A CLINICAL PROTOCOL FOR HOME MANAGEMENT OF ALCOHOL DETOXIFICATION BY ADVANCED PRACTICE NURSES IN PRIMARY CARE

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By

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ABSTRACT

A CLINICAL PROTOCOL FOR HOME MANAGEMENT
OF ALCOHOL DETOXIFICATION BY
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By

Jane R. Duerr

Alcohol detoxification carried out in a therapeutic setting is the first opportunity to bring about a lifestyle change and sobriety in persons seeking to improve their health. In the changing construct of managed care, clinicians must seek new ways to treat patients while maintaining quality care. Outpatient (home) alcohol detoxification is a viable option for a select low risk population and warrants consideration by clinicians in lieu of the traditional costly in-patient treatment. A protocol for Advanced Practice Nurses managing this patient population is proposed and outlined.

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Chapter 1

Alcohol detoxification is the systematic withdrawal of alcohol from the body. The process of alcohol detoxification requires careful monitoring to avoid negative consequences. There are two components to treatment: restoration of physical health, which includes medical supervision of withdrawal, and treatment of any concomitant complications and preparation for involvement in aftercare (Kinney, 1996). Restoration of physical health may include medication regimens, which when properly administered, reduce the incidence of complications during treatment. Detoxification, when carried out in a therapeutic setting, is the first opportunity to bring about a lifestyle change and sobriety in persons seeking to improve their health.

This project proposes an alternative to inpatient alcohol detoxification. A review of the literature shows that outpatient alcohol detoxification is a viable option for a select low risk population and that the cost of outpatient alcohol detoxification warrants consideration in the managed care context. To that end, a protocol is proposed for home detoxification of low risk patients by an Advanced Practice Nurse (APN) in primary care.

The outcome of this project is the safe detoxification of alcoholics in a primary care setting. It is recognized that the goal of detoxification is only the first step in the commitment to abstinence by the individual. The protocol uses specified assessment tools, past medical history, the physical exam and laboratory testing to determine the potential for or degree of withdrawal. A pharmacological taper is outlined.

The goal of the protocol is for the individual to achieve abstinence without evidence of complications during the outpatient detoxification period of four to ten days. The period of time required will depend on the individual. Patients will be monitored daily by an APN in collaboration with a physician. Immediate supportive services for the individual and family will be included. Provisions for inpatient care are assumed to be an option if deemed medically necessary. Long term rehabilitation is beyond the scope of this project and will not be specifically addressed.

Problem

Incidence and Prevalence

The problem of alcoholism and the cost to society are clearly documented in the literature. Between 15% and 30% of hospitalized patients have a substance abuse problem (Geller, 1996). By far the greatest cause of preventable

mortality in the United States is the use of addictive substances (Geller, 1996). Over 100,000 deaths annually are related to alcohol, 45% of these are attributable to accidents. Forty percent of trauma patients have a blood alcohol level (BAL) of 100mg/dl. According to Geller (1996), 15.3 million persons meet the criteria for alcohol abuse or dependence (See Tables 1 and 2). Alcohol abuse and dependence rates are higher among younger people, and among young women who are using alcohol at a rapidly rising rate. Heavy drinking occurs in over 40 million households according to a 1993 National Household Survey (Geller, 1996). More than 80% of alcoholics also smoke tobacco. Multiple addictions complicate both the diagnosis and treatment of substance abuse (Geller, 1996).

Healthy Michigan 2000 (1993) includes alcohol and other drug use and consumption as one of its Priority Area I concerns. According to Healthy Michigan 2000, (1993) Michigan residents consistently demonstrate higher rates of risky behavior than national rates. Risky behaviors include chronic drinking and smoking.

Table 1
DSM IV Criteria of
Physiologic Dependence

Three or more incidences during 1 year indicate pattern of physical dependence
1. Increasing amounts of alcohol needed to achieve desired effect (tolerance).
2. Same amount of alcohol with decreasing effect.
3. Drinking more or for longer periods.
4. Similar substance used to avoid withdrawal symptoms.
5. Great deal of time and effort spent on obtaining, using or recovering from the substance
6. Persistent desire or unsuccessful efforts to curb abuse.
7. Avoiding important social, occupational, or recreational events because of alcohol use.
8. Continued use of alcohol despite exacerbation of health problems.

Table 2
DSM IV Criteria for
Alcohol Abuse

Occurrence of any three criteria in 1 year indicates abuse
1. Continued use of alcohol despite interpersonal problems.
2. Failure to fulfill major obligations at work, school, or home.
3. Recurrent use of alcohol in hazardous situations.
4. Recurrent legal problems related to alcohol use.

A study cited by Burns (1994) of hospitalized patient costs in 1980 reported that 13% of the patients accounted for 87% of the hospital costs. An analysis of the reasons for this cost differential were attributed to the use of alcohol and tobacco by the high cost group (Burns, 1994). Alcohol abuse costs impose an $85.8 billion burden on the United States economy making it one of the nations most significant and troublesome problems (Sullivan, 1995).

According to Goodman, (1992) there is considerable evidence that alcoholics and their family members use more health care resources and incur higher health care costs than non-alcoholics. Alcoholism frequently occurs along with other illnesses including psychiatric illness and drug abuse (Goodman, 1992a). Goodman's (1992b) analysis on monthly costs and utilization of alcoholism treatment shows the percentage of inpatient costs to be 84.22% for all diagnoses.

In spite of these statistics, the DSM IV (APA, 1994) states that while clinicians have the erroneous impression that alcohol dependence and abuse are intractable disorders, the most severe cases represent only a small proportion of individuals with alcohol dependence or abuse. The typical person presenting with an alcohol abuse disorder has a much more promising prognosis. Alcohol dependence and alcohol abuse are considered alcohol abuse disorders (APA, 1994). It is these individuals who are most likely to benefit from home detoxification.

Alcoholism as a Disease

According to Meyer (1996) the concept of drug and alcohol addiction as a disease has evolved over the past 200 years in the changing constructs of clinical medicine, public health and psychiatry. The concept of alcoholism has been credited to Benjamin Rush, a signer of the Declaration

of Independence and a physician in George Washington's army, and Thomas Trotter in Great Britain, after distilled alcohol became commercially available (Meyer, 1996). After the repeal of Prohibition in the United States of America in 1933, E.M. Jellinek was credited with the defining work on the disease concept of alcoholism (Meyer, 1996). Jellinek characterized alcoholics as having alcohol tolerance, withdrawal symptoms and either loss of control or inability to abstain from alcohol. These individuals, unable to drink in moderation, deteriorated with life threatening diseases such as cirrhosis and neurologic disorders. Jellinek also recognized that alcohol prevention needed to address complex cultural, demographic, political, and economic issues. To that end, features of the disease (inability to abstain versus loss of control) would be controlled by cultural factors. Once the disease was classified, Jellinek believed that services for alcoholics would increase within established medical facilities (Sullivan, 1995; Meyer, 1996).

In the 1960's, a major epidemic of drug use and addiction among middle class youths provided the impetus for animal behavioral models of addictive disorders, methadone maintenance, narcotic antagonist treatments and funding of community based treatments for addicts in the USA. These

developments shaped the direction for emerging criteria for an alcohol dependence syndrome (Meyer, 1996).

In the 1970's, other investigators identified explicit criteria for an alcohol dependence syndrome. These criteria were later described in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) IIIR and IV (American Psychiatric Association 1987 & 1994). According to Meyer (1996), the boundaries of what constitutes a disease have been expanded to include risk associated with family history, age, life style and/or environment. Meyer views alcoholism as an addiction, and therefore, a disease. Using Morse and Flavin's definition, Meyer describes alcoholism as a "primary, chronic disease with genetic, psychosocial and environmental factors influencing its development and manifestations" (p. 163).

There is little agreement in health care on the definition of alcoholism (Bradley, 1992; Burns, 1994; Sullivan, 1995). Most researchers, acknowledge a spectrum of disease with no clear demarcation between normal and pathologic drinking (Bradley, 1992). The DSM IV defines alcohol abuse and dependence along a spectrum of alcohol use (APA, 1994). Stevenson and Delaney (1987) do not support the notion that alcoholism is a disease unless other drug addictions are seen as diseases. Stevenson and Delaney's view is that the concept of alcoholism as a disease is due

to humanitarian sentiments rather than any scientific evidence that alcoholism exhibits the defining characteristics of a disease.

When viewed as a chronic disease, alcohol and prescription drug disorders and smoking result from a complex interaction between the agent (drug, alcohol, nicotine), the host and the environment (Geller, 1996). Some drugs are more addictive, some people are more genetically predisposed to the effects of drugs with addictive properties, and the environment frequently determines the availability of the drug, as well as the pressure to use the substance as well as what age the use is likely to occur (Geller, 1996).

The concept of alcoholism remains controversial (Sullivan, 1995). For the purposes of this paper, alcoholism refers to both abuse and dependence. The DSM IV criteria for alcohol abuse and dependence will be used (see Table 1). Three or more of these signs strongly indicate a physiologic dependence. Dependence refers to a pattern of abuse that leads to clinically significant impairment or distress. Substance abuse without physical dependence can also lead to impairment or distress (Geller, 1996).

Treatment Philosophies

Goals of Treatment

According to Geller, (1996) alcoholism is a frequently missed diagnosis. An unwillingness of the healthcare provider to present a diagnosis that may cause anger and denial in the client, along with the provider's uncertainty about what to do next and a hopelessness about the outcome may all contribute to the diagnosis not being made (Geller, 1996). While there is no definitive diagnostic method and no specific lab test to identify the problem, screening tools, health histories and physical exams may help identify its existance.

The ideal goal of alcoholism rehabilitation is to achieve abstinence from alcohol consumption. The chronic relapsing nature of the illness precludes this from happening (Forest, Frances, Mooney & Reilly, 1987; Prochaska, DiClemente & Norcross, 1992; Sullivan, 1995). There appears to be no clear agreed upon explanation as to why this pattern exists. It has been suggested that the traditional inpatient detoxification programs fail to meet the needs of the alcoholic seeking help (Edwards & Guthrie, 1967; Feldman, Pattison & Sobell, 1975, Tennant, 1979; Stinnett, 1982; Stevenson & Delaney, 1987; Prochaska, DiClemente & Norcross, 1992).

Data supporting the success rates for various forms of therapy are scarce according to Forest et al. (1987) and Prochaska, DiClemente and Norcross, (1992). Researchers have been unable to develop standardized methods of assessing patients entering alcoholism treatment programs or measuring outcomes (Forest et al., 1987). Most studies of alcoholism have been limited to men and screening tools commonly used in research today were developed based on male populations (Bradley, 1992). Recent findings that ethnicity, family history, personality as well as age and gender differences appear to be factors in predisposing an individual to alcoholism can provide the impetus to change traditional attitudes and approaches to screening individuals at risk(Bradley,1992; Kinney, 1996).

Ideally, the alcoholic should have access to a treatment program at the time he/she experiences symptoms or the need for help. This includes continuous, comprehensive care from the acute phase proceeding into the chronic phase of rehabilitation. Forest et al. (1987) estimate that 50% of patients who enter alcoholism treatment achieve prolonged periods of abstinence. With social support, the rate may approach 70-80% and some employee assistance programs report rates up to 90% (Forest et al., 1987). When the patient and family are motivated to take the step toward abstinence, when the risk of major physical withdrawal problems is low,

and serious medical and psychiatric problems are absent, outpatient home detoxification should be considered. An obvious advantage to outpatient treatment is that is does not remove the patient from his/her job, family and other community social support systems.

Detoxification

The severity of the problem and the presence of physical dependence on alcohol determines the treatment of the individual. Counseling, advice to "cut down" or abstain to inpatient and outpatient detoxification are the range of treatments currently in use (Geller, 1996).

Detoxification is the medical care that safely carries the patient through withdrawal in the acute phase and into rehabilitation (Cross & Hennessey, 1993). If intoxication is the presence of (the toxin) alcohol in the system then detoxification is the removal of that substance. Detoxification of an individual may involve withdrawal symptoms referred to as Alcohol Withdrawal Syndrome (AWS).

According to Feldman, Pattison, Sobell, Graham & Sobell, (1975) the AWS can be divided into three components:

1. *The acute withdrawal phase* during which primary problems involve acute toxicity and consequent central nervous system dysfunction's appear 24 - 48 hours after blood alcohol levels drop. Severe consequences include hallucinations, delirium, toxic psychosis and toxic death.

However, most individuals do not suffer serious withdrawal problems.

2. *The subacute phase* is marked by general dysfunction of major organ systems, secondary infections, and psychological symptoms (depression, anxiety, and agitation) which may follow the acute phase (around 48 to 72 hours according to Geller, 1996) or may appear without preceding acute symptomatology.

3. *The chronic phase* involves the psychological features of drug dependency and the associated psychosocial conflicts and life dysfunction's.

Treatment of the patient with AWS has traditionally focused on tertiary prevention. Identification and treatment of alcohol abuse and dependence usually takes place in a hospital setting using a medical model of intervention utilizing constant medical and nursing supervision (Stinnett, 1982). Services for alcoholics often fail to see the problem of withdrawal along a continuum without effective links between treatment for acute withdrawal and the subsequent treatment phases (Feldman et al., 1975). New models of treatment have evolved out of the need to develop alternative approaches to the high cost of tertiary care, inpatient treatment and the hypothesis that a medical model is sterile and impersonal and therefore not

conducive to the sympathetic involvement of treatment personnel with patients (Stinnett, 1982).

Criteria to determine if the alcohol detoxification of the patient with AWS is safe are defined by Stinnett (1982) as the absence of seizures and absence of the severe manifestations of delirium (e.g. disorientation, hallucination, psychomotor agitation). How one assesses the effectiveness of detoxification depends in large part on what the goals will be (Mattick & Hall, 1996). Stinnett's (1982) criteria to determine effectiveness are:

1. The patient should not consume alcohol during treatment.

2. The severity of the symptoms must show a progressive decrease over a reasonable length of time and reach a level that does not interfere with normal functioning

3. At the end of the withdrawal period, the patient should continue with some type of treatment for alcohol abuse.

It is the opinion of Mattick and Hall (1996) that if detoxification is a treatment in its own right for alcoholics to achieve *abstinence*, then detoxification programs are not especially effective. However, detoxification should not be regarded as a goal or a treatment for *dependence* per se, as prospective controlled studies show people undergoing detoxification are no less

likely to relapse than those who have not (Mattick & Hall, 1996). Detoxification seen as a process that aims to achieve a safe and humane withdrawal from a drug of dependence is a worthwhile aim in and of itself. Mattick and Hall's (1996) criteria for judging effectiveness are completion of the process, the severity of the withdrawal symptoms, distress, and absence of medical complications.

A poorly managed detoxification only serves to alienate the patient from treatment resources (Cross & Hennessey, 1993). Most chemically dependent patients have self-detoxified in the past and their recollection may be frightening and uncomfortable. Subsequent use may then be perpetuated by the memory. A controlled detoxification, therefore, breaks the cycle and increases the likelihood that the patient will seek help in the future if relapse occurs (Cross & Hennessey, 1993). Detoxification provides a period of respite from the drug use and its consequences, an occasion to reflect on the wisdom of continued use and an opportunity to take up offers of intervention. A safe, supportive environment, free of drugs is essential and forms the traditional in-patient setting for detoxification.

Role of Primary Care Provider

"Primary care is the provision of *integrated, accessible health care services* by *clinicians* who are *accountable* for addressing a large *majority of personal*

health care needs, developing a *sustained partnership* with *patients,* and practicing in the *context of family and community"* (Institute of Medicine,1994, p.1) The term clinician refers to individuals who use a recognized scientific knowledge base and who have the authority to direct the delivery of personal health services to patients (IOM, 1994). A clinician may or may not be a physician.

According to Michigan State University's College of Nursing (publication) and the American Academy of Nurse Practitioners, (1988) nurse practitioners are clinicians who use advanced nursing skills and knowledge to provide care to clients. Nurse practitioners are registered nurses with advanced education and clinical competency necessary for the delivery of primary health and medical care.

Educational preparation is guided by the profession and is accomplished through formal advanced education encompassing knowledge and clinical practice. Advanced practice nurses provide nursing and medical services to individuals, families and groups. Masters' prepared (family) nurse practitioners are trained to provide primary care services. They function interdependently and collaboratively with other health care providers. The autonomous nature of the advanced clinical practice of nurse practitioners requires accountability for health care outcomes. Training is focused on health promotion, health

maintenance, illness prevention, episodic care and long-term care. Services include but are not limited to ordering, conducting and interpreting appropriate diagnostic and laboratory tests, prescription of pharmacological and nonpharmacological agents and treatments (American Academy of Nurse Practitioners, 1992).

The problem of alcoholism is supported by the statistics and is sufficiently prevalent that primary care providers should routinely screen patients for it. Primary care providers play a key role in identifying patients at risk, providing the diagnosis, detoxification, introducing the patient to rehabilitation and the follow up through recovery. The APN's focus on health promotion and illness prevention places them in an ideal position to manage this patient population. For the purposes of this paper, primary care providers include physicians, physician assistants and advanced practice nurses.

Influence of Managed Care

An era of health care cost containment has resulted in increasing pressure to reduce hospital length of stay (LOS), complication rates, inpatient, and general health care costs. If alcoholism is viewed as a chronic disease resulting from a complex interaction between the agent, the host and the environment, consideration must be given to controlling and managing these triggers. Changing the

setting of detoxification for low risk individuals without compromising care is consistent with the goals and practices of managed care. It is proposed that controlling and managing triggers can be provided in a home setting using outpatient detoxification. Accomplished through screening and assessment during the initial contact, outpatient management considers that patients with a history of coexistent dependence or abuse, psychiatric illness, comorbid conditions may not be suitable candidates for outpatient home treatment.

Chapter 2

Literature Review

As early as 1967, physicians began examining the possibility of conducting outpatient detoxification (Edwards & Guthrie, 1967). In a controlled clinical trial of alcohol dependent patients randomized to inpatient and outpatient treatment, Edwards and Guthrie found no significant differences in outcome. Sobriety over the course of a year (measured independently by wife or employer) showed the two groups ran parallel courses with the outpatient group "seeming to have some slight advantage" (p.557). There was no significant difference in outcome between the two groups. The conclusion is that, "a certain type of outpatient treatment has been shown, on average, to give as good results as a certain type of inpatient treatment" (p.557). Extrapolating results beyond that statement was viewed as unjustified by the authors.

Feldman, Pattison and Sobell,(1975) reported on a large-scale outpatient alcohol detoxification program of 564 patients (469 male). Forty seven percent required detoxification, 9% of the total sample (or 19% of the detoxification group) required inpatient care. Any patient exhibiting severe withdrawal symptoms regardless of the BAL were recommended for inpatient care. When the alcoholic

first presented for treatment, he/she entered a total treatment program that simultaneously involved acute detoxification services, subacute management and immediate triage into a sequential rehabilitation program. Acute detoxification services were provided by a staff of registered nurses with a physician consultant always available. Next-visits were conducted by nurses who provided evaluation, appropriate medication and observation. A variety of medications were used interchangeably. Every effort was made to integrate the detoxification program into the rehabilitation program from the moment the acute alcoholic presented. Eighty-two percent of those who began outpatient detoxification returned regularly to complete the acute phase of treatment; 17% were considered recidivists; 50% continued in treatment. The mortality rate for the total sample was zero.

Feldman et al.(1975) concluded that outpatient detoxification can be successfully conducted without undue morbidity or mortality, not all individuals presenting for services require medical (supervised) detoxification, costs of outpatient services are approximately 20% of inpatient costs, and finally that socially unstable, high risk patients can successfully complete outpatient detoxification (Feldman et al., 1975).

Stinnett (1982) reported results suggesting outpatient management is both safe and in the short term effective. One hundred sixteen patients were studied; 50% successfully completed treatment, 20% dropped out and 30% required hospitalization. Potential advantages to "social setting detoxification" or "nonmedical detoxification" include cost-effectiveness and cost benefits assuming that treatment outcomes are similar and equally effective for inpatient and outpatient care. Outpatient medical detoxification is even less expensive than nonmedical, residential detoxification due to the decreased number of staff required. Stinnett's concern over outpatient management involved the lack of information regarding the comparative safety and effectiveness of both nonmedical and outpatient medical treatment (article published in 1982).

Stinnett (1982) developed specific criteria and quantitative objective measures to judge the safety and effectiveness of these treatment modalities. (The criteria are cited and used in Alterman, Hayashida and O'Brien's 1988 report). Stinnett's criteria for *safety* are:

1. The patient should not demonstrate any seizures and
2. The patient should not develop any of the severe manifestations of delirium including disorientation, hallucination, psychomotor agitation (p.1036).

Stinnett's criteria for judging effectiveness were:

1. The patient should not consume alcohol during the treatment period.

2. The severity of symptoms must show a progressive decrease over a reasonable amount of time and reach a level that does not interfere with normal functioning.

3. At the end of the withdrawal period, the patient should continue with some type of treatment for alcohol abuse (p. 1036).

Patients returned daily, Monday through Friday for evaluation. Patients not returning for 7 consecutive days were counted as dropouts. Completion of treatment consisted of quantitative measures using the Alcohol Withdrawal Syndrome - Symptom Severity Scale (AWS-SSS) and breathalyzer tests.

Stinnett concluded that treatment of a patient manifesting symptoms of the AWS can be managed safely and effectively in an outpatient setting utilizing a medical model of treatment. However, outpatient treatment is not effective or appropriate for all patients because it does not meet the medical or social needs of some patients. Part of the latter could be explained by the fact that services were only available Monday through Friday. It is not clear whether the services were available 24 hours a day during that time.

The Exeter Drug and Alcohol Resource Team in Devon, United Kingdom, estimate that approximately half of all patients seen in the practices with alcohol dependence were managed at home. Of the clients managed at home, 38% were unsupervised, 45% had a close relative holding their medications and 17% were supervised by a nurse (Stockwell, Bolt & Hooper, 1986). The authors view outpatient detoxification services as relatively safe, effective, more accessible, carrying less stigma and providing a better link patients to aftercare. Recommendations include support of alcohol resource teams to general practitioners managing patients at home. Limitations of the study include the lack of quantitative data (data was regarded as subjective with global impressions and estimates by the practitioners surveyed). General practitioners identified lack of social support and poor motivation as exclusion criteria in determining which patients were managed using home detoxification (Stockwell et al., 1986)

Collins, Burns, Van Den Berk and Tubman (1990) report on an outpatient detoxification service with medical supervision and structured counseling for patients with alcohol dependence as an alternative to inpatient treatment. Staffed by two nurses who saw all referrals the clinic provided back-up medical and psychiatric services. Multiple abusers were excluded. Patients had to be physically able to

attend the clinic daily. Any evidence of drinking led to termination and the point was emphasized in writing and reinforced daily. Each day the patient was seen in a progressive counseling session where discussion of problems at home and coping strategies for the short term and long term continued.

Responsibility for maintaining sobriety was firmly placed in the patients' hands, with the expectation that the patient contact at least one outside agency. Where appropriate, medical care was arranged.

Over the course of one year, 173 patients were referred for assessment. Seventy-six were accepted. Success was defined as attending all sessions, giving no history of alcohol consumption and having negative breathalyzer results at all sessions. Seventy nine percent completed treatment without medical complications. These figures are consistent with results of Feldman (1975) and better than Stinnett's (1982). Inpatient admissions declined by more than 50% during that year suggesting a potential savings of 74 inpatient days (assuming an average of ten days). No long term data was available.

Alterman, Hayashida and O'Brien (1988) examined a number of aspects of patient responses relevant to outpatient treatment. The study's focus was on compliance with treatment, decline in symptomatology and evidence of

drinking during treatment in addition to post-treatment outcome of those patients who failed to complete treatment. The patient population (49 male veterans) had limited social resources (22% were employed) or environmental supports (26.5% were married). With reported heavy drinking for nearly 12 years they exhibited sufficient evidence of the AWS. The Selected Severity Assessment (SSA) and a modified version of Stinnett's symptom severity scale (1982) was employed. Stinnett's instrument included 10 ratings of physical-behavioral symptoms (eating and sleeping disturbances, tremor, sweating, clouding of sensorium, hallucinations, quality of contact, psychomotor activity, pulse rate and convulsions). Alterman et al. added temperature to the list. Goals of treatment were to: (1) effectively resolve the existing symptoms of the AWS and prevent more serious symptoms, such as seizures or delirium tremens; (2) disrupt the pattern of abusive drinking; (3) help the patient become engaged in the rehabilitation treatment deemed necessary in establishing and maintaining alcohol-free living.

Using Stinnett's (1982) criteria for completion, 34 (69%) successfully completed detoxification in a median time of 5.3 days. None of the non-completers reported complications requiring medical treatment. The findings indicated that ambulatory detoxification can be accomplished

in a population of chronic and severe alcoholics having relatively limited social and environmental support, while patients in need of immediate medical attention should initially be treated as inpatients. Cited within this article was reference to Hayashida's et al. previous study of inpatient detoxification which yielded a 90% completion rate (Alterman et al., 1988)

In 1989 Hayashida, Alterman, McLellan, O'Brien, Purtill, Volpicelli, Raphaelson and Hall found outpatient medical detoxification of 164 male veterans of low socioeconomic status to be an effective, safe and low cost treatment for patients with mild to moderate symptoms of alcohol withdrawal. Assessment of AWS was performed using the SSA. To be accepted into the study, the patient had to have sufficient evidence of AWS to require some form of detoxification - the cessation of or reduction in heavy prolonged ingestion of alcohol followed by coarse tremors and at least one other symptom of alcohol withdrawal as defined by DSM-III. Patients with serious alcohol withdrawal status, such as impending DT's or a recent history of seizure of unknown origin, or patients with serious medical or psychiatric symptoms were excluded. Patients were randomized to either program. Of note is that there was a long wait for inpatient detoxification beds for patients not participating in this study. The study gave

patients a 50% chance of receiving inpatient treatment. Some bias may have been present since patients may have consented to join the study to simply obtain this treatment.

Inpatient detoxification required approximately 9 days with an average stay of 15 days. The additional 6 days were for initiating rehabilitation, for supplementary medical treatment or for care while awaiting longer term rehabilitation. Inpatient care was therefore more intensive and extensive. Outpatients were seen and evaluated daily with brief counseling for social and withdrawal-related problems usually provided by the physician. Outpatients who could not remain alcohol free, achieve complete detoxification within two weeks, or both, were classified as treatment failures and were either hospitalized or discharged if they refused hospitalization.

While the mean duration of treatment for outpatients was significantly shorter than for inpatients (6.5 and 9.2 days respectively), more inpatients than outpatients completed detoxification (95 % and 72% respectively). There were no serious medical complications in either group. Costs for inpatient detoxification ($3,319 to $3,665 per patient) were nine to twenty times higher than for out-patients ($175 to $388).

Hayashida's four objectives were (1) effective resolution of acute medical and psychiatric problems

associated with alcohol withdrawal syndrome and preventing development of more severe symptoms (seizures and DT's) (2) arresting the patient's abusive drinking during the detoxification and post-treatment follow up periods (3) helping the patient become engaged in continued rehabilitation treatment at a separate program, which was deemed necessary to establish and maintain alcohol free living and (4) preventing the need for redetoxification.

Follow-up evaluations were at one and six months to determine the effectiveness of the different programs. At one month, results were obtained for 83 of 87 outpatients and 70 of 77 inpatients. Sixty-six percent of the outpatients surveyed and 81% of the inpatients remained completely sober (chi-square = 4.44, 1 df, P=0.035). The percentage of those refraining from intoxification during the same period were 76% among outpatients and 88% among inpatients (chi-square = 4.06, 1 df, P=0.044). Rates may have been biased in favor of inpatients because their treatment was markedly longer (15 days on average)and their period of risk correspondingly shorter.

At six months, 70 of 87 outpatients and 70 of 77 inpatients were contacted. Follow up data were based on information from 79% of outpatients and 88% of inpatients. The follow up rates for the two groups did not differ significantly (p>0.10). Nearly half the patients surveyed

reported abstinence during the evaluation period, regardless of the setting in which they had been detoxified. Data were reanalyzed (due to the loss in follow-up) without differences between groups. The proportion of patients who remained abstinent at six months suggested that abstinence associated with detoxification diminished over time. Neither method of detoxification demonstrated a significant advantage over the other at six months. There was no difference between the groups with respect to later entry and retention in long-range rehabilitation during the first month of the succeeding five months of follow up. Limitations of this study were addressed and include the method of follow up (self report) rather than quantifiable methods such as laboratory results, breathalyzer or data from informants (Hayashida, et al., 1989). This study is cited repeatedly as the standard for outpatient programs.

Drummond, Thom, Brown, Edwards and Mullen (1990) examined the efficacy of treatment provided by general practitioners (GPs) versus specialists in a randomized controlled trial of 40 problem drinkers. The null hypothesis tested was that GP and specialist clinic treatment care were equally effective. All subjects received initial advice and counseling in the clinic. The specialist clinic group received continued care from the clinic and admission to the hospital if necessary. The GP

group were returned to the care of the GP with further support from the specialist who remained in contact with the GP initiating contact to check on progress or difficulties. All patients and GPs were told they would be contacted after six months. Some patients in the GP group chose to attend the clinic or other specialist clinics during the follow up period. Among other tools, the Alcohol Dependence Syndrome (SADQ), a 20 item self-completion questionnaire was used to measure the frequency and severity of symptoms. Findings suggest that GP and specialist treatment of problem drinkers have similar effect on behavior and problem status. The GPs were at least as successful as a specialist clinic in the treatment of more severely dependent drinkers. The researchers "found a highly statistically and clinically significant reduction in drinking and related problems within the groups in the absence of a significant difference between groups" (p.917). No specific "p" value is given in this report to support that statement and the reader found the results difficult to interpret. Changes in behavior were measured using the General Health Questionnaire (GHQ), the Alcohol Problems Questionnaire (APQ) and a "questionnaire designed to measure their perception of change in problem status" (p. 916) assumed by the reader to be the APQC. The APQ "is a new questionnaire designed to measure alcohol-related problems of the previous six months"

(p. 916). No information is provided about the validity and reliability of this tool. A type II error (accepting a false null hypothesis) is acknowledged due to the small number in the study (Drummond et al., 1990). There were no further details provided relative to the type of medical treatment these individuals required; it is not clear whether any showed signs of AWS. Patients were only classified as problem drinkers. However, the study points out the role of the primary care provider as a viable alternative to specialist treatment or inpatient treatment.

In 1991, Bartu reported guidelines for the nursing management of alcohol related withdrawal symptoms in the home. "Domiciliary" detoxification has been carried out successfully in Australia since the mid 1980's. For those patients with "viable support and no inhibiting medical conditions, home detoxification under nursing supervision is a valid option" (p.13). Nurses, with knowledge about addictions, including relapse prevention, assessment, counseling, caring for withdrawal reactions and available support in the community, visit daily for three to four days initially, then as frequently as required for up to ten days to monitor withdrawal symptoms and medications. Nurses also counsel the individual and significant others in goal setting, decision making and strategies for life style changes.

Bartu and Saunders (1994) subsequently reported on a small, quasi-experimental study of domiciliary detoxification as a cost effective alternative to inpatient detoxification in a specialist unit. Bartu and Saunders hypothesized that there would be no significant statistical differences in outcomes between the two groups and secondly, that home detoxification would be more cost effective than inpatient care. The first hypothesis was not supported. Thirty six of the original 40 subjects were interviewed between 9 and 22 months (mean 15.5 for the home group and 15.4 for the inpatient group) after detoxification to compare patient outcomes and the costs of home and inpatient detoxification. The site of the interview was determined by the client; all had blood pressure and breathalyzer readings recorded before the interview commenced. Interviews were based on the Alcohol Problems Questionnaire (APQ) designed to assess changes in employment, relationships, health, drinking behavior, symptoms of alcohol dependency, use of medications, health services, satisfaction with detoxification services, use of support services and legal problems. The APQ is the same tool used by Drummond (1990). Individuals were asked to reconstruct behavior as they recalled it since completing detoxification. Clients were asked to recall their alcohol intake on holidays, birthdays, sporting events and major news event days as well the days

following those events. Collaboration with concerned others was obtained from the majority when possible and compared to the information provided by the client (10 from the home group; 11 from the inpatient group). Two experienced clinicians (blind to each group and one another's ratings) performed a functional analysis of the major outcome variables (interrater reliability was high as assessed by the correlation coefficient r=0.85).

Clients in the home group had 17.94 standard drinks(measured in standard pub measures) in the week prior to the interview. Patients in the inpatient group had 48.94 standard drinks. The majority of clients described their drinking during the week prior as a typical week's drinking.

Sixty percent of the home group had maintained or improved the quality of relationships compared to 35% of subjects from the inpatient group (Wilcoxon Z=2.64, p=0.008). Seventy percent of the home group compared to 35% of the inpatient group considered their health to have improved (chi-square=5.2, df=1, p=0.02).

The second hypothesis was supported. Results indicated, that for suitable clients, home detoxification was at least as beneficial as inpatient detoxification and that it was achieved at a much lower cost (four to eight times less). Costs were directly related to the location in which it was conducted. The cost of home detoxification

ranged from $154.44 to $330 compared to $1280 for inpatients ($128/day x 10 days). Bartu and Saunders acknowledge limitations to their study which include its size and the choice of patient and likelihood of a Type 2 error.

In 1995, Ryan reported on a community detoxification center in Manchester, UK as an alternative to home and inpatient detoxification. Home detoxification generally takes place under the supervision of a general practitioner (GP), and a community alcohol team (CAT) who monitor the progress of alcohol withdrawal. Monitoring withdrawal is achieved through regular domiciliary visits or contact at clinics as opposed to inpatient settings. Success is likely when there is a supportive environment and there are no additional problems which complicate the alcohol misuse. The Smithfield Project evolved from a government funded study in the 1980's. As a 22 bed direct access detoxification center, day center and with two short stay hostels, it is staffed by mental health nurses with medical support from a local GP practice. Other professional groups include social services community care managers and members of community alcohol teams. People can refer themselves to the center at any time and can be in any state of intoxication. The philosophy is based on the provision of an accessible service at any time when the person is motivated to address their drinking problem. People come to

Smithfield when they are intrinsically motivated rather than coerced. It is also a system that recognizes that "gatekeepers" can diminish motivation. Consequently, the center deals with many people for whom home detoxification is not an option due to compounding problems of physical, mental health difficulties, relationship difficulties, social isolation, homelessness and involvement with the criminal justice system. Of particular interest is the center's recognition that while the early stages of detoxification focus on health care intervention, the second phase focus moves to social care within a community context.

The home based detoxification program initiated in the United Kingdom during the late 1980's is briefly described by Cooper (1993; 1995). The alcohol home detoxification program was developed as a result of nursing research into the benefits of a community alcohol team. Home detoxification is a safe and cost effective alternative to in-patient care according to Cooper. There is no rigid approach to detoxification, treatment depends on identified needs of the problem drinker and usually lasts seven to nine days. The drug of choice is usually the preference of the responsible physician.

A personal communication with Steve Gentz, Clinical Nurse Specialist at a local Veteran's Administration Hospital (2-5-96), revealed that they have been using an

outpatient detoxification program for approximately eight years. Criteria for admission to that program is consistent with the criteria Hayashida et al. (1989) used in his report on veterans treated in the outpatient setting. The most important criteria in this setting is the presence of a significant other who can administer the medications, monitor for complications and who is committed to bringing the individual to the clinic on a daily basis for approximately four days. Exclusion criteria include prior attempts at detoxification and comorbid conditions that warrant close in-patient care (impending DT's, recent history of seizure activity, unstable coronary artery disease). Success is defined as returning to the clinic for the four day duration, negative breathalyzer, self report and corroboration by the significant other that there has been no alcohol intake, and the absence of withdrawal symptoms. The patient is seen by a Clinical Nurse Specialist, counseled and if there is evidence of complications, the patient is referred to the physician for further intervention. Services are available Monday through Friday during the day.

Kaiser Permanente Medical Center in California has been treating alcoholics on an outpatient basis for over a year (personal communication, Nicola Longmuir, MD, 6-6-96). The program involves the individual agreeing to the entire

program that consists of day treatment for two weeks followed by intensive aftercare in the evenings and weekends for one year. Nurse Practitioners screen the individuals, complete the health history and physical and initiate the protocol established for the health care facility. If the individual requires more intense supervision, a back up residential service is available for up to five days. Patients must be ambulatory and not require intravenous therapy. Twenty-four hour nursing care is available. There is also the option of hospitalizing the individual if they do not meet the criteria for the residential service. This clinic employs two full time nurse practitioners who see the returning patients and approximately 3 - 4 new patients a day. The clinic includes the East Bay area and draws from a large population of indigent as well as Kaiser patients.

Summary

The literature review illustrates that the practice of outpatient detoxification has been going on for over twenty years with variable results. However, none of the reports indicates that this is an unsafe procedure. While there is some variation in the use of screening tools and medication, factors that appear repeatedly include the presence of a significant other, transportation to and from the clinic and agreement to abstain during the detoxification period. Additionally, there must be a provision for more inpatient

care if necessary. Finally, well-documented cost savings warrant serious consideration in this period of health care that emphasizes cost containment.

Stinnett's (1982) criteria used to judge the safety and effectiveness of outpatient detoxification form the basis of Alterman, Hayashida and O'Brien's (1975) landmark report. This in turn formed the basis for Hayashida's et al. 1989 study of male veterans with mild to moderate symptoms of AWS. As previously reported, this study showed that abstinence associated with detoxification diminished over time.

Drummond's et al. (1990) study on the efficacy of treatment provided by general practitioners versus specialists lends credence to the idea that primary care providers can manage outpatient detoxification as an alternative to specialist or inpatient treatment.

The literature supports the use of an APN in the provision of outpatient detoxification (Bartu, 1991; Cooper, 1993 & 1995; Ryan, 1995; Gentz, 1996; Longmuir, 1996). The requirements for safely conducting this type of service is well within the scope of practice of the APN.

Chapter 3

Theoretical Framework

Individuals wishing to modify addictive behaviors are able to change with and without expert assistance. Certain modalities demonstrate successful outcomes for alcoholism. Self change, often misnamed "spontaneous remission," occurs with alcohol abuse. Self change involves external influence and individual commitment (Prochaska, DiClemente & Norcross, 1992).

Addictive behaviors include behaviors of alcohol abuse, cocaine dependence, heroin addiction, compulsive gambling, overeating, and smoking. Regardless of the adopted intervention, not all clients suffering from addictive disorders improve. Some drop out of treatment and others relapse following brief improvement. The complexities of changing addictive behaviors require multivariate rather than univariate solutions (Prochaska & DiClemente, 1986).

Most models of change are models of action. However, there are many changes that precede and follow a person trying to change addictive behaviors. Prochaska and DiClemente's (1986) transtheoretical model proposes that clients seeking to change addictive behaviors move along a continuum of five stages. The constructs of this model assist in understanding self initiated and professionally

assisted changes of addictive behavior (Prochaska, DiClemente & Norcross, 1992).

Client variables thought to interfere with desirable outcomes include lack of motivation, resistance to therapy, defensiveness and the inability to relate. Intervention variables of the clinician include inadequate techniques, theory and relationship skills. The five stages explain when change is likely to occur. The model also describes the process of changing addictive behaviors (Prochaska, DiClemente & Norcross, 1992). It is conceptualized as a spiral model that integrates stages, processes and levels of change.

Prochaska's (1986, 1992) research is primarily with addictive behaviors associated with smoking cessation, obesity and alcohol abuse. Prochaska's theory is cited in the Agency for Health Care Policy and Research Smoking Cessation Clinical Practice Guidelines (1996). An examination of these addictive behaviors reveals many similarities. It is now clear that nicotine and alcohol dependence is similar in nature (Geller, 1996). Similarities include age of onset, conditioning, tolerance, dose modulation, craving, desirable and undesirable effects, withdrawal effects and relapse (Geller, 1996). Kinney (1996) and Sullivan (1995) find Prochaska's model applicable to substance abuse and relevant to primary care providers.

According to Prochaska and DiClemente the five stages of change begin with *precontemplation* where there is no intention to change behavior in the future. Individuals may be either unaware or underaware that a problem exists. People close to the person (spouses, friends, neighbors, employees) are however, aware that there is a problem. Individuals at this stage, when challenged to enter treatment, do so feeling coerced from outside pressure. This is in the form of spouses threatening to leave, loss of employment or pressure from the legal system. Individuals may demonstrate change while the pressure is on, but often quickly revert to old ways when they perceive the pressure has diminished. Precontemplators can wish to change, but this is quite different from intending or seriously considering a change within the next six months. Resistance to recognizing or modifying the behavior is "the hallmark of precontemplation" (p. 1103). This behavior may be seen the first time the primary provider identifies a problem with alcohol; they are the clients who are most resistant to efforts to help them change (Prochaska, DiClemente & Norcross, 1992).

In the stage of *contemplation,* people are aware of the problem and are seriously thinking about overcoming it, but have not made a commitment to action. People can remain in this stage for long periods. While in this stage,

contemplators weigh the pros and cons, the solution to the problem, and struggle with the amount of energy, effort, loss and cost of overcoming the change. Contemplators know where they need to go, but are not quite sure they are ready to go there. They are willing to make a change within six months giving serious consideration to problem resolution. It is at this stage that clients are most open to consciousness raising interventions (observations, confrontation, interpretation). They are more free to evaluate themselves both affectively and cognitively. At this stage, they are likely to question which values they are ready to let die since the change will result in changing peer groups as well as behaviors. There is a certain amount of risk they must be willing to take to move to the next stage (Prochaska, DiClemente & Norcross, 1992).

The stage of *preparation* combines intention and behavior. Individuals intend to change in the next month and have unsuccessfully changed their behavior sometime in the past year. Although some reductions are seen in their behavior they have not been able to effect change that involves total abstinence. This stage has been conceptualized as the early stirrings for the action stage. In this stage the primary provider may be cued that the client is beginning to address the problem. The client may

report attempts at abstinence but without ongoing success (Prochaska, DiClemente & Norcross, 1992).

During the *action* stage, individuals modify behavior, experiences or environment to overcome the problem. This requires considerable time and commitment of time and energy and is most visible by others. External recognition is frequently given and the action may be erroneously interpreted as change by people close to the individual as well as professionals. At this stage, the person must have demonstrated overt efforts toward change for one day to six months. Clients at this stage have attempted to change their behavior but lack the important elements necessary to maintain the changes (Prochaska, DiClemente & Norcross, 1992).

Maintenance is the stage where people strive to prevent relapse and consolidate the gains attained during action. Maintenance is a continuation not an absence of change. Behavior maintenance lasts a lifetime. Remaining free of the addictive behavior and consistently engaging in a new incompatible behavior for more than six months are criteria for the maintenance stage (Prochaska, DiClemente & Norcross, 1992).

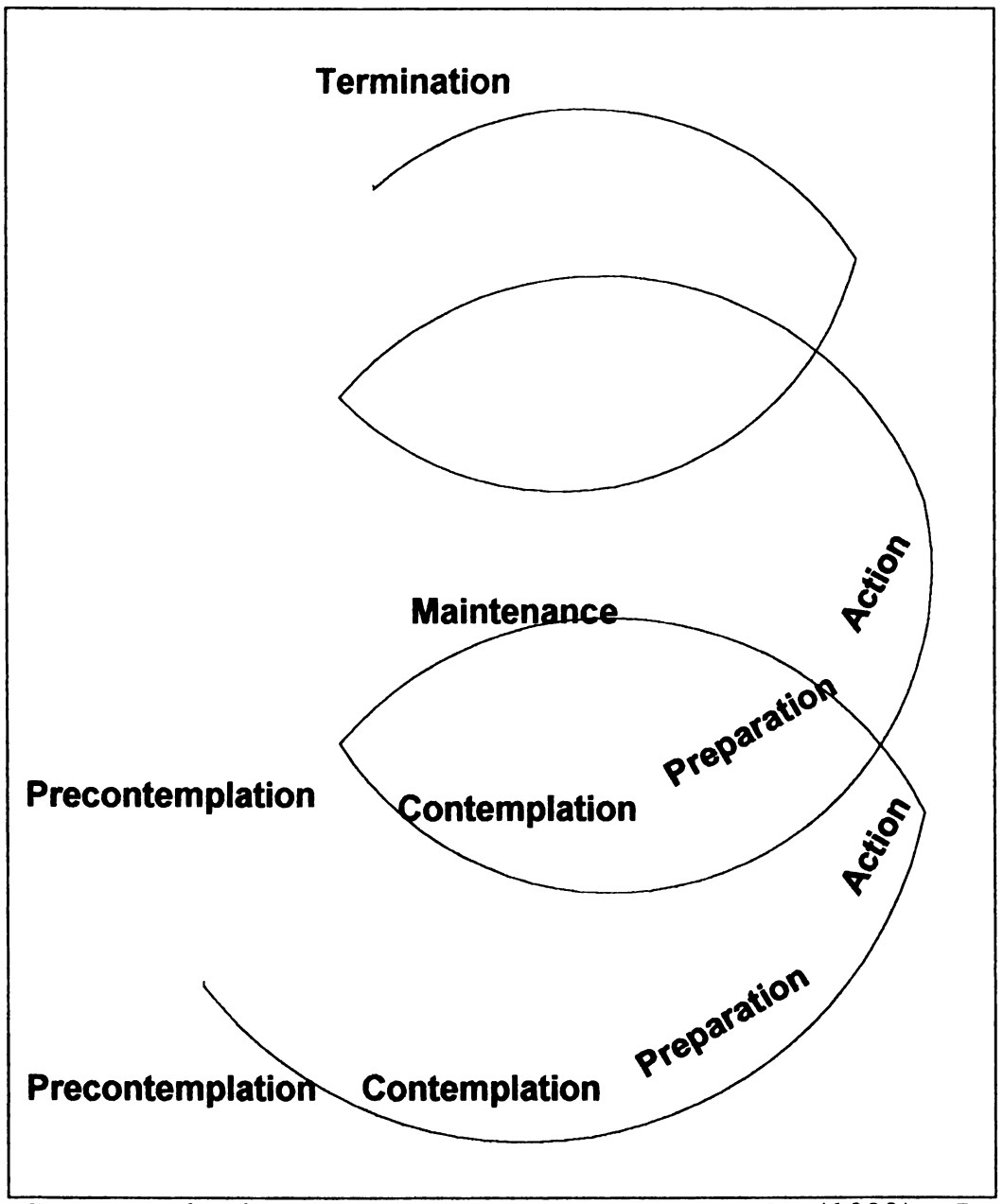
The vast majority of addicted people, according to Prochaska et al. (1992) are not in the action stage when they present for help. However, programs designed to help

people progress just one stage in a month can double the chance of participants taking action on their own in the near future.

Studies show that individuals with addictive behaviors, make an average of three to four attempts before the new behavior is well integrated. Relapse and recycling occur quite frequently. Because relapse is the rule rather than the exception, Prochaska's spiral model is most useful. In this model people progress from contemplation to maintenance, but most relapse. During relapse, people revert to an earlier stage, frequently precontemplation, where they remain for various periods of time. Research with smokers shows that the majority of relapsers -- 85% of smokers -- recycle back to contemplation or preparation. During this time they plan for their next attempt at change while learning from previous attempts (Prochaska, DiClemente & Norcross, 1992). The spiral model (Figure 1) suggests that they do not regress all the way back to where they started, rather, they recycle through the stages, learning from mistakes, trying something different the next time.

Each of Prochaska's et al. (1992) stages represent a period of time as well as a set of tasks needed for movement to the next stage. Tasks do not vary, however, the length of time spent in each stage does.

Figure 1 - A Spiral Model of the Stages of Change



From Prochaska,J., Demente,C. & Norcross,J. (1992). In search of how people change. Applications to addictive behaviors. American Psychologist, 47(9), 1102-1114.

Identifying a person's stage of change provides proscriptive and prescriptive information for treatment. Action oriented therapies (detoxification and/or therapy) may be more effective with individuals in the preparation or action stage rather than with those in the earlier stages of precontemplation or contemplation. Studies have shown that independent of treatment received, there is a clear relationship between pretreatment and outcome in smokers who are at the preparation or action stage. The progression from contemplation to action is thought to be essential for improving outcomes regardless of the treatment (Prochaska, DiClemente & Norcross, 1992).

From Prochaska's et al. (1992) perspective, the underlying structure of change is not technique oriented or problem specific. Rather, "efficient self change depends on doing the right things (processes) at the right time (stages)" (p. 1110). In other words, matching the client's stage with the treatment increases the likelihood of success.

The stages of change allow understanding of when shifts in attitudes, intentions and behaviors occur. The process of change is the second dimension and allows understanding of how these shifts occur. There are covert and overt activities that individuals engage in as they attempt to

modify addictive behaviors. Table 3 includes the 10 processes receiving the most theoretical and empirical support in Prochaska's et al. (1992) research. Helping relationships, consciousness raising, and self liberation were the top ranked processes whereas contingency management and stimulus control were the lowest ranked processes. Support for matching the intervention with client characteristics is viewed as most promising. According to Prochaska et al. the Institute of Medicine's (1989) report on prevention and treatment of alcohol problems identifies the stages of change as a key matching variable (Prochaska, DiClemente & Norcross, 1992).

When Prochaska et al. (1992) integrated the stages of change with the processes of change they were able to see how particular processes can be applied or avoided at each stage of change (Table 4). Between the stages of preparation and action, techniques such as self liberation, counterconditioning and stimulus control are used to reduce the use of addictive substances or to control the situations in which clients relied on such substances (Prochaska, DiClemente & Norcross, 1992). Self liberation is based in part on a sense of self-efficacy, the belief that one's efforts play a critical role in succeeding when faced with difficult situations. Clinicians must however be effective with affective and cognitive processes as well as with

behavioral processes (such as counterconditioning and stimulus control). When this is the case, clinicians are more able to modify the conditional stimuli that can lead to relapse (Prochaska & DiClemente, 1986). It is during this period that detoxification is most likely to be successful when combined with other treatment modalities (Prochaska & DiClemente, 1986).

Prochaska's model is used as an example of the importance of assessing the client's readiness to change. For the primary care provider, this model also offers a framework for understanding behavior. Prochaska's model contributes to the understanding of predictable stages in changing addictive behaviors.

In primary care, the provider is in the position of being able to assess the extent of the problem, the individual's motivation to change as well as the appropriate treatment. Detoxification offered as an option too early can be translated into time and resources unwisely spent. However, if the individual is ready to change then the likelihood of success will improve by using specific approaches for each stage (Sullivan, 1995). Detoxification may have to occur prematurely if the situation warrants such action. This model is a guide for supportive therapy and a guide to measure the likelihood of success.

Table 3 - The Processes of Change

Titles, Definitions and Interventions of the Processes of Change

Process	**Definitions:Interventions**
Consciousness raising	Increasing information about self and problem: observations, confrontations, bibliotherapy.
Self-reevaluation	Assessing how one feels and thinks about oneself with respect to a problem: values clarification, imagery, corrective emotional experience.
Self liberation	Choosing and commitment to act of belief in ability to change: decision-making therapy, New Year's resolutions, logo-therapy techniques, commitment enhancing techniques.
Counterconditioning	Substituting alternatives for problem behaviors: relaxation, desensitization, assertion, positive self-statements
Stimulus Control	Avoiding or countering stimuli that elicit problem behaviors: restructuring one's environment (e.g. removing alcohol or fattening foods), avoiding high risk cues, fading techniques.
Reinforcement Management	Rewarding oneself or being rewarded by others for making changes: contingency contracts, overt and covert reinforcement, self reward.
Helping Relationships	Being open and trusting about problems with someone who cares: therapeutic alliance, social support, self help groups.
Dramatic relief	Experiencing and expressing feelings about one's problems and solutions: psychodrama, grieving losses, role playing.
Environmental reevaluation	Assessing how one's problem affects physical environment: empathy training, documentaries.
Social Liberation	Increasing alternatives for nonproblem behaviors available in society: advocating for rights expressed, empowering, policy interventions.

Table 4 - Stages and Processes of Change

Stages of Change in Which Particular Processes of Change are Emphasized				
Precontemplation	Contemplation	Preparation	Action	Maintenance
Consciousness raising				
Dramatic relief				
Environmental reevaluation				
	Self evaluation			
		Self liberation		
			Reinforcement management	
			Helping relationships	
			Counterconditioning	
			Stimulus Control	

Chapter 4

Clinical Protocol

Some individuals with alcohol withdrawal symptoms can be managed in an outpatient setting. The primary care provider, while not only the person who may be approached by the client for help, is also in the position of detecting that alcohol abuse is a problem. Primary care providers may also become aware of a problem through referral by Employee Assistance Programs (EAP), school counselors, after contact with the police, a recent visit to the emergency room, or through contact from a significant other.

The Advanced Practice Nurse, as a primary care provider, in collaboration with a physician is able to direct the in-home management of an individual needing detoxification. The APN assumes the responsibility of monitoring and directing the detoxification through the collaborative efforts of a physician and support staff. The APN uses clinical assessment skills, assessment tools, clinical judgment and frequently a research based protocol to guide decision making and care.

The protocol suggested is research based and assumes an availability of physician services for consultation as well as appropriate substance abuse counseling and inpatient

services for individuals seeking help. It also assumes service provision through protocol - that it can be conducted safely in the home, and that there will be a significant other involved. The protocol includes guidelines for the assessment and selection of appropriate individuals, recommended testing, an outline for use of Phenobarbitol for detoxification as well as the subsequent follow up until the patient achieves a state of abstinence (See Appendix F).

The choice of medications that can be used to control the effects of the AWS depends on institutional and individual preferences. The literature suggests a range of medications with benzodiazepines being the most frequently used. The addition of a cardiac medication is sometimes used but remains controversial. The medication taper outlined for this protocol represents the preference of a local tertiary care institution.

Exclusion Criteria

Using the history, physical examination and assessment tools as guides, and in consideration of the review of literature the following conditions preclude outpatient detoxification. These exclusions may be modified once a program is well established.

1. Dehydration, or inability to retain fluids or medications.

2. Medical conditions that would complicate detoxification or that would require services that are not available in a primary care setting (i.e. chest pain, severe abdominal pain, persistent nausea and vomiting, significant hyperglycemia, recent post-ictal state, fever and tachycardia disproportionate to withdrawal, orthostatic hypotension, altered mental status, impending major withdrawal, or other severe psychiatric disorders that require medical observation and nursing care).

3. Dementia or poor patient reliability sufficient to compromise the patient's ability to follow instructions unless the patient has a significant other available and willing to remain with the patient for at least 48 hours. The Folstein Mini Mental State Exam is recommended as a screening tool - See Appendix A.

4. Lack of a safe/and or appropriate social situation that may hinder appropriate follow-up (i.e. lack of a significant other willing to stay with the patient and monitor them for at least 48 hours, lack of transportation, availability of alcohol in the home or history of behavior endangering self or others).

5. Pregnant or currently breast feeding.

6. Positive T.B. and H.I.V. positive

If the client meets any of the above criteria, the APN will consult the physician and review available alternatives.

Taking the History

A careful review of the client's history and physical exam allows clinicians to determine the existence of a problem with alcohol abuse as well as the potential for, or degree of withdrawal in physically dependent individuals. For these physically dependent persons, detoxification is the initial step in treatment of alcohol abuse. This exam is labor intensive and cannot be conducted in a short period of time. It is recommended that a one hour block be allowed to conduct the history and physical with the understanding that more time may be needed.

Taking the history generally begins the relationship with a patient. The prime objective is to identify matters the patient defines as problems. These problems may be hidden as well as obvious. It is therefore up to the interviewer to develop a sense of the patient's reliability. The structure includes:

Chief complaint

Present Problem

Past medical history

Family History

Social and experiential history

Systems review

A review of past medical and drinking history distinguishes alcohol abuse from alcohol dependence and determines the likelihood and potential severity of withdrawal. The drinking history is helpful in determining if the patient has a physiologic dependence needing medically assisted detoxification. Knowledge of previous attempts at abstinence, attendance at Alcoholics Anonymous (AA), or other formal treatment assists in designing a specific treatment plan for the patient as well as the appropriateness of outpatient detoxification (Geller, 1996).

Questions relevant to past psychiatric history also assist the provider in uncovering underlying psychiatric problems that would warrant referral. The history includes the following questions:

1. Personal background: marital status/significant other; pregnancy, general life satisfaction, hobbies and interests.

2. Home conditions: includes an assessment of environment, housing, economic condition, type of health insurance.

3. Occupation: description of usual work, hours and stressors.

4. Habits: Past and present use of recreational drugs, including intravenous drug abuse (IVDA), medications (OTC & Rx.).

5. Family history of alcoholism and alcoholic liver disease.

6. Current and past use of tobacco products.

7. History of abuse, depression, suicide attempts or ideation.

8. Age of first drink, number of years drinking. Last drink, type and amount.

a). How often and how much, what the patient drinks as well as when the drinking usually occurs and in what circumstance(s). It is also important to ask what social and personal stresses trigger drinking.

b). Symptoms patient usually experiences upon cessation of drinking (i.e. tremulousness, tachycardia, restlessness, nausea or vomiting, anxiety, insomnia, kinesthetic or other hallucinations).

c). How many and what attempts at sobriety have been made.

d). Any history of hospitalizations or surgeries. Any alcohol related injuries or illnesses, withdrawal, DT's or hallucinations.

9. Any history of seizures. Did seizures precede alcoholism?

10. Medical complications of drinking (i.e. pancreatitis, cirrhosis/hepatitis, dyspepsia, neuropathies, GI bleeding, poor nutrition, seizures).

Physical Exam

Once the history has been taken it is necessary to conduct a physical examination. The physical examination allows the clinician to validate findings through the use of a variety of techniques including inspection, palpation, percussion and auscultation. The physical examinations focus includes:

1. GENERAL APPEARANCE: How neatly dressed, hygiene, affect, facial flushing, smell of alcohol, tremulousness, general demeanor.

2. VITAL SIGNS: blood pressure, pulse, apical rhythm, respiratory rate, and temperature.

3. SKIN: Presence of bruising, petechiae, nail infections, dilated capillaries, jaundice, needle marks.

4. HEENT: Evidence of trauma; EOM function, ophthalmologic exam.

5. LUNGS: quality of lung sounds

6. CARDIAC: murmurs, gallops, rubs, rhythm

7. ABDOMEN: Shape, presence of ascites, bruits, masses, organomegaly, hepatic tenderness, guarding and tenderness, bowel sounds.

8. EXTREMITIES: track marks, bruises, edema, cyanosis, pulses.

9. MUSCULOSKELETAL: muscle wasting, tenderness, cramping

10. NEUROLOGIC: muscle size and strength, gait, Romberg, DTR's, sensory exam (light touch & vibration in distal locations), cranial nerves.

Test Administration

Additional testing is helpful in conducting a thorough assessment. The use of the Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar - see Appendix B) provides a quantitative measure of withdrawal potential. The breathalyzer provides immediate information relative to the presence of alcohol and serum testing provides information about organ function.

A score below 10 on the CIWA-Ar will not require benzodiazepines or barbiturates. Clinical judgment determines the need for medication with scores between 10 and 20. Medication is indicated for patients scoring over 20 (Worner, 1995).

It is difficult to conduct ambulatory detoxification when the patient is severely clinically intoxicated. If it is not possible to observe the patient until the blood alcohol level decreases, referral should be made for inpatient treatment. Conversely, it may be possible for a

patient to be in moderate alcohol withdrawal with an alcohol level of 200mg/DL (mg%). Such a person can be managed on an ambulatory basis, providing there is a reliable family member or significant other to monitor the detoxification regimen (Worner, 1995). Caution and judgment must be used in a patient with a positive breathalyzer and/or BAL. There must be assurance that the individual will not be driving under these circumstances.

A breathalyzer (normal result of < 200mg/%) provides immediate results. Furthermore, a urine toxicology screen may be ordered to detect the presence of other drugs.

Pregnancy testing, TB, HIV and other blood work including chemistries, liver function and CBC/platelets are dictated by findings from the history and physical findings. The GGT is elevated in approximately 65% of alcoholics and is considered a sensitive marker of heavy ETOH use over the previous few weeks (Geller, 1996). Urine pregnancy tests can yield a false positive when associated with opioids, therefore serum (quantitative HCG) is suggested for these individuals.

Treatment

If the patient is an otherwise healthy adult based on the history, physical exam and assessments indicated, the patient is given a patient is given a complete explanation of outpatient detoxification (See Appendix D). The

explanation includes a written contract (See Appendix C) outlining the expectations of participants, contact instructions if there are complications, and reasons for termination. Compliance with medications, medication side effects and abstinence are emphasized orally and in written form.

The patient must identify a supportive adult (caregiver) willing and able to bring them in daily and remain with the patient for at least the first 48 hours or until medical detoxification is complete. A written explanation of the medication regimen is provided. The caregiver is instructed in the administration of medications and monitoring of pulse and temperature. The caregiver is also given an explanation of complications that warrant return to the emergency room. A written agreement of the caregiver's obligations is obtained (Appendix A). The caregiver's ability to take a pulse is validated by return demonstration prior to discharge home.

As previously noted, the patient is encouraged to begin participation in a Twelve Step Program immediately. For a successful referral, the individual needs to be sent to a specific meeting, with address and times written down. The patient should be referred to a substance abuse specialist for individual and/or family therapy.

Detoxification

Once consent is obtained from the client and caregiver, medications for managing withdrawal are prescribed. Dosages are adjusted for age (elders and minors) and liver function. A prescription for enough medications to last until the next evaluation is provided. An appointment is scheduled for the next day. The patient and caregiver receive reinforcement relative to the need to attend Alcoholics Anonymous (AA) or and Employee Assistance Program.

As previously noted, there is a wide range of medications currently in use for detoxification. It is recommended that a Multivitamin 1 p.o. qd. and Thiamine 100 mg. 1 p.o. qd be dispensed for a 30 day period. For control of signs and symptoms of withdrawal a Phenobarbital taper is used. The dose is dependent on the presence of a positive breathalyzer and existing evidence of withdrawal.

Phenobarbital, a long acting barbiturate with sedative, hypnotic, anticonvulsant and antiepileptic qualities has an onset of action of 30-60 minutes and a duration of action of 10-16 hours when taken orally. The benefits of Phenobarbitol include its duration of action, its low cost and low addictive properties. The following recommendations represent adult (non geriatric) dosing.

Phenobarbital Taper

DAY 1: 120 mg. PO now

Then in 4 hours: 90 mg. PO

Then in 4 hours: 60 mg. PO

Then in 4 hours: 45 mg. PO

Then in 4 hours: 30 mg. PO

THEN

30 mg. PO every 4 hours for 24 hours

Then in 4 hours: 15 mg. PO

Then in 12 hours: 15 mg. PO

then discontinue.

A worksheet is given to the caregiver to monitor pulse, temperature and symptoms of agitation or restlessness. Caregivers are instructed to check the patient's pulse every 2 hours. If the patient's pulse is > 100 or > 10 beats/minute over baseline OR if the patient is exhibiting increased agitation, they will be instructed to call the office or go to the emergency room if the office is closed. Furthermore, if the individual's pulse is < 50, or his/her temperature exceeds 101 (F) and/or if the patient is unable to respond to verbal commands they will be instructed to go to the emergency room.

A quiet home environment with low stimulation, adequate lighting is suggested. The use of medications and mouthwashes containing alcohol are contraindicated. Smoking

tobacco within fifteen minutes of a breathalyzer may result in a false positive result. The patient is encouraged to drink and eat as usual. If the patient is unable to do so, the caregiver should contact the health care system.

Follow up

The patient is expected to return daily for evaluation by the APN. At that time the patient is clinically reevaluated for changes (appearance, vital signs, heart, lungs and neurologic). Significant changes and/or a positive breathalyzer results in referral to the physician for further evaluation. The caregiver is given the opportunity to express concerns and provide collaboration of abstinence. A breathalyzer exam is repeated on each visit.

If the patient does not return for the next scheduled appointment, every effort should be given to attempt to reach the individual to find out the reason. This contact is important since it allows the provider to check on the individual's safety or state of well being.

By day 2, the breath/blood alcohol level should be zero. A detectable level suggests the patient has been unable to abstain and this warrants referral for inpatient care. A CIWA-Ar is administered to objectively track symptoms over time. Medication is again prescribed for the next day. Again, the importance of attending a recovery program is reinforced along with discussion related to

prognosis, and plans for managing the chronic abuse of alcohol.

Most relapses occur three to six months with incidence declining thereafter. General health measures (regular exercise, good nutrition, adequate rest), along with reassurance that symptoms will decline over time are encouraged. Exercise appears to be useful because it stimulates the endogenous opioid system, decreasing depression, improving body image and promoting sleep.

At day three, the clinical reevaluation emphasizes abnormal laboratory and breathalyzer results. The CIWA-Ar is again administered if there is no seizure history to date, along with continued reinforcement for progress. Serious consideration is given to referral to outpatient treatment in addition to AA or EAP.

By day 4, the majority of patients should require no medication (other than MVI and Thiamine). Clinical reevaluation is conducted, reinforcement for progress made is given and abstinence is reinforced. At this time the patient should be involved in supportive therapy with beginning plans for continuing a life of abstinence. The client is made aware at this point that future detoxification may not be conducted on an outpatient basis.

The patient is encouraged to return to the primary care provider for follow up at two week intervals for a month.

Evaluation/Outcome Criteria

The short term outcomes will be measured by the individual returning daily for evaluation in the office, stable vital signs, absence of withdrawal symptoms, negative breathalyzer, compliance with medications and AA and verbalized satisfaction by the significant other and patient. The CIWA-Ar is used to document declining symptoms of withdrawal over time.

Long term criteria will be completion of the detoxification period, absence of withdrawal symptoms, abstinence (negative BAL) during the detoxification period and at follow up. Cost of service will be calculated based on the standard charge per visit with the APN and will be measured against the average cost of in-patient detoxification.

Chapter 5

Implications

In this era of managed care, health care providers are faced with the challenge of ensuring that patients receive appropriate cost effective treatment. The challenge is not only in finding new ways to provide care, but may also involve finding new settings and new faces to provide care. Creative approaches to meeting the demands of health care are necessary within this construct. What used to be standard treatment for all alcoholics now ranges from inpatient, residential to outpatient day treatment. The practice of outpatient home detoxification for low risk individuals is another way to provide appropriate care at yet a lower financial cost than these options without compromising care.

As with any new idea or finding, there are implications to consider. One consideration is in looking to where the patients will originate. While the proposed protocol has been designed for low risk adults presenting in a primary care providers' office, it can be adapted for use in other settings. Conventional wisdom tells us that most problem drinking occurs after regular office hours. There is therefore a reasonable liklihood that many of these individuals will be seen in the emergency room. When an

intoxicated individual comes to the emergency department (ED), it is not unusual for them to be admitted for detoxification. While this is a safe practice, it means that the individual may be prematurely detoxified without a full assessment of their true readiness to change. The patient may be detoxified or they may leave the hospital against medical advice. Regardless they do not remain abstinent. With a few modifications of the protocol, and in cooperation with the emergency department staff and primary care provider, it is possible to reconsider this practice and perhaps reduce the number of costly admissions under those circumstances.

Current practice legally requires the ED to house the patient until the BAL is <200mg %. While it is well known that these patients can be disruptive and difficult to handle, there are some interventions that can be used to minimize the behavior. Rather than admitting the patient to the hospital, the ED staff could initiate a Phenobarbital taper and explore the possibility of continuing the taper on an outpatient basis. Additionally, since there is a high correlation between alcohol and tobacco use (Istvan and Matarazzo, 1984; Geller, 1996) the use of a nicotine patch may decrease impulsive behavior noted in smokers. The patient could then be referred to their primary care provider or the physician on call for follow up.

The question "why will this fail?" cannot be ignored. First, change is usually met with resistance when the status quo is disturbed. The protocol's success rests on a number of factors including the provider being willing to try something new. Anticipating the problems and providing information, answers and support during the early stages is essential for success. Problems that may be encountered include insufficient time allotted to assessing these patients. If the individual is intoxicated, it will require more time to obtain the history. This clearly has implications for scheduling and staffing. Furthermore, the issue of "billing" arises. How insurance companies are to be billed for reimbursement may present some dilemmas. The question of whether this is a chronic illness or a disease may lead to coverage issues and pre-existing conditions denials.

One must anticipate that if a detoxing individual is managed on an outpatient basis and develops complications that require hospitalization; the question may be raised "are the complications a result of the outpatient treatment?" Or, "would this have happened if the patient was hospitalized?" There is a reasonable likelihood that the complications would have occurred had the patient initially been admitted for treatment. To say that the complications occurred because of the method of treatment

may be a quantum leap. To suggest that complications might have been prevented in an inpatient setting may also be hasty. The (nursing) literature is sparse on this topic. Specialty (detoxification) units may do a better job of monitoring and intervening, however, not all alcoholics are admitted to specialty units. Careful tracking of this information when the protocol is implemented is essential.

This protocol relies on the availability of a significant other/caregiver to facilitate the home detoxification. It also depends upon available transportation for daily follow-up. Without these the likelihood of success will decrease. Furthermore, if the individual is not ready to change, there seems little chance that he/she will comply even in the face of support (significant other and transportation). If this is the case it may not matter where the detoxification takes place. For these persons, counseling and the use of techniques suggested by Prochaska, DiClemente & Norcross, (1992) may assist the individual in gaining insight and in so doing facilitate readiness to change.

One cannot exclude the possibility that there are individuals admitted to inpatient detoxification who are not ready to change. In either case, the outcome should be clear. To paraphrase Mattick and Hall (1996): if detoxification is a treatment in its own right for

alcoholics to achieve *abstinence,* then detoxification programs are not especially effective. Detoxification seen as a *process* that aims to achieve a safe and humane withdrawal is a worthwhile aim in and of itself.

Access to healthcare services remains a problem for many individuals including the uninsured and working poor. This population frequently lack financial and social resources (including transportation, social support and education). The working poor have few financial resources to spare, and are unlikely or unable to take time off from work to avail themselves of services regardless of how accessible they may appear in and to the community. Agencies such as the Salvation Army may be not only a referral source but may also be able to assist in transportation, housing and social support during the detoxification period.

Research Opportunities

The opportunity for furthering research in clients' undergoing outpatient detoxification is extensive. The review of literature reveals very little from a nursing perspective. One study (Bartu & Saunders, 1994) was quasi-experimental with a small "N"; the remainder are anecdotal. The two facilities involved in outpatient detoxification have not published data relative to success or failure of their programs.

This patient population and their caregivers offer opportunities to examine the meaning of alcoholism or detoxification from a phenomenological perspective. Qualitative analysis provides insight into the realities of the individuals' lived experience and from a different perspective. This methodology allows the opportunity to examine the way these events are perceived and experienced from the individual's point of view. This inductive form of research can also generate theory.

Quantitative research from tracking the participants retrospectively to prospective studies on abstinence and related issues are of value. Obvious variables include demographics, source of referral, length of detoxification, compliance (as measured by BAL), amount of medication prescribed, side effects, changes in CIWA-Ar ratings, inpatient admissions after initiation, rates of completion and drop out, length of abstinence, cost of detoxification and reasons for exclusion. This data could be used not only to examine correlations but also potential savings (in length of stay and inpatient hospital use). Data could provide information about the efficacy of the protocol.

Analysis of descriptive statistics using inpatient and outpatient data and correlations between variables are some examples of statistical testing that could yield helpful

information. The size of the sample will determine specific analysis.

Questionnaires could be developed to measure client and family satisfaction as well as quality of life (measuring home and work) since the detoxification. Additional areas of interest would be changes in lifestyle resulting from abstinence (weight, exercise, recreation, and peer group).

Finally, data gathered can be used to test nursing theory. While it is uncertain how many of the patient's with problems related to alcohol will in fact qualify for this protocol, tracking these patients as a group will yield valuable information for the APN in this new role and will provide data to justify making further changes in addition to expanding nursing's knowledge base.

APPENDICES

APPENDIX A

Scale for assessing severity of alcohol withdrawal syndrome

Patient Name_____ Total CIWA-Ar Score _____
Date_____Time (24 hour clock)_____ Rater's initials_____
Pulse or heart rate for 1 minute_____ Maximum possible point: 67

NAUSEA AND VOMITING-ask "Do you feel sick to your stomach? Have you vomited?" Observation.
0 no nausea and no vomiting
1 mild nausea with no vomiting
2
3
4 intermittent nausea with dry heaves
5
6
7 constant nausea, frequent dry heaves

TREMOR-Arms extended and fingers spread apart. Observation.
0 no tremor
1 not visible, but can be felt fingertip-to-fingertip
2
3
4 moderate, with patient's arms extended
5
6
7 severe, even with arms not extended

PAROXYSMAL SWEATS-Observation.
0 no sweat visible
1 barely perceptible sweating, palms moist
2
3
4 beads of sweat obvious of forehead
5
6
7 drenching sweats

ANXIETY-Ask "Do you feel nervous?" Observation.
0 no anxiety, at ease
1 mildly anxious
2
3
4 moderately anxious or guarded, anxiety is inferred
5
6
7 equivalent to acute panic state, as seen in severe delirium or acute schizophrenic reactions

AGITATION-Observation.
0 normal activity
1 somewhat more than normal activity
2
3
4 moderately fidgety and restless
5
6
7 paces back and forth during most of interview or constantly thrashes about.

TACTILE DISTURBANCES-Ask "have you any itching, pins-and-needles sensations, burning, numbness, or a feeling of bugs drawling on or under your skin?"
3 moderate itching, pins and needles, burning or numbness
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

AUDITORY DISTURBANCES-Ask "Are you more aware of sounds around your? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing you? Are you hearing hearing things you know are not there?" Observation.
0 not present
1 very mild harshness or ability to frighten
2 mild harshness or ability to frighten
3 moderate harshness of ability to frighten
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

VISUAL DISTURBANCES-Ask "Does the light appear to be too bright? Is its color different? Does it hurt your eyes? Are you seeing anything that is disturbing you? Are you seeing things you know are not there?" Observation.
0 not present
1 very mild sensitivity
2 mild sensitivity
3 moderate sensitivity
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

HEADACHE, FULLNESS IN HEAD-Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or light-headedness. Otherwise rate severity.
0 not present
1 very mild
2 mild
3 moderate
4 moderately severe
5 severe
6 very severe
7 extremely severe

ORIENTATION & CLOUDING OF SENSORIUM Ask "What day is this? Where are you

Observation	Who am I?"
0 none	0 oriented and can do serial additions
1 very mild itching, pins and needles, burning, or numbness	1 cannot do serial additions or is uncertain about date
2 mild itching, pins and needles, burning, numbness	2 disoriented for date by no more than two calendar days
	3 disoriented for date by more than calendar days
	4 disoriented for place and/or person

Adapted from Sullivan, JT, Sykora, K, Schneiderman, J. et al: Assessment of Alcohol Withdrawal: the Revised Clinical Institute Withdrawal Assessment for Alcohol Scale (CIWA-Ar). British Journal of Addiction 84:1353, 1989 (in Worner, T.M. 1995).

APPENDIX B

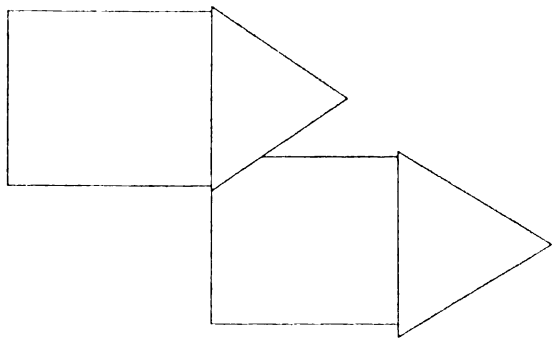
THE MINI MENTAL STATE EXAM

Maximum	Score	
		ORIENTATION
5	( )	What is the (year) (season) (date) (day) (month)?
5	( )	Where are we (state) (country) (town) (hospital)?
		REGISTRATION
3	( )	Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer. Then repeat them until he/she learns all 3. Count trials and record. Trials_____
		ATTENTION AND CALCULATION
5	( )	Serial 7's. 1 point for each correct answer. Stop after 5 answers. Alternatively spell "world" backward
		RECALL
3	( )	Ask for the 3 objects repeated above. Give 1 point for each correct answer.
		LANGUAGE
2	( )	Name a pencil and a watch
1	( )	Repeat the following; "no ifs, ands, or buts."
3	( )	Follow a 3-stage command: "Take a paper in your hand, fold it in half, and put it on the floor"
1	( )	Read and obey the following: CLOSE YOUR EYES
1	( )	Write a sentence
1	( )	Copy a design (sample attached)
	_____	Total Score

Assess level of consciousness along a continuum

Alert Drowsy Stupor

CLOSE YOUR EYES



Adapted from Folstein, M.R. & Folstein, S.E. Mini-mental state: A practical method for grading the cognitive state of patients for the clinician.

APPENDIX C

SAMPLE AGREEMENT FOR PARTICIPATION

Agreement to participate in the outpatient home alcohol detoxification program is made with the following understanding:

- That upon determination of meeting the criteria to participate you will need to name another person (hereafter called caregiver) willing and able to supervise your detoxification.
- Supervision by the caregiver of the detoxification will include administering the prescribed medications, taking your temperature, monitoring your pulse rate, and observing for evidence of increasing agitation (tremors, sweating, visual changes, hallucinations).
- The caregiver must be willing and able to remain with you for at least 48 hours or until you are judged by the health care professional to be able to remain alone.
- The caregiver must be able and willing to bring you to the office daily until the detoxification period is completed. The caregive must ensure that you will not drive while receiving medication for detoxification.
- The caregiver must be willing to ensure that you abstain from alcohol during the detoxification period. In the event that you consume alcohol, the caregiver must agree to bring you to the emergency room for evaluation for inpatient treatment.
- The caregiver also agrees to assisting in securing the medications with the understanding that the loss of prescription and or medications results in you no longer being eligible for further outpatient detoxification. The caregiver assumes no financial responsibility for obtaining the prescriptions.
- The caregiver agrees to participate in the evaluation as it relates to your tolerance of the medications and the detoxification program. The caregiver will also be asked to facilitate transportation to appointments and meetings during this time.

_____ _____

Patient name Date

_____ _____

Caregiver name Date

APPENDIX D

EXPLANATION OF PROGRAM

Patients meeting certain criteria are eligible for outpatient (home)detoxification. This kind of detoxification involves returning daily to the office for evaluation and further treatment. An explanation follows:

- Detoxification is managed at home under the supervision of an individual willing and able to monitor your response to the medications and detoxification.
- This individual needs to be willing and able to remain with you for at least 48 hours or until medical detoxification is complete.
- They must be willing and able to drive you to the office each day, help you in securing appropriate medications daily and support you in your attempt to remain abstinent.
- You will be asked to begin to participate in a twelve step program and begin supportive therapy to help you maintain sobriety.
- In the event that you loose your prescription, medication or that you test positive for presence of alcohol after your initial evaluation, you will no longer be eligible to participate in outpatient detoxification. Other reasons for terminating outpatient detoxification include failure to return daily, or failure to complete the entire period. If this happens, your health care professional will recommend alternate treatment.
- It is understood that each day you will see your health care provider, you will be questioned about how you are tolerating the medications and treatment, they will conduct a breathalyzer test and additional tests as necessary.

Detoxification can be managed safely at home, given the appropriate medications and support. We ask that all alcohol be removed from your home. You should eat and drink as normal, keep your environment quiet and abstain from alcohol. Do not use medications that contain alcohol (mouthwash and cough medicines for example) and do not smoke before you come in since these can cause the breathalyzer to test positive. You should not drive or operate heavy or dangerous equipment while on these medications.

APPENDIX E

SAMPLE MEDICATION & VITAL SIGN WORKSHEET

*Take pulse every two hours and temperature every four hours.

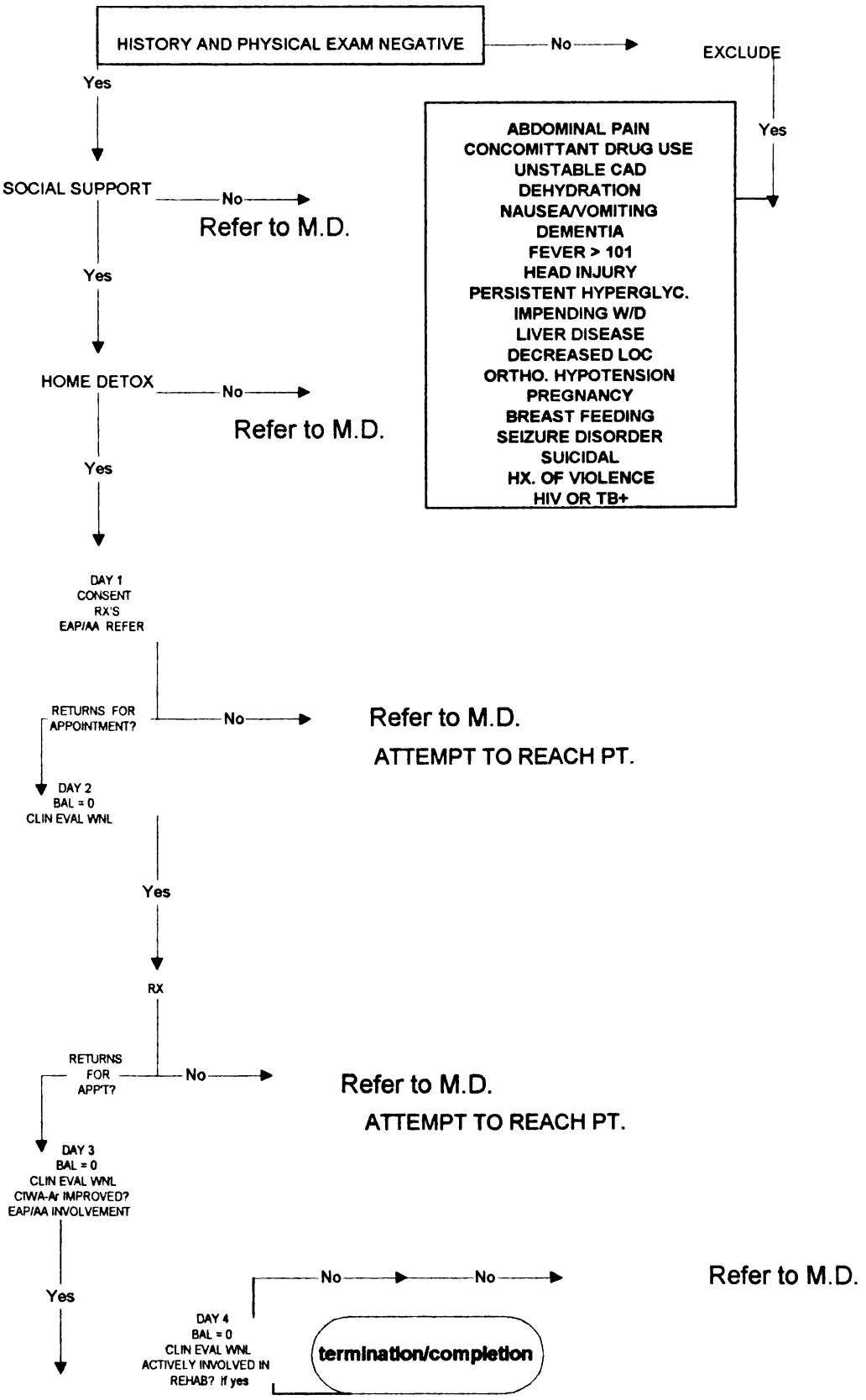
- If pulse is greater than or equal to _____
- If pulse is less than 50 **OR**
- If temperature is greater than 101 F **OR**
- If patient is getting more agitated **OR**
- If patient is unable to respond to verbal commands **OR**
- If patient cannot hold down fluids without throwing up

Call your doctor or go to the emergency room

Time	Dose	Pulse	Temp.	Other

APPENDIX F

ALGORITHM FOR HOME ALCOHOL DETOXIFICATION


HISTORY AND PHYSICAL EXAM NEGATIVE
No
EXCLUDE
Yes
ABDOMINAL PAIN
CONCOMITTANT DRUG USE
UNSTABLE CAD
DEHYDRATION
NAUSEA/VOMITING
DEMENTIA
FEVER > 101
HEAD INJURY
PERSISTENT HYPERGLYC.
IMPENDING W/D
LIVER DISEASE
DECREASED LOC
ORTHO. HYPOTENSION
PREGNANCY
BREAST FEEDING
SEIZURE DISORDER
SUICIDAL
HX. OF VIOLENCE
HIV OR TB+
Yes
SOCIAL SUPPORT
No
Refer to M.D.
Yes
HOME DETOX
No
Refer to M.D.
Yes
DAY 1
CONSENT
RX'S
EAP/AA REFER
RETURNS FOR APPOINTMENT?
No
Refer to M.D.
ATTEMPT TO REACH PT.
DAY 2
BAL = 0
CLIN EVAL WNL
Yes
RX
RETURNS FOR APPT?
No
Refer to M.D.
ATTEMPT TO REACH PT.
DAY 3
BAL = 0
CLIN EVAL WNL
CIWA-Ar IMPROVED?
EAP/AA INVOLVEMENT
Yes
No
No
Refer to M.D.
DAY 4
BAL = 0
CLIN EVAL WNL
ACTIVELY INVOLVED IN REHAB? If yes
termination/completion

APPENDIX G

HOME ALCOHOL DETOXIFICATION PROTOCOL

RATIONALE: Some patients with alcohol withdrawal syndromes can be managed safely as outpatients with medications. A careful history and physical exam will allow the APN to determine potential for or degree of withdrawal.

THE FOLLOWING CONDITIONS PRECLUDE OUTPATIENT HOME DETOX:

1. Dehydration, or inability to retain fluids or medications.
2. Medical conditions that would complicate detoxification or that would require services that are not available in primary care setting. (i.e. chest pain, severe abdominal pain, persistent nausea and vomiting, significant hyperglycemia, recent post-ictal state, fever and tachycardia disproportionate to withdrawal, orthostatic hypotension, altered mental status, impending major withdrawal, or other severe psychiatric disorders that require medical observation and nursing care).
3. Dementia or poor patient reliability sufficient to compromise the patient's ability to follow instructions unless the patient has a significant other available and willing to remain with the patient for at least 48 hours. The Folstein Mini Mental Sate Exam is recommended as a screening tool.
4. Lack of a safe/and or appropriate social situation that may hinder appropriate follow-up (i.e. lack of a significant other willing to stay with the patient and monitor them for at least 48 hours, lack of transportation, availability of alcohol in the home or history of behavior endangering self or others).
5. Pregnant or currently breast feeding.

HISTORY:

1. Review Past Medical History, chart (if available), current symptoms and inquire specifically about:
    a. Personal background, including availability of social support
    b. Home conditions
    c. Occupation
    d. Habits
    e. Family history of alcoholism and alcoholic liver disease.
    f. Current and past use of tobacco products.

g. History of abuse, depression, suicide attempts or ideation.
h. Age of first drink, number of years drinking. Last drink, type and amount. How often and how much, when the drinking occurs and in what circumstance(s). Social and personal stressors that trigger drinking.
i. Symptoms patient usually experiences upon cessation of drinking (i.e. tremulousness, tachycardia, restlessness, nausea, vomiting, anxiety, insomnia, kinesthetic or other hallucinations).
j. How many and what attempts have been made at sobriety
k. History of hospitalizations or surgeries, Any alcohol related injuries or illnesses, withdrawal, DT's or hallucinations.
l. Any history of seizures. Did they precede alcoholism.
m. Medical complications of drinking (i.e. pancreatitis, cirrhosis, hepatitis, dyspepsia, neuropathies, GI bleeding, poor nutrition, seizures).

PHYSICAL EXAM

1. GENERAL APPEARANCE: How neatly dressed, hygiene, affect, facial flushing, smell of alcohol, tremulousness, general demeanor
2. VITAL SIGNS: blood pressure, pulse, apical rhythm, respiratory rate and temperature
3. SKIN: presence of bruising, petechiae, nail infections, dilated capillaries, jaundice, needle marks.
4. HEENT: evidence of trauma; EOM function, ophthalmologic exam
5. LUNGS: quality of lung sounds
6. CARDIAC: murmurs, gallops, rubs, rhythm
7. ABDOMEN: shape, presence of ascites, bruits, masses, organomegaly, hepatic tenderness, guarding and tenderness, bowel sounds
8. EXTREMITIES: track marks, bruises, edema, cyanosis, pulses
9. MUSCULOSKELETAL: muscle wasting, tenderness, cramping
10. NEUROLOGIC: muscle size and strength, gait, Romberg, DTR's, sensory exam (light touch and vibration in distal locations), cranial nerves

ASSESSMENT MAY INCLUDE:

1. Alcohol dependence and or abuse (DSM IV criteria)
2. Alcohol withdrawal (CIWA-Ar)

3. Polysubstance abuse with a primary addiction to alcohol
4. Other drug withdrawal syndromes
5. Mental Status (Folstein Mini Mental)
6. Awareness of problem and willingness/motivation to change

PLAN:
1. Breathalyzer
2. Blood work (pregnancy testing, chemistries, liver function, CBC/platelets, HIV)
3. Urine toxicology
4. TB Tine

DETOXIFICATION:
1. Dispense medications for withdrawal signs and symptoms. Give supply sufficient only to next evaluation appointment
2. Schedule evaluation appointments daily
3. Reinforce need to attend program for recovery to be successful. Refer to AA or EAP

MEDICATIONS:
1. Use medications to control signs and symptoms. Dose may be dependent on history, level of agitation and tremulousness, positive breath alcohol in presence of significant withdrawal signs, age and weight. Choice of medication is driven by practitioner/institutional preference
2. Multivitamins 1 p.o. qd. Dispense #30 pills
3. Thiamine 100 mg. 1 p.o. qd. Dispense #30 pills
4. Provide worksheet for medications, pulse and temperature
5. Obtain verbal and written contracts. Emphasize need for remaining abstinent during following 24 hours.
6. Emphasize importance of not driving.
7. Schedule appointment for next day

Day 2 - *if patient does not return attempt contact*

- Clinical evaluation. If clinically deteriorating consider inpatient management
- Breathalyzer; if positive consider inpatient admission
- CIWA-Ar. If clinically deteriorated; consider inpatient admission
- Rx for next 24 hours based on CIWA-Ar score
- Reinforce participation in AA or EAP; encourage excercise; assist in developing long term strategies for sobriety; set up appointment for substance abuse adviser

Day 3 - *if patient does not return attempt contact*

- Clinical evaluation emphasizes abnormal laboratory and breathalyzer tests
- Breathalyzer; if positive, consider inpatient admission
- CIWA-Ar; if clinically deteriorated, consider inpatient admission
- Reconsider referral to an outpatient treatment program

Day 4 - *if patient does not return attempt contact*

- Clinical reevaluation
- Most patients should require no medication by this day
- Reinforce abstinence; schedule follow up visit

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