	-.36177	.49099	-.21822	-.32026	.06804	-.38889	.49099	0	1.00000
COUNALCH	.01105	.64441	-.49099	-.05455	-.08006	.27217	-.44444	.05455	.57735	-.16667
VOLUSED	.25900	-.48954	.18898	-.18898	-.13868	0	0	.47246	-.40000	.57735
OFFPROP	-.53958	-.19582	.18898	.09449	-.13868	.35355	0	-.09449	.20000	-.28868
NUMOFF	.78580	.01717	-.16575	.22790	.48650	.07752	-.12659	-.04164	-.10963	.12659
EMPLSTAF	.65696	.27526	-.18156	.04918	-.09023	-.13123	-.08754	-.17102	.05789	.18315
FUNDSEP	.00937	-.39163	.09449	-.09449	-.27735	.35355	-.28868	.37796	-.20000	.28868
FUNDFED	-.25361	.04345	.36690	.02621	-.15385	-.29417	.08006	-.02621	.13868	.08006
COLRLOSS	.23831	.47965	-.46291	-.23146	.16984	.14434	-.47140	.23146	.12247	.00000
INFOPAMP	.15526	.12107	.04029	.26189	.23652	.07538	.49237	-.56408	.10660	-.43082
INFOPOST	.23194	-.00740	.33929	.19643	.41931	.13363	.05455	-.19643	-.09449	.05455
INFOMAIL	-.13027	-.47483	.49099	.32733	.08006	-.27217	.44444	-.32733	-.57735	-.11111
INFOADVZ	.32452	-.05538	-.13363	.13363	.19612	.58333	.06804	-.13363	-.35355	-.27217
INFOMAG	.06255	-.25164	.28571	.25000	.10483	-.13363	-.32733	-.25000	.18898	.21822
MANAGED	.28337	-.04345	.02621	-.41931	-.42308	.29417	-.48038	.02621	-.13868	.32026
UNIONEDU	.49800	-.03392	.05455	.21822	-.08006	.27217	-.16667	.05455	-.57735	.11111
EMPLREL	-.38482	-.47483	.76376	-.21822	-.32026	.40825	-.11111	.21822	-.28868	.44444
SIGNREL	-.20788	-.43667	.46429	.07143	.36690	.20045	.21822	.19643	-.18898	.21822
BREAKJOB	-.21603	-.48954	.18898	-.18898	-.13868	-.35355	.28868	.47246	-.40000	.28868
ALKPERYR	.98740	.02845	-.07654	.29430	.26390	-.10627	-.05343	-.41123	-.19128	.11029
ALKAVAGE	.17916	.30802	-.08743	.03497	.10265	-.32714	.00000	-.03497	-.03701	.10684
ALKMENPC	.06552	.63701	-.52358	-.05911	.27266	-.22118	-.25799	-.11823	.11618	-.41279
TIMEPROG	-.04908	.45942	-.64343	-.54050	-.21993	-.08880	-.17542	-.04880	.52206	-.18221
NUMDRY	.04613	.25353	.26658	-.03808	-.27945	-.28499	-.27632	-.37607	-.38288	-.13089
NUMWET	.06225	-.08418	-.02995	.05803	.56593	.32919	.12010	-.00187	.44079	.04861
NUMDONCK	-.11988	-.18389	-.25859	-.02294	-.32442	-.05462	.16883	.41396	-.07173	.08920
SELFREF	-.05976	-.58709	.53835	.24116	.06793	.10330	.33985	-.15590	-.39959	.06698
FELOWREF	-.35493	-.42354	.12883	-.37274	-.09729	.32292	.42798	.20388	-.30446	-.10699
SUPERREF	.26967	.39048	-.01282	.10393	.34072	-.16919	-.04330	-.66071	.27141	-.31133
UNIONREF	-.08680	-.21955	-.14779	-.27565	-.09992	.32930	.22322	.59946	-.16695	.22322
LAWREF	.12659	.34836	-.12718	.12718	-.13796	.22759	-.28719	-.45896	.05852	-.37166
FAMLYREF	-.19691	.18810	.49764	.15945	-.28030	-.18358	-.12848	-.29087	-.35234	.00535
RULEGREF	.17014	.21021	-.43923	-.10213	-.26258	.51430	-.26509	.27490	.00813	-.12434
MEDICREF	.14175	.40561	-.50070	.19345	.06680	-.25547	-.20859	-.15931	.22882	-.19121
SCRENFAC	.30066	.03392	-.05455	.05455	.08006	.40825	-.11111	-.05455	.28868	.16667
STANDAGR	.00584	.20350	-.05455	.32733	.08006	.06804	-.11111	-.05455	.28868	.16667
EVALRULG	-.26354	-.05845	.26189	.34247	.20696	.30151	.12309	.26189	-.10660	.12309
ALTRULG	-.15915	.28784	.36690	.02621	-.15385	.19612	-.32026	-.02621	-.27735	.08006

	TOTEMPLD	PERCMALE	BROADCOV	MEDINVOL	MEDREF	FAMILY	DIRTORED	DIRTEXPR	DIRALCH	COUNEXPR
GSINPROG	-.53843	-.02960	.28571	-.28571	-.68139	.53452	-.32733	.28571	.18898	.21822
PENETRAT	.06751	.02205	.29579	.29074	.13009	.27844	.04240	-.33690	-.15645	-.14453
MEANAGE	.04087	.07633	.33267	.46931	-.27027	-.26673	.07260	-.02376	-.44009	.16334
STAFSIZE	.67569	-.04955	-.24717	.08597	.26417	.09047	-.22982	-.08597	-.09951	.01642
PROGAGE	.07608	.30473	-.30565	-.18278	-.03568	.17815	-.35724	-.42287	.41123	-.34176
PARTUNON	.04919	-.54182	.52291	.37351	.10963	.27951	.45644	-.14940	-.39528	.00000
REINSTAT	-.37741	.29447	.10150	.10150	-.29792	.37978	-.51681	.00000	.21483	-.10336
TYPEPOL	.18244	-.25677	-.15019	.52566	.22042	-.28098	.45883	-.15019	-.39736	-.30589
RECCONF	.32213	.52680	-.56345	-.22276	.15385	-.19612	-.08006	-.36690	.48536	-.28022
CHANGE	-.06225	.08418	.02995	-.05803	-.56593	-.32919	-.12010	.00187	-.44079	-.04861
DRINK	-.04613	-.25353	-.26658	.03808	.27945	.28499	.27632	.37607	.38288	.13089

	COUNALCH	VOLUSED	OFFPROP	NUMOFF	EMPLSTAF	FUNDSEP	FUNDFED	DOLRLOSS	INFOPAMP	INFOPOST
TOTEMPLD	.01105	.25900	-.53958	.78580	.65696	.00937	-.25361	.23831	.15526	.23194
PERCMALE	.64441	-.48954	-.19582	.01717	.27526	-.39163	.04345	.47965	.12107	-.00740
BROADCOV	-.49099	.18898	.18898	-.16575	-.18156	.09449	.36690	-.46291	.04029	.33929
MEDINVOL	-.05455	-.18898	.09449	.22790	.04918	-.09449	.02621	-.23146	.26189	.19643
MEDREF	-.08006	-.13868	-.13868	.48650	-.09023	-.27735	-.15385	.16984	.23652	.41931
FAMILY	.27217	0	.35355	.07752	-.13123	.35355	-.29417	.14434	.07538	.13363
DIRTORED	-.44444	0	0	-.12659	-.08754	-.28868	.08006	-.47140	.49237	.05455
DIRTEXPR	.05455	.47246	-.09449	-.04144	-.17102	.37796	-.02621	.23146	-.56408	-.19643
DIRALCH	.57735	-.40000	.20000	-.10963	.05789	-.20000	.13868	.12247	.10660	-.09449
COUNEXPR	-.16667	.57735	-.28868	.12659	.18315	.28868	.08006	.00000	-.43082	.05455
COUNALCH	1.00000	-.28868	.00000	-.06330	.30775	-.28868	-.08006	.35355	.12309	-.05455
VOLUSED	-.28868	1.00000	-.50000	.17541	.29727	.20000	-.13868	.12247	-.42640	.09449
OFFPROP	.00000	-.50000	1.00000	-.41660	-.47548	.20000	.27735	-.24495	.21320	-.18898
NUMOFF	-.06330	.17541	-.41660	1.00000	.22434	.28504	-.33447	.40281	-.11687	.35222
EMPLSTAF	.30775	.29727	-.47548	.22434	1.00000	-.32520	.10640	.15207	.26010	-.07064
FUNDSEP	-.28868	.20000	.20000	.28504	-.32520	1.00000	-.27735	.12247	-.53300	-.37796
FUNDFED	-.08006	-.13868	.27735	-.33447	.10640	-.27735	1.00000	-.33968	.23652	.02621
DOLRLOSS	.35355	.12247	-.24495	.40281	.15207	.12247	-.33968	1.00000	-.39167	-.11573
INFOPAMP	.12309	-.42640	.21320	-.11687	.26010	-.53300	.23652	-.39167	1.00000	.26189
INFOPOST	-.05455	.09449	-.18898	.35222	-.07064	-.37796	.02621	-.11573	.26189	1.00000
INFOMAIL	-.72222	0	.28868	-.25318	-.38365	0	.08006	-.35355	.18464	.05455
INFOADVZ	-.06804	0	0	.46513	-.12541	.35355	-.78446	.28868	.07538	.13363
INFOMAG	-.21822	-.18898	.37796	.16575	-.23660	.18898	.10483	-.23146	-.16116	.25000
MANAGED	.08006	.55470	-.27735	.06081	.27958	.27735	-.42308	.33968	-.23652	-.02621
UNIONEDU	-.11111	.28868	-.28868	.50637	.04014	.57735	-.48038	.35355	-.18464	-.05455
EMPLREL	-.44444	.28868	.28868	-.25318	-.47264	.28868	.08006	-.23570	-.12309	.32733
SIGNREL	-.49099	.18898	.18898	.08287	-.52560	.09449	-.02621	-.11573	.04029	.60714
BREAKJOB	-.57735	.70000	-.20000	-.21926	-.05664	.20000	.27735	-.12247	-.42640	-.18898
ALKPERYR	.00060	.21216	-.51481	.77319	.60155	-.00026	-.24016	.16797	.23155	.27092
ALKAVAGE	-.16027	.03701	-.29609	.11361	.44414	-.25908	.10265	.22665	-.15782	-.12240
ALKMENPC	.38699	-.25024	-.25024	.19596	-.05214	-.28599	-.21069	.68958	-.27628	-.00844
TIMEPROG	.48226	-.22152	-.23846	-.22151	.27158	-.10582	-.24928	.25000	.03730	-.54717
NUMDRY	-.21815	.00504	.02015	-.10052	.06733	-.14106	.34932	.24681	-.21482	-.03808

	COUNALCH	VOLUSED	OFFPROP	NUMOFF	EMPLSTAF	FUNDSEP	FUNDFED	DOLRLOSS	INFOPAMP	INFOPOST
NUMWET	.18014	-.18820	.09410	.30189	-.13166	-.25754	-.21703	-.05459	.36535	.63365
NUMDONOK	.03823	.20415	-.12690	-.22623	.07294	.44140	-.14079	-.20948	-.17175	-.66421
SELFREF	-.78637	-.05156	.34803	.10740	-.37376	.34803	.01430	-.51064	.04672	.15590
FELOWREF	-.35155	.26474	.02647	-.21043	-.29020	.01324	-.26250	-.12970	-.08325	-.01626
SUPERREF	.02268	-.50710	.16784	.16992	.11692	-.33926	.28129	.05249	.58397	.35701
UNIONREF	.05580	.48327	-.25482	-.04239	.13661	.12302	-.35581	.29056	-.18359	-.32547
LAWREF	.37166	-.49742	.20482	.01283	-.15674	.14630	-.25969	.07167	.30568	-.03871
FAMLYREF	-.35331	-.42651	.15762	-.18704	-.35924	.12054	.25973	-.13627	-.04349	-.10338
RULEGREF	.51142	.04063	-.08127	.23432	.16096	.45915	-.44853	.40310	-.19405	-.43616
MEDICREF	.27812	-.13849	-.01204	-.06073	.39855	-.15054	-.20876	.24337	-.12196	-.31863
SCRENFAC	.11111	-.28868	0	.44307	.13793	.28868	-.32026	-.11785	.18464	.05455
STANDAGR	.38889	-.28868	0	-.12659	.14768	-.28868	-.32026	-.11785	.18464	.05455
EVALRULG	-.12309	-.21320	.10660	.04675	-.50657	.21320	-.23652	-.26112	.02273	.34247
ALTRULG	-.08006	-.13868	-.13868	.03041	-.42830	.13868	-.15385	0	-.20696	.41931
GSINPROG	.32733	-.18898	.37796	-.45581	-.20618	.18898	.10483	-.23146	-.16116	-.28571
PENETRAT	.07888	-.27365	.12006	.04792	-.32016	-.08297	-.18802	-.19261	.46579	.51643
MEANAGE	-.07260	-.03143	-.12574	-.15853	.22528	-.15717	.25283	-.19250	-.08712	-.24356
STAFSIZE	-.09849	.09951	-.24168	.87591	.05971	.58287	-.38640	.38305	-.22429	.04567
PROGAGE	.29976	-.60191	.28947	.12140	-.22114	.25960	-.23320	.16788	.19690	-.15673
PARTUNON	-.45644	-.07906	.39528	.12134	-.15125	.07906	.10963	-.38730	.33710	.14940
REINSTAT	.41345	-.42967	.42967	-.18842	-.33435	.10742	.00000	-.08771	-.22901	.10130
TYPEPOL	-.07647	.00000	-.19868	.08713	-.16262	.00000	-.33062	-.32444	.08472	-.03755
RECCONF	.28022	-.48536	-.27735	.28886	.32607	-.13868	-.13462	.16984	.20696	-.22276
CHANGE	-.18014	.18820	-.09410	-.30189	.13166	.25754	.21703	.05459	-.36535	-.63365
DRINK	.21815	-.00504	-.02015	.10052	-.06733	.14106	-.34932	-.24681	.21482	.03808

	INFOMAIL	INFOADVZ	INFOMAG	MANAGED	UNIONEDU	EMPLREL	SIGNREL	BREAKJOB	ALKPERYR	ALKAVAGE
TOTEMPLD	-.13027	.32452	.06255	.28337	.49800	-.38482	-.20788	-.21603	.98740	.17916
PERCMALE	-.47483	-.05538	-.25164	-.04345	-.03392	-.47483	-.43667	-.48954	.02845	.30802
BROADCOV	.49099	-.13363	.28571	.02621	.05455	.76376	.46429	.18898	-.07654	-.08743
MEDINVOL	.32733	.13363	.25000	-.41931	.21822	-.21822	.07143	-.18898	.29430	.03497
MEDREF	.08006	.19612	.10483	-.42308	-.08006	-.32026	.36690	-.13868	.26390	.10265
FAMILY	-.27217	.58333	-.13363	.29417	.27217	.40825	.20045	-.35355	-.10627	-.32714
DIRTORED	.44444	.06804	-.32733	-.48038	-.16667	-.11111	.21822	.28868	-.05343	.00000
DIRTEXPR	-.32733	-.13363	-.25000	.02621	.05455	.21822	.19643	.47246	-.41123	-.03497
DIRALCH	-.57735	-.35355	.18898	-.13868	-.57735	-.28868	-.18898	-.40000	-.19128	-.03701
COUNEXPR	-.11111	-.27217	.21822	.32026	.11111	.44444	.21822	.28868	.11029	.10684
COUNALCH	-.72222	-.06804	-.21822	.08006	-.11111	-.44444	-.49099	-.57735	.00060	-.16027
VOLUSED	0	0	-.18898	.55470	.28868	.28868	.18898	.70000	.21216	.03701
OFFPROP	.28868	0	.37796	-.27735	-.28868	.28868	.18898	-.20000	-.51481	-.29609
NUMOFF	-.25318	.46513	.16575	.06081	.50637	-.25318	.08287	-.21926	.77319	.11361
EMPLSTAF	-.38365	-.12541	-.23660	.27958	.04014	-.47264	-.52560	-.05664	.60155	.44414
FUNDSEP	0	.35355	.18898	-.27735	.57735	.28868	.09449	.20000	-.00026	-.25908
FUNDFED	.08006	-.78446	.10483	-.42308	-.48038	.08006	-.02621	.27735	-.24016	.10265
DOLRLOSS	-.35355	.28868	-.23146	.33968	.35355	-.23570	-.11573	-.12247	.16797	.22665
INFOPAMP	.18464	.07538	-.16116	-.23652	-.18464	-.12309	.04029	-.42640	.23155	-.15782

	INFOMAIL	INFOADVZ	INFOMAG	MANAGED	UNIONEDU	EMPLREL	SIGNREL	BREAKJOB	ALKPERYR	ALKAVAGE
INFOPOST	.05455	.13363	.25000	-.02621	-.05455	.32733	.60714	-.18898	.27092	-.12240
INFOMAIL	1.00000	.06804	.21822	-.08006	.11111	.44444	.49099	.28868	-.08543	-.10684
INFOADVZ	.06804	1.00000	-.13363	.29417	.61237	.06804	.20045	-.35355	.31572	-.13086
INFOMAG	.21822	-.13363	1.00000	-.10483	-.21822	.21822	.28571	-.18898	.07230	.03497
MANAGED	-.08006	.29417	-.10483	1.00000	.48038	.32026	.02621	.13868	.26161	-.17964
UNIONEDU	.11111	.61237	-.21822	.48038	1.00000	.11111	.05455	.00000	.50143	-.26711
EMPLREL	.44444	.06804	.21822	.32026	.11111	1.00000	.76376	.28868	-.34292	-.32053
SIGNREL	.49099	.20045	.28571	.02621	.05455	.76376	1.00000	.18898	-.15692	-.24481
BREAKJOB	.28868	-.35355	-.18898	.13868	.00000	.28868	.18898	1.00000	-.25727	.09253
ALKPERYR	-.08543	.31572	.07230	.26161	.50143	-.34292	-.15692	-.25727	1.00000	.06693
ALKAVAGE	-.10684	-.13086	.03497	-.17964	-.26711	-.32053	-.24481	.09253	.06693	1.00000
ALKMENPC	-.25799	.06320	-.18579	-.12394	.00000	-.51599	-.32090	-.25824	.01525	.23485
TIMEPROG	-.48226	-.06385	-.44211	.24341	-.09748	-.48633	-.62743	-.22152	-.04737	.04021
NUMDRY	.30541	-.21374	.10473	.06986	.00000	.02909	-.16185	.21663	-.01927	.38504
NUMWET	-.16585	.25915	.26020	-.19505	-.26307	.12010	.50355	-.51508	.12303	-.15489
NUMDONCK	-.14972	-.05462	-.40457	.14079	.29307	-.16565	-.38372	.33657	-.11596	-.24914
SELFREF	.55071	.27040	.47745	-.26455	-.00496	.43908	.47745	.12690	-.04879	.13358
FELOWREF	.14139	.32292	-.40276	-.04038	-.14139	.25602	.18512	.30446	-.37099	.03185
SUPERREF	.18350	-.03030	.31450	-.05844	-.11134	-.05361	.17952	-.43211	.31751	.05023
UNIONREF	-.18263	.26717	-.70407	.17303	.20800	-.00507	-.07306	.27239	-.11763	.04228
LAWREF	.05068	.33104	.01106	.25969	.45612	-.03379	-.12718	-.58521	.20220	-.59022
FAMLYREF	.48714	-.11801	.16471	-.22116	.18201	.27301	.07710	-.06490	-.16743	.10467
RULEGREF	-.57006	.45684	-.47763	.26258	.52315	-.34720	-.51986	-.22754	.13877	-.24213
MEDICREF	-.19121	.00000	.22759	.10855	-.19121	-.48671	-.43242	-.17462	.03634	.58391
SCRENFAC	-.38889	.40825	.21822	-.08006	.11111	-.11111	-.05455	-.57735	.32089	.10684
STANDAGR	-.11111	.06804	.21822	-.08006	-.16667	-.11111	-.05455	-.57735	.01578	.16027
EVALRULG	.12309	.30151	.16116	-.20696	.18464	.43082	.56408	-.21320	-.21836	-.19727
ALTRULG	.08006	.19612	.10483	.15385	.32026	.48038	.36690	-.13868	-.14042	-.12831
OSINPROG	-.32733	-.13363	-.07143	-.10483	-.21822	.21822	-.25000	-.18898	-.53278	-.17486
PENETRAT	.33094	.33922	.06199	.10932	.36096	.37882	.46063	-.44964	.18212	-.65650
MEANAGE	.16334	-.26673	-.08317	-.38361	.01815	-.19964	-.38020	.06287	-.00066	.42466
STAFSIZE	-.18878	.49257	.18269	.20897	.64021	-.22982	-.04567	-.15638	.67650	-.12102
PROGAGE	-.10744	.26479	.18061	.16949	.21797	-.12733	-.14935	-.60191	.14762	-.44555
PARTUNCN	.45644	.27951	.14940	-.43853	.00000	.22822	.29881	-.07906	.07867	.01463
REINSTAT	-.31009	.00000	.40600	-.14896	-.20672	.10336	-.10150	-.42967	-.40623	-.07951
TYPEPOL	.26765	.18732	-.15019	-.22042	.30589	-.30589	-.15019	.00000	.23396	-.40444
RECCONF	-.48038	.04903	-.10483	-.15385	-.12010	-.68054	-.56345	-.48536	.32489	.32079
CHANGE	.16585	-.25915	-.26020	.19505	.26307	-.12010	-.50355	.51508	-.12303	.15489
DRINK	-.30541	.21374	-.10473	-.06986	.00000	-.02909	.16185	-.21663	.01927	-.38504

	ALKMENPC	TIMEPROG	NUMDRY	NUMWET	NUMDONOK	SELFREF	FELOWREF	SUPEPREF	UNIONREF	LAWREF
TOTEMPLD	.06552	-.04908	.04613	.06225	-.11988	-.05976	-.35493	.26967	-.08680	.12659
PERCMALE	.63701	.45942	.25353	-.08418	-.18389	-.58709	-.42354	.39048	-.21955	.34836
BROADCOV	-.52358	-.64343	.26658	-.02995	-.25859	.53835	.12883	-.01282	-.14779	-.12718
MEDINVOL	-.05911	-.54050	-.03808	.05803	-.02294	.24116	-.37274	.10393	-.27565	.12718
MEDREF	.27266	-.21993	-.27945	.56593	-.32442	.06793	-.09729	.34072	-.09992	-.13796
FAMILY	-.22118	-.08880	-.28499	.32919	-.05462	.10330	.32292	-.16919	.32930	.22759
DIRTORED	-.25799	-.17542	-.27632	.12010	.16883	.33985	.42798	-.04330	.22322	-.28719
DIRTEXPR	-.11823	-.04880	-.37607	-.00187	.41396	-.15590	.20388	-.66071	.59946	-.45895
DIRALCH	.11618	.52206	-.38288	.44079	-.07173	-.39959	-.30446	.27161	-.16695	.05852
COUNEXPR	-.41279	-.18221	-.13089	.04861	.08920	.06698	-.10699	-.31133	.22322	-.37166
COUNALCH	.38699	.48226	-.21815	.18014	.03823	-.78637	-.35155	.02268	.05580	.37166
VOLUSED	-.25024	-.22152	.00504	-.18820	.20415	-.05156	.26474	-.50710	.48327	-.49742
OFFPROP	-.25024	-.23846	.02015	.09410	-.12690	.34803	.02647	.16784	-.25482	.20482
NUMOFF	.19596	-.22151	-.10052	.30189	-.22623	.10740	-.21043	.16992	-.04239	.01283
EMPLSTAF	-.05214	.27158	.06733	-.13166	.07294	-.37376	-.29020	.11692	.13661	-.15674
FUNDSEP	-.28599	-.10582	-.14106	-.25754	.44140	.34803	.01324	-.33926	.12302	.14630
FUNDFED	-.21069	-.24928	.34932	-.21703	-.14079	.01430	-.26250	.28129	-.35581	-.25969
COLRLOSS	.68958	.25000	.24681	-.05459	-.20948	-.51044	-.12970	.05269	.29056	.07167
INFOPAMP	-.27628	.03730	-.21482	.36535	-.17175	.04672	-.08325	.58397	-.18359	.30568
INFOPOST	-.00844	-.54717	-.03808	.63365	-.66421	.15590	-.01626	.35701	-.32547	-.03871
INFOMAIL	-.25799	-.48226	.30541	-.16585	-.14972	.55071	.14139	.18350	-.18263	.05068
INFOADVZ	.06320	-.06385	-.21374	.25915	-.05462	.27040	.32292	-.03030	.26717	.33104
INFOMAG	-.18579	-.44211	.10473	.26020	-.40457	.47745	-.40276	.31450	-.70407	.01106
MANAGED	-.12394	.24341	.06986	-.19505	.14079	-.26455	-.04038	-.05844	.17303	.25969
UNIONEDU	.00000	-.09748	.00000	-.26307	.29307	-.00496	-.14139	-.11134	.20800	.45612
EMPLREL	-.51599	-.48633	.02909	.12010	-.16565	.43908	.25602	-.05361	-.00507	-.03379
SIGNREL	-.32090	-.62743	-.16185	.50355	-.38372	.47745	.18512	.17952	-.07306	-.12718
BREAKJOB	-.25024	-.22152	.21663	-.51508	.33657	.12890	.30446	-.43211	.27239	-.58521
ALKPERJR	.01525	-.04737	-.01927	.12303	-.11596	-.04879	-.37099	.31751	-.11763	.20220
ALKAVAGE	.23485	.04021	.38504	-.15489	-.24914	.13358	.03185	.05023	.04228	-.59022
ALKMENPC	1.00000	.26128	.42098	-.09738	-.35257	-.51609	-.06093	.08458	-.01021	.10722
TIMEPROG	.26128	1.00000	-.20657	-.16931	.41485	-.58853	-.05134	-.00109	.21912	.28025
NUMDRY	.42098	-.20657	1.00000	-.59035	-.43752	.00779	-.07069	.22381	-.31563	-.06928
NUMWET	-.09738	-.16931	-.59035	1.00000	-.46750	.13445	.06484	.27425	-.03586	-.02724
NUMDONOK	-.35257	.41485	-.43752	-.46750	1.00000	-.15831	.00519	-.55065	.38562	.10623
SELFREF	-.51609	-.58853	.00779	.13445	-.15831	1.00000	.32129	.03047	-.20931	-.24365
FELOWREF	-.06093	-.05134	-.07069	.06484	.00519	.32129	1.00000	-.52056	.60983	-.44310
SUPEPREF	.08458	-.00109	.22381	.27425	-.55065	.03047	-.52056	1.00000	-.68055	.40272
UNIONREF	-.01021	.21912	-.31563	-.03586	.38562	-.20931	.60983	-.68055	1.00000	-.35378
LAWREF	.10722	.28025	-.06928	-.02724	.10623	-.24365	-.44310	.40272	-.35378	1.00000
FAMLYREF	.05552	-.17065	.49281	-.38234	-.11378	.31528	-.19981	.25224	-.38308	.29192
RULEGREF	.18484	.41659	-.27001	-.20350	.52242	-.38726	.06852	-.43886	.48685	.33789
MEDICREF	.24486	.30042	.14956	-.16343	.01827	-.15523	-.31524	.09204	-.17883	-.05638
SCREENLC	-.30959	.14500	-.56719	.49182	.07327	.32745	-.08789	.10103	-.03044	.13515
STANDAGR	-.07740	.14500	-.42175	.43463	-.02230	-.06946	-.24074	-.00206	-.00507	.13515
EVALRULG	-.29534	-.32007	-.49408	.42659	.06588	.39298	-.00141	-.05863	-.06931	.16220
ALTRULG	.08675	-.19645	.13973	.00962	-.16374	.13943	-.09729	.10301	-.31925	.34896
GSINPROG	-.18579	.13386	-.15233	-.04867	.22106	-.00974	.27267	-.49537	.24244	.01106
PENETRAT	-.13992	-.21333	-.23406	.38871	-.17669	.03647	-.20262	.38107	-.27209	.70982
MEANAGE	.05338	-.21760	.34049	-.43499	.11170	.08185	-.04452	-.33096	.10827	-.23547

	ALKMENPC	TIMEPROG	NUMDRY	NUMWET	NUMDONOK	SELFREF	FELOWREF	SUPERREF	UNIONREF	LAWREF
STAFSIZE	.15119	-.03887	-.06589	.03788	.02996	.10188	-.25141	.13839	-.11417	.27121
PROGAGE	.15625	.45465	-.12268	.10714	.01501	-.14820	-.38916	.50802	-.40308	.83448
PARTUNON	-.37447	-.60794	-.03983	.25450	-.23991	.70314	.40290	-.05646	.13893	-.23132
REINSTAT	.13440	-.12226	.05953	.09044	-.16595	.05077	-.12797	-.10357	-.37754	.22001
TYPEPOL	.05327	-.07363	-.25023	-.10234	.38806	.00512	.06049	-.31786	.07332	.25579
RECCONF	.32223	.69247	-.11877	.08310	.03749	-.20199	-.20559	.35756	-.15597	.19883
CHANGE	.09738	.16931	.59035	-1.00000	.46750	-.13445	-.06484	-.27425	.03586	.02724
DRINK	-.42098	.20657	-1.00000	.59035	.43752	-.00779	.07069	-.22381	.31563	.06928

	FAMLYREF	RULEGREF	MEDICREF	SCRENFAC	STANDAGR	EVALRULG	ALTRULG	GSINPROG	PENETRAT	MEANAGE
TOTEMPLD	-.19691	.17014	.14175	.30066	.00584	-.26354	-.15915	-.53843	.06751	.04087
PERCMALE	.18810	.21021	.40561	.03392	.20350	-.05845	.28784	-.02960	.02205	.07633
BROADCOV	.49764	-.43923	-.50070	-.05455	-.05455	.26189	.36690	.28571	.29579	.33267
MEDINVOL	.15945	-.10213	.19345	.05455	.32733	.34247	.02621	-.28571	.29074	.46931
MEDREF	-.28030	-.26258	.06680	.08006	.08006	.20696	-.15385	-.68139	.13009	-.27027
FAMILY	-.18358	.51430	-.25547	.40825	.06804	.30151	.19612	.53452	.27844	-.26673
DIRTORED	-.12848	-.26509	-.20859	-.11111	-.11111	.12309	-.32026	-.32733	.04240	.07260
DIRTEXPR	-.29087	.27490	-.15931	-.05455	-.05455	.26189	-.02621	.28571	-.33690	-.02376
DIRALCH	-.35234	.00813	.22882	.28868	.28868	-.10660	-.27735	.18898	-.15645	-.44009
COUNEXPR	.00535	-.12434	-.19121	.16667	.16667	.12309	.08006	.21822	-.14453	.16334
COUNALCH	-.35331	.51142	.27812	.11111	.38889	-.12309	-.08006	.32733	.07888	-.07260
VOLUSED	-.42651	.04063	-.13849	-.28868	-.28868	-.21320	-.13868	-.18898	-.27365	-.03143
OFFPROP	.15762	-.08127	-.01204	0	0	.10660	-.13868	.37796	.12006	-.12574
NUMOFF	-.18704	.23432	-.06073	.44307	-.12659	.04675	.03041	-.45581	.04792	-.15853
EMPLSTAF	-.35924	.16096	.39855	.13793	.14768	-.50657	-.42830	-.20618	-.32016	.22528
FUNDSEP	.12054	.45915	-.15054	.28868	-.28868	.21320	.13868	.18898	-.08297	-.15717
FUNDFED	.25973	-.44853	-.20876	-.32026	-.32026	-.23652	-.15385	.10483	-.18802	.25283
DOLRLOSS	-.13627	.40310	.24337	-.11785	-.11785	-.26112	0	-.23146	-.19261	-.19250
INFOPAMP	-.04349	-.19405	-.12196	.18464	.18464	.02273	-.20696	-.16116	.46579	-.08712
INFOPOST	-.10338	-.43616	-.31863	.05455	.05455	.34247	.41931	-.28571	.51643	-.24336
INFOMAIL	.48714	-.57006	-.19121	-.38889	-.11111	.12309	.08006	-.32733	.33094	.16334
INFOADVZ	-.11801	.45684	.00000	.40825	.06804	.30151	.19612	-.13763	.33922	-.26673
INFOMAG	.16471	-.47763	.22759	.21822	.21822	.16116	.10483	-.07143	.06199	-.08317
MANAGED	-.22116	.26258	.10855	-.08006	-.08006	-.20696	.15385	-.10483	.10932	-.38361
UNIONEDU	.18201	.52315	-.19121	.11111	-.16667	.18464	.32026	-.21822	.36096	.01815
EMPLREL	.27301	-.34720	-.48671	-.11111	-.11111	.43082	.48038	.21822	.37882	-.19964
SIGNREL	.07710	-.51986	-.43242	-.05455	-.05455	.56408	.36690	-.25000	.46063	-.38020
BREAKJOB	-.06490	-.22754	-.17462	-.57735	-.57735	-.21320	-.13868	-.18898	-.44964	.06287
ALKPERYR	-.16743	.13877	.03634	.32089	.01578	-.21836	-.14042	-.53278	.18212	-.00066
ALKAVAGE	.10467	-.24213	.58391	.10684	.16027	-.19727	-.12831	-.17486	-.65650	.42466
ALKMENPC	.05552	.18484	.24486	-.30959	-.07740	-.29534	.08675	-.18579	-.13992	.05338
TIMEPROG	-.17065	.41659	.30042	.14500	.14500	-.32007	-.19645	.13386	-.21333	-.21760
NUMDRY	.49281	-.27001	.14956	-.56719	-.42175	-.49408	.13973	-.15233	-.23406	.34049
NUMWET	-.38234	-.20350	-.16343	.49182	.43463	.42659	.00962	-.04867	.38871	-.43499
NUMDONOK	-.11378	.52242	.01827	.07327	-.02230	.06588	-.16374	.22106	-.17669	.11170
SELFREF	.31528	-.38726	-.15523	.32745	-.06946	.39298	.13943	-.00974	.03647	.08185

	FAMLYREF	RULEGREF	MEDICREF	SCRENFAC	STANDAGR	EVALRULG	ALTRULG	GSINPROG	PENETRAT	MEANAGE
FELOWREF	-.19981	.06852	-.31524	-.08789	-.24074	-.00141	-.09729	.27267	-.20262	-.04452
SUPERREF	.25224	-.43886	.09204	.10103	-.00206	-.05863	.10301	-.49537	.38107	-.33794
UNIONREF	-.38308	.46665	-.17883	-.03044	-.00507	-.06931	-.31925	.24244	-.27209	.10827
LAWREF	.29192	.33789	-.05638	.13515	.13515	.16220	.34896	.01106	.70982	-.23567
FAMLYREF	1.00000	-.28090	-.16973	-.07494	-.02141	.28070	.56832	.11214	.26502	.45410
RULEGREF	-.28090	1.00000	.03328	.27448	-.05396	-.07883	-.09354	.35169	-.08379	-.02733
MEDICREF	-.16973	.03328	1.00000	.08691	.43456	-.20541	-.20876	-.18207	-.44020	.11736
SCRENFAC	-.07494	.27448	.08691	1.00000	.44444	.43082	.08006	.21822	.09115	-.10889
STANDAGR	-.02141	-.05396	.43456	.44444	1.00000	.43082	.08006	.21822	.22865	.25408
EVALRULG	.28070	-.07883	-.20541	.43082	.43082	1.00000	.65044	.16116	.52488	-.01340
ALTRULG	.56832	-.09354	-.20876	.08006	.08006	.65044	1.00000	.10483	.51575	-.00872
GSINPROG	.11214	.35169	-.18207	.21822	.21822	.16116	.10483	1.00000	-.08375	.27327
PENETRAT	.26502	-.08379	-.44020	.09115	.22865	.52488	.51575	-.08375	1.00000	-.21441
MEANAGE	.45410	-.02733	.11736	-.10889	.25408	-.01340	-.00872	.27327	-.21441	1.00000
STAFSIZE	-.08911	.40886	-.07105	.38576	-.31189	-.04849	.02760	-.38150	.05340	-.29673
PROGAGE	.18890	.28038	.00235	.32143	.02078	.02106	.15866	-.00174	.42419	-.49382
PARTUNON	.13927	-.15740	-.36179	.22822	.00000	.16855	-.21926	.14960	.11869	.32307
REINSTAT	.16932	.15276	.21992	.20672	.31009	.34352	.44688	.60900	.08467	.10130
TYPEPOL	-.02211	.19052	-.16749	-.11471	.07647	.12708	-.05510	-.15019	.31670	.26231
RECCONF	-.00900	.22032	.29644	.52042	.12010	-.20696	-.13462	-.10483	-.20229	-.12206
CHANGE	.38234	.20350	.16343	-.49182	-.43463	-.42659	-.00962	.04867	-.38871	.43499
DRINK	-.49281	.27001	-.14956	.56719	.42175	.49408	-.13973	.15233	.23406	-.34069

	STAFSIZE	PROGAGE	PARTUNON	REINSTAT	TYPEPOL	RECCONF	CHANGE	DRINK
TOTEMPLO	.67569	.07608	.04919	-.37741	.18244	.32213	-.06225	-.04613
PERSONALE	-.04955	.30473	-.54182	.29447	-.25677	.52680	.08418	-.25353
BROADCOV	-.24717	-.30565	.52291	.10150	-.15019	-.56345	.02995	-.26658
MEDINVOL	.08597	-.18278	.37351	.10150	.52566	-.22276	-.05803	.03608
MEDREF	.26417	-.03568	.10963	-.29792	.22042	.15385	-.56593	.27945
FAMILY	.09047	.17815	.27951	.37978	-.28098	-.19612	-.32919	.28499
DIRTORED	-.22982	-.35724	.45644	-.51681	.45883	-.08006	-.12010	.27632
DIRTEXPR	-.08597	-.42287	-.14940	.00000	-.15019	-.36690	.00187	.37607
DIRALCH	-.09951	.41123	-.39528	.21483	-.39736	.48536	-.44079	.38788
COUNEXPR	.01642	-.34176	.00000	-.10336	-.30589	-.28022	-.04861	.13089
COUNALCH	-.09849	.29976	-.45644	.41345	-.07647	.28022	-.18014	.21815
VOLUSED	.09951	-.60191	-.07906	-.42967	.00000	-.48536	.18820	-.00534
OFFPROP	-.24168	.26947	.39528	.42967	-.19868	-.27735	-.09410	-.02015
NUMOFF	.87591	.12140	.12134	-.18842	.08713	.28886	-.30189	.10052
EMPLSTAF	.05971	-.22114	-.15125	-.33435	-.16262	.32607	.13166	-.06733
FUNDSEP	.58287	.25960	.07906	.10742	.00000	-.13868	.25754	.14106
FUNDPRO	-.38640	-.23320	.10963	.00000	-.33062	-.13462	.21703	-.34932
COLRLOSS	.38305	.16788	-.38730	-.08771	-.32444	.16984	.05459	-.24681
INFOAMP	-.22429	.19690	.33710	-.22901	.08472	.20696	-.36535	.21482
INFOPOST	.04567	-.15673	.14940	.10150	-.03755	-.22276	-.63365	.03803
INFOMAIL	-.18878	-.10744	.45644	-.31009	.26765	-.48038	.16585	-.30541
INFOADVZ	.49257	.26479	.27951	.00000	.18732	.04903	-.25915	.21374

	STAFSIZE	PROGAGE	PARTUNON	REINSTAT	TYPEPOL	RECCONF	CHANGE	DRINK
INFOMAG	.18269	.18061	.14940	.40800	-.15019	-.10483	-.26020	-.10473
MANAGED	.20897	.16949	-.43853	-.14888	-.22042	-.15385	.19505	-.06986
UNIONEDU	.64021	.21797	.00000	-.20672	.30589	-.12010	.26307	.00000
EMPLREL	-.22982	-.12733	.22822	.10338	-.30589	-.68054	-.12010	-.02909
SIGNREL	-.04567	-.14935	.29881	-.10150	-.15019	-.56345	-.50355	.16185
BREAKJOB	-.15638	-.60191	-.07906	-.42887	.00000	-.48536	.51508	-.21663
ALKPERYR	.67650	.14762	.07867	-.40823	.23396	.32489	-.12303	.01927
ALKAVAGE	-.12102	-.44555	.01463	-.07951	-.40444	.32079	.15489	-.38504
ALKMENPC	.15119	.15625	-.37447	.13443	.05327	.32223	.09738	-.42098
TIMEPROG	-.03887	.45465	-.60794	-.12228	-.07363	.69247	.16931	.20657
NUMDRY	-.06589	-.12268	-.03983	.05953	-.25023	-.11877	.59035	-1.00000
NUMWET	.03788	.10714	.25450	.09044	-.10234	.08310	-1.00000	.59035
NUMDONOK	.02996	.01501	-.23991	-.16595	.38806	.03749	.46750	.43752
SELFREF	.10188	-.14820	.70314	.05077	.00512	-.20199	-.13445	-.00779
FELOWREF	-.25141	-.38916	.40290	-.12797	.06049	-.20559	-.06484	.07069
SUPERREF	.13839	.50802	-.05646	-.10357	-.31786	.35756	-.27425	-.22381
UNIONREF	-.11417	-.40308	.13893	-.37754	.07332	-.15597	.03586	.31563
LAWREF	.27121	.83448	-.23132	.22001	.25579	.19883	.02724	.06928
FAMLYREF	-.08911	.18890	.13927	.16932	-.02211	-.00900	.38234	-.49281
RULEGREF	.40886	.28038	-.15740	.15278	.19052	.22032	.20350	.27001
MEDICREF	-.07105	.00235	-.36179	.21992	-.16749	.29644	.16343	-.14956
SCRENFAC	.38576	.32143	.22822	.20672	-.11471	.52042	-.49182	.56719
STANDAGR	-.31189	.02078	.00000	.31009	.07647	.12010	-.43463	.42175
EVALRULG	-.04849	.02106	.16855	.34352	.12708	-.20696	-.42659	.49408
ALTRULG	.02760	.15866	-.21926	.44588	-.05510	-.13462	-.00982	-.13973
GSINPROG	-.38150	-.00174	.14940	.60800	-.15019	-.10483	.04867	.15233
PENETRAT	.05340	.42419	.11869	.08487	.31670	-.20229	-.38871	.23406
MEANAGE	-.29673	-.49382	.32307	.10130	.26231	-.12206	.43499	-.34049
STAFSIZE	1.00000	.42641	-.01124	-.15271	.15817	.32726	-.03788	.06589
PROGAGE	.42641	1.00000	-.26517	.17932	-.00974	.50082	-.10714	.12268
PARTUNON	-.01124	-.26517	1.00000	-.08492	.15707	-.27408	-.25450	.03983
REINSTAT	-.15271	.17932	-.08492	1.00000	-.14228	-.07448	-.09044	-.05953
TYPEPOL	.15817	-.00974	.15707	-.14228	1.00000	-.08266	.10234	.25023
RECCONF	.32726	.50082	-.27408	-.07448	-.08266	1.00000	-.08310	.11877
CHANGE	-.03788	-.10714	-.25450	-.09044	.10234	-.08310	1.00000	-.59035
DRINK	.06589	.12268	.03983	-.05953	.25023	.11877	-.59035	1.00000

Appendix D

Factor Analysis

(Variables are Defined in Appendix B)

QUARTIMAX ROTATED FACTOR MATRIX
AFTER ROTATION WITH KAISER NORMALIZATION

	Broad Coverage Openness FACTOR 1	% Still Drinking FACTOR 2	Supervisory Participation FACTOR 3	Corporation Size FACTOR 4	Penetration Rate FACTOR 5	Rule G Policies FACTOR 6	Failures vs. Successes FACTOR 7	Program Size FACTOR 8	Magazine Syndrome FACTOR 9	Medical Involv. Policy FACTOR 10
TOTEMPLD	-.05122	.05273	.14648	.87948	-.07396	-.12539	-.03377	.42186	.12944	.07852
PERCMALE	-.68375	.03509	.21120	.05334	.06145	.21739	-.46548	-.07198	.13981	.11302
BROADCOV	.82849	-.08777	-.05051	.10124	.17970	.34348	-.08833	-.24180	.09761	-.09791
MEDINVOL	.22282	.07849	.14620	.17223	-.00648	-.00040	-.00238	.06137	.18608	.75701
MEDREF	-.06886	.65139	.08676	.01803	-.15653	-.52922	-.03745	.16221	.06578	.35417
FAMILY	.12111	.21249	.05403	-.12159	.22885	.57359	.09363	.34831	-.35724	-.33049
DIRTCRED	.29517	.12559	.20187	-.06123	-.12972	-.49324	.28107	-.18463	-.40112	.40525
DIRTEXPR	-.05643	.05227	-.79258	-.24321	-.06615	.06723	.21820	.03946	-.21680	-.07367
DIRALCH	-.59589	.36135	.10759	-.21143	-.15784	.09550	.28095	-.20828	.27331	-.33423
COUNEXPR	.26739	.00451	-.61570	.31409	-.03589	.28470	.18943	-.06349	.19001	-.26024
COUNALCH	-.78593	.16287	.07090	.06132	.17185	.41058	-.00819	-.11060	-.06441	-.01392
VOLUSED	.24851	-.10139	-.69061	.42765	.01306	-.21936	.04095	.04023	-.27510	-.23719
OFFPROP	.25285	-.01996	.38608	-.58056	-.01777	.20378	.13017	-.08625	.10588	-.14968
NUMOFF	.00775	.32098	-.04419	.47285	-.15125	-.12810	-.08663	.70753	.16866	.04552
EMPLSTAF	-.31574	-.10755	.04218	.80045	-.26709	.06613	.05177	-.15813	-.07334	-.07206
FUNDSEP	.22221	-.34004	-.27080	-.20559	.05910	.10834	.26399	.66692	.14207	-.19380
FUNDFEE	.19656	-.18222	.12130	-.01658	-.16687	-.05330	-.04132	-.66943	.26765	-.14365
DOLRLOSS	-.47515	.07202	-.21494	.09193	-.03068	-.05702	-.50416	.41517	-.09561	-.23600
INFOPAMP	.05025	.27100	.71658	.21912	.15573	-.05453	.21944	-.29919	-.13845	.11329
INFOPOST	.31944	.70086	.01370	.23971	.25798	-.01303	-.26789	-.07771	.10906	.02807
INFOMAIL	.69212	-.16561	.20961	-.12713	.18336	-.35029	-.11684	-.11242	.04246	.22035
INFOADVZ	.11466	.21379	.20150	.03717	.16687	.10303	-.05745	.77589	-.35836	.07468
INFOMAG	.32417	.20190	.05811	-.10261	-.17925	.11637	.01502	.06850	.75634	-.05188
MANAGED	-.08938	-.17529	-.25872	.34048	.40321	.04229	-.05468	.23672	-.05422	-.49088
UNIONEDU	.10671	-.26607	-.12768	.31766	.44252	.00376	-.06374	.67982	-.07791	.12757
EMPLREL	.69278	.10151	-.25782	-.21413	.41794	.18308	-.02892	-.08469	.03003	-.35413
SIGNREL	.63176	.55015	-.19585	-.20094	.30167	-.18841	-.05534	.02958	.07543	-.10129
BREAKJOB	.33787	-.38123	-.57337	-.04139	-.10712	-.48856	.01867	-.21129	-.14634	-.13506
ALKPERYR	-.02121	.08525	.20498	.86905	.01994	-.14593	.03674	.40144	.14635	.07801
ALKAVAGE	-.06532	-.02224	-.09430	.22006	-.72441	.06680	-.35431	-.10768	.06558	.10104
ALKMENPC	-.55244	.05035	.03836	-.11310	-.08808	-.13427	-.67171	.15684	-.06125	.14137
TIMEPROG	-.78503	-.21800	.13612	-.02825	.01950	-.00310	.20722	-.01273	-.12920	-.20785
NUMORY	.17343	-.45830	.13380	.06777	-.14724	-.07233	-.82372	-.14471	.14488	-.14086
NUMNET	.04337	.96629	.13553	-.00637	.01562	.11640	.21201	.04928	-.00234	-.04597
NUMDONOR	-.22501	-.53656	-.27965	-.06312	.12721	-.03966	.61016	.10186	-.16748	.18024
$ELFREF	.81505	.05742	.16255	-.19340	-.28273	.03345	.14556	.22607	.14244	.08809
$ELOWREF	.31380	.04968	-.08248	-.28866	-.18112	-.03674	.00543	.04593	-.73313	-.12804
$UPERREF	-.03612	.28993	.62320	.16423	.13191	-.20157	-.22152	-.09545	.47810	-.15887
UNIONREF	-.08353	-.05136	-.38623	.05200	-.09515	.04615	.17816	.12566	-.79832	-.04734
LAWREF	-.26534	-.13702	.48939	-.04086	.70337	.14396	.02498	.28708	.21440	.06695
FAMLYREF	.32466	-.36954	.20562	-.19897	.17269	.18606	-.34087	-.03919	.34345	.22523
RULEGREF	-.46366	-.27181	-.06163	.03023	.10656	.28870	.17818	.53750	-.37407	-.01728
MEDICREF	-.44512	-.07915	.01265	.07240	-.40783	.08059	-.12944	-.00119	.24548	.15452
SCRENFAC	-.04908	.31581	.19716	.12713	-.19059	.45123	.43746	.42977	.15821	.01964

	Broad Coverage Openness	% Still Drinking	Supervisory Participation	Corporation Size	Penetration Rate	Rule G Policies	Failures vs. Successes	Program Size	Magazine Syndrome	Medical Involv. Policy
	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9	FACTOR 10
STANDAGR	-.20442	.34348	.01857	.07939	-.00683	.49660	.20001	-.13490	.13163	.39124
EVALRULG	.28415	.39626	-.16775	-.30015	.31557	.31279	.17736	.17579	.14264	.40147
ALTRULG	.17408	.08635	-.15515	-.17292	.51242	.31109	-.37381	.15246	.26548	.13634
GSIMPRIG	-.01363	-.19694	-.06928	-.36709	-.01441	.75731	.20813	-.15108	-.20344	-.13373
PENETRAT	.20837	.31097	.31666	.03143	.79770	.09380	.01936	.08036	.08007	.19538
MEANAGE	.16798	-.41020	-.06867	.17881	-.27534	.32325	-.16690	-.24141	-.05913	.54464
STAFSIZE	-.05318	-.00327	.03866	.27518	-.00951	-.20543	.03757	.85785	.25208	-.09120
PROGAGE	-.36388	-.03307	.54304	-.20423	.37932	.02971	.12371	.39510	.35426	-.24044
PARTUNCN	.71480	.12187	.32964	.00440	-.27323	.14530	.13917	.09017	-.27362	.18042
REINSTAT	-.10147	.06535	.01090	-.42631	.02972	.66148	-.16432	.01888	.27492	.07797
TYPEPOL	.02899	-.15135	.06908	.04605	.23506	-.25147	.23268	.16561	-.18270	.65568
RECCONF	-.59298	.02759	.42407	.13485	-.30164	-.01387	.09936	.20087	.15903	-.03166
CHANGE	-.04337	-.96629	-.13553	.00637	-.01562	-.11640	-.21201	-.04928	.00234	.04597
DRINK	-.17343	.45830	-.13380	-.06777	.14724	.07233	.82372	.14471	-.14488	.14086

FACTOR	EIGENVALUE	PCT OF VAR	CUM PCT
1	8.91234	18.3	18.3
2	7.67345	15.7	34.0
3	6.44891	13.2	47.2
4	5.96216	12.2	59.4
5	5.07912	10.4	69.8
6	3.90556	8.0	77.8
7	3.18365	6.5	84.4
8	2.74171	5.6	90.0
9	2.58118	5.3	95.3
10	2.30258	4.7	100.0

Appendix E

Regression Equations for the Dependent Variables

Penetration

Percent of Successes

Percent of Failures

Percent of Potential Successes

Percent Still Drinking

(Variables are defined in Appendix B)

Regression Design

The technique used was a stepwise multiple linear regression limited to explaining approximately 95% of the variance of the dependent variable. Some of the variables are parts of percentage sets that will add up to 100% within a single case. Where this occurs one of the variables in the set must be deleted since all the others in the set explain the total variance of the remaining one in the string.

As a consequence all regressions do not contain the variables FELOWREF or NUMDONOK. Where the dependent variable involves the success/failure percentages only one of the following was selected for inclusion in the regression. (NUMDRY, NUMWET, CHANGE, DRINK)

* M U L T I P L E R E G R E S S I O N *

DEPENDENT VARIABLE.. PENETRAT

VARIABLE(S) ENTERED ON STEP NUMBER 5.. MEDICREF

MULTIPLE R	.98510	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F	SIGNIFICANCE
R SQUARE	.97042	REGRESSION	5.	.00006	.00001	59.05445	.000
STD DEVIATION	.00045	RESIDUAL	9.	.00000	.00000		

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	STD ERROR B	F SIGNIFICANCE	BETA ELASTICITY
LAWREF	.15772224E-02	.13541445E-03	135.66126 .000	1.2573809 .28106
SIGNREL	.11682264E-02	.30541892E-03	14.630601 .004	.2883955 .10409
PROGAGE	-.20189759E-03	.36193913E-04	31.116533 .000	-.6150033 -.17405
NUMWET	.66292296E-04	.14911556E-04	19.764244 .002	.3122305 .26875
MEDICREF	-.49595656E-04	.16601487E-04	8.9246933 .015	-.1921292 -.05524
(CONSTANT)	.34440449E-02	.36732053E-03	87.911808 .000	

S U M M A R Y T A B L E

STEP	VARIABLE ENTERED	VARIABLE REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	LAWREF		13.20129	.003	.70982	.50384	.50384	.70982	13.20129	.003
2	SIGNREL		19.72610	.001	.90130	.81233	.30849	.46063	25.97173	.000
3	PROGAGE		6.34741	.029	.93862	.88100	.06867	.42419	27.14593	.000
4	NUMWET		10.20011	.010	.97010	.94109	.06009	.38871	39.93758	.000
5	MEDICREF		8.92469	.015	.98510	.97042	.02933	-.44020	59.05445	.000

* M U L T I P L E R E G R E S S I O N *

DEPENDENT VARIABLE.. NUMDRY

VARIABLE(S) ENTERED ON STEP NUMBER 6.. ALKAVAGE

MULTIPLE R	.97982	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F SIGNIFICANCE
R SQUARE	.96005	REGRESSION	6.	1260.87203	210.14534	32.04577 .000
STD DEVIATION	2.56079	RESIDUAL	8.	52.46130	6.55766	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	STD ERROR B	F SIGNIFICANCE	BETA ELASTICITY
SCRENFAC	-3.3770165	1.7353885	3.7866052 .088	-.1768060 -.01967
FAMLYREF	.66995946	.16497512	16.491500 .004	.3640220 .05008
EVALRULG	-18.939111	2.5764402	54.035480 .000	-.8950614 -.07355
TIMEPROG	-.29649517E-01	.75027692E-02	15.616800 .004	-.3175924 -.03204
ALTRULG	13.789794	3.1249546	19.472788 .002	.5009696 .02678
ALKAVAGE	.97825518	.28046500	12.165976 .008	.2663149 .61735
(CONSTANT)	29.599074	12.094293	5.9895655 .040	

S U M M A R Y T A B L E

STEP	VARIABLE ENTERED	VARIABLE REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	SCRENFAC		6.16558	.027	.56719	.32170	.32170	-.56719	6.16558	.027
2	FAMLYREF		5.15823	.042	.72499	.52562	.20392	.49281	6.64797	.011
3	EVALRULG		9.04535	.012	.86005	.73968	.21406	-.49408	10.41850	.002
4	TIMEPROG		3.55837	.089	.89889	.80800	.06832	-.20657	10.52081	.001
5	ALTRULG		8.16134	.019	.94832	.89931	.09131	.13973	16.07636	.000
6	ALKAVAGE		12.16598	.008	.97982	.96005	.06075	.38504	32.04577	.000

* M U L T I P L E R E G R E S S I O N *

DEPENDENT VARIABLE.. NUMWET

VARIABLE(S) ENTERED ON STEP NUMBER 4.. FUNDFED

MULTIPLE R	.97488	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F SIGNIFICANCE
R SQUARE	.95038	REGRESSION	4.	1291.50900	322.87725	47.88735 .000
STD DEVIATION	2.59662	RESIDUAL	10.	67.42433	6.74243	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	STD ERROR B	F SIGNIFICANCE	BETA ELASTICITY
INFOPOST	12.219585	1.3603925	80.683438 .000	.6404803 .23499
DIRALCH	15.210682	1.5814242	92.512546 .000	.7533365 .20894
PARTUNCN	7.9762611	1.2532226	40.508141 .000	.4996888 .76695
FUNDFED	-11.005935	2.0252111	29.533387 .000	-.3930691 -.06047
(CONSTANT)	-3.6498516	3.2037016	1.2979152 .281	

S U M M A R Y T A B L E

STEP	VARIABLE ENTERED	VARIABLE REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	INFOPOST		8.72145	.011	.63365	.40151	.40151	.63365	8.72145	.011
2	DIRALCH		8.78289	.012	.80897	.65443	.25292	.44079	11.36286	.002
3	PARTUNCN		8.37939	.015	.89658	.80385	.14942	.25450	15.02676	.000
4	FUNDFED		29.53339	.000	.97488	.95038	.14653	-.21703	47.88735	.000

* M U L T I P L E R E G R E S S I O N *

DEPENDENT VARIABLE.. CHANGE

VARIABLE(S) ENTERED ON STEP NUMBER 4.. FUNDFED

MULTIPLE R	.97488	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F	SIGNIFICANCE
R SQUARE	.95038	REGRESSION	4.	1291.50900	322.87725	47.88735	.000
STD DEVIATION	2.59662	RESIDUAL	10.	67.42433	6.74243		

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	STD ERROR B	F SIGNIFICANCE	BETA ELASTICITY
INFOPOST	-12.219585	1.3603925	80.683438 .000	-.6404803 -.07530
DIRALCH	-15.210682	1.5814242	92.512546 .000	-.7533365 -.06695
PARTUNCN	-7.9762611	1.2532226	40.508141 .000	-.4996888 -.24575
FUNDFED	11.005935	2.0252111	29.533387 .000	.3930691 .01938
(CONSTANT)	103.64985	3.2037016	1046.7266 .000	

S U M M A R Y T A B L E

STEP	VARIABLE ENTERED	VARIABLE REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	INFOPOST		8.72145	.011	.63365	.40151	.40151	-.63365	8.72145	.011
2	DIRALCH		8.78289	.012	.80897	.65443	.25292	-.44079	11.36286	.002
3	PARTUNCN		8.37939	.015	.89658	.80385	.14942	-.25450	15.02676	.000
4	FUNDFED		29.53339	.000	.97488	.95038	.14653	.21703	47.88735	.000

* M U L T I P L E R E G R E S S I O N *

DEPENDENT VARIABLE.. DRINK

VARIABLE(S) ENTERED ON STEP NUMBER 6.. ALKAVAGE

MULTIPLE R	.97982	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F	SIGNIFICANCE
R SQUARE	.96005	REGRESSION	6.	1260.87203	210.14534	32.04577	.000
STD DEVIATION	2.56079	RESIDUAL	8.	52.46130	6.55766		

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	STD ERROR B	F SIGNIFICANCE	BETA ELASTICITY
SCRENFAC	3.3770165	1.7353885	3.7868052 .088	.1768060 .04311
FAMLYREF	-.66995946	.16497512	16.491500 .004	-.3640220 -.10976
EVALRULG	18.939111	2.5764402	54.035480 .000	.8950614 .16118
TIMEPROG	.29649517E-01	.75027692E-02	15.616800 .004	.3175924 .07021
ALTRULG	-13.789794	3.1249546	19.472788 .002	-.5009696 -.05868
ALKAVAGE	-.97825518	.28046500	12.165976 .008	-.2663149 -1.35291
(CONSTANT)	70.400926	12.094293	33.884087 .000	

S U M M A R Y T A B L E

STEP	VARIABLE ENTERED	VARIABLE REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	SCRENFAC		6.16558	.027	.56719	.32170	.32170	.56719	6.16558	.027
2	FAMLYREF		5.15823	.042	.72499	.52562	.20392	-.49281	6.64797	.011
3	EVALRULG		9.04535	.012	.86005	.73968	.21406	.49408	10.41850	.002
4	TIMEPROG		3.55837	.089	.89669	.80800	.06832	.20657	10.52081	.001
5	ALTRULG		8.16134	.019	.94832	.89931	.09131	-.13973	16.07636	.000
6	ALKAVAGE		12.16598	.008	.97982	.96005	.06075	-.38504	32.04577	.000