

Trends in inpatient detoxification services, 1992–1997

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Introduction

For some persons with substance dependence disorders, addiction treatment may start with detoxification. Detoxification is therapeutically supervised withdrawal to abstinence over a short time period during which pharmacologic agents are often employed to reduce client discomfort or the likelihood of complications (Gerstein & Harwood, 1990). While detoxification may be a necessary beginning step to recovery for clients who are addicted to certain substances (particularly the opioids, sedatives, and hypnotics) and who experience acute withdrawal symptoms, detoxification alone is seldom sufficient to result in long term abstinence or recovery from substance abuse (Gerstein & Harwood, 1990). Patients who receive detoxification alone, in comparison to persons who receive detoxification and substance abuse rehabilitation, are much less likely to have a good outcome in terms of abstinence at a later point in time (Daley, Argeriou, & McCarty, 1998; McCusker, Bigelow, Luippoid, Zorn, & Lewis, 1995).

Some authors have noted that within the last five years, due to the influence of managed care, the standard model of care for chemical dependency treatment of 21–28 day inpatient stays (including detoxification and substance abuse rehabilitation followed by outpatient treatment) has been replaced by short inpatient detoxification, followed by partial hospitalization or outpatient rehabilitation for substance abuse rehabilitation (Anderson & Church, 2000a, 2000b). They note that the previous model of inpatient detoxification accompanied by inpatient substance abuse rehabilitation has to a large degree been replaced with detoxification in one setting, followed by substance abuse rehabilitation in another setting (Anderson & Church, 2000a, 2000b). Such a change however, requires the patients to make a successful transition from one setting to another much earlier in the course of treatment. A number of studies suggest that the majority of patients do not successfully make this transition from detoxification to rehabilitation treatment (Daley et al., 1998; Lash, 1998). The Office of the Inspector General found that even in the public sector, few State Medicaid programs had formal linkages between detoxification and substance abuse rehabilitation services (Department of Health and Human Services [DHHS], OIG, 1998).

Not only does this situation reflect missed opportunities for patients and their families, but it also reflects expenditures for services with little likelihood of improved health outcome in the long term. Adding to these concerns, some recent research has suggested that repeated instances of detoxification from alcohol may be related to increased severity of withdrawal symptoms, increasingly obsessive thoughts about drinking, and a poorer outcome in terms of abstinence (Malcolm, Herron, Anton, Roberts, & Moore, 2000;

Malcolm, Roberts, Wang, Myrick, & Anton, 2000). While the settings and services for detoxification and treatment may have changed dramatically over the recent decade, some research suggests that the clients who use detoxification services also have changed. McCarty and others found that in Massachusetts the older white male was no longer the primary consumer of detoxification services; they noted substantial increases in the admission of women and African-Americans to detoxification services (McCarty, Caspi, Panas, Krakow, & Mulligan, 2000). In other research, pregnant women (compared to women who were not pregnant) were more likely to be readmitted to detoxification services (Daley et al., 1998). Thus, successful transition of persons with addiction from detoxification to rehabilitation has significant public health implications beyond individual substance use disorders.

Detoxification has been shown to be safely carried out in partial hospitalization programs, in other outpatient programs, and at home (Allan, Smith, & Mellin, 2000; Prater, Miller, & Zylstra, 1999). Given the growth in managed care with its emphasis on cost containment and outpatient services, the use of inpatient detoxification and inpatient rehabilitation services may have declined. Yet, because persons with substance abuse have a high probability of injury and hospitalization, hospital settings will continue to have a role in the identification, detoxification, and treatment of substance use disorders (Field, Claassen, & O'Keefe, 2001). Little empirical information exists on the trends in services for detoxification of patients who have substance abuse disorders. This study is one of two studies of the Center for Substance Abuse Treatment of the Substance Abuse and Mental Health Services Administration that aim to provide information on trends in detoxification and treatment across inpatient and outpatient settings and by type of payer. This study focuses on patients who receive detoxification as inpatients and how the characteristics of those patients have changed over time.

Materials and methods

Data

Data for this project are primarily from the Healthcare Cost and Utilization Project, Nationwide Inpatient Sample (HCUP-NIS), a census of discharges for a sample of community hospitals from 22 states, developed by the Agency for Healthcare Research and Quality. The HCUPNIS sample was selected to approximate a national sample of such hospitals and has been shown to produce estimates of inpatient utilization similar to the National Hospital Discharge Survey (AHRQ, undated). Community hospitals are non-Federal, short-term, general hospitals, excluding specialty hospitals in psychiatry and chemical dependency. Data for years 1992 and 1997 and HCUP-NIS weights for deriving national estimates were used in this study.

The HCUP database was used because of the long trend available and because its size (about 6 million discharges per year) gives reliable estimates for substance abuse detoxification and rehabilitation. One limitation of the database is that it provides data only on inpatient treatment and does not track patients after discharge. Thus, HCUP data cannot reveal the extent of follow-up treatment in outpatient settings that occurs after hospitalization. Another limitation is the exclusion of specialty hospitals that treat

substance abuse. Thus, the HCUP findings from this study apply to care in the general hospital setting only.

To understand the national HCUP trends better, an ancillary analysis of MarketScan1 data was conducted to explore outpatient treatment following inpatient detoxification. MarketScan is the claims experience of approximately 5 million covered employees of 50 large employers. We identified persons who had received inpatient detoxification procedures and then examined whether they received inpatient or outpatient mental health or substance abuse treatment or rehabilitation during the stay or 30 days following discharge. International Classification of Diseases, Ninth Edition, Clinical Modification (ICD-9-CM) codes were used to define substance abuse and mental health treatment on inpatient claims. CPT-4 (Common Procedural Terminology, Fourth Edition), the uniform coding for outpatient and physician billing for treatments, was used to define the same categories for outpatient treatment. While the Market- Scan database includes services obtained from any health care setting including specialty psychiatric and chemical dependency hospitals, it relates onto to the employment based privately insured population.

In addition, data on HMO market penetration were obtained from the Area Resource File, a database of numerous statistics at the State and county level, compiled by the Bureau of Health Professions of the Health Resources and Services Administration. For the analysis, 1997 HCUP utilization and 1998 HMO penetration in the county of the hospital were compared. Only 1998 values of HMO penetration were available from the Area Resource File. These data were used to test the hypothesis about the association of managed care with linkage between detoxification and rehabilitation.

Identification of hospital stays for detoxification—the study sample

Hospitalizations were identified as related to an admission for a detoxification if an inpatient had a detoxification procedure on their uniform bill for insurance reimbursement. Procedure codes are based on ICD-9-CM, the coding system used uniformly by the hospital industry. The procedure codes were: 94.62, 94.63, 94.65, 94.66, 94.68, 94.69.

Identification of treatment

The subset of the study population who had rehabilitation during a hospital stay for substance abuse or dependence was identified also using procedure codes. If the person had any of a list of procedure codes related to substance abuse rehabilitation (94.61, 94.63, 94.64, 94.66, 94.67, 94.69) then that person was defined as having received rehabilitation during the hospital stay. Those who had only detoxification procedure codes were not considered as receiving rehabilitation.

Results

Overview of trends

Between 1992 and 1997 the number of discharges from general hospitals in the United States related to detoxification for substance abuse increased by 11%, from 305,502 to 337,572 (Table 1). The rate of all U.S. discharges increased by 1.1%. In 1992 there were

35.0 million discharges of all types from acute care hospitals in the United States; in 1997, there were 35.4 million total discharges.

Table 1. Trends in Substance Abuse Detoxification Hospitalizations (With and Without Treatment) in the United States, 1992 and 1997

Characteristic	1992	1997
Number of detoxification discharges	305,502	337,572
Number of discharges of all types	35,011,737	35,407,187
Stays with and without inpatient treatment:		
With treatment	38.9%	21.1%
Without treatment	61.1%	78.9%
Stays by type of detoxification procedure:		
Alcohol detoxification	36.1%	41.6%
Alcohol rehabilitation and detoxification	19.1%	9.3%
Drug detoxification	11.2%	20.6%
Drug rehabilitation and detoxification	7.5%	5.6%
Combined alcohol and drug detoxification	14.0%	16.9%
Combined alcohol and drug rehabilitation and detoxification	12.2%	6.0%

Source: Thomson Medstat analysis of HCUP data.

Most people admitted to the hospital for detoxification did not receive rehabilitation for substance abuse during their stay, whether in 1992 or 1997 (61.1% and 78.9%, respectively) (Table 1). Moreover, the proportion of persons receiving rehabilitation for substance abuse during an inpatient stay where a detoxification procedure occurred declined between 1992 and 1997. Three codes indicate that “detoxification and rehabilitation” was provided and three codes indicate that only “detoxification” was provided. All three “detoxification and rehabilitation” procedures declined over the study period and all three types of detoxification-only procedures increased over the period. The most common type of detoxification in both 1992 and 1997 was for alcoholism. Combined alcohol and drug detoxification was the second most common procedure in 1992 but third in frequency in 1997. Drug only detoxification moved from third to second position between 1992 and 1997.

Trends in characteristics of persons receiving inpatient detoxification

The characteristics of persons receiving an inpatient detoxification procedure in 1992 and 1997 remained relatively constant (Table 2). Approximately 70% of discharges were of males, the average age of discharged detoxification patients was about 40 years, and most persons were between ages 18 and 55. There was some decline in the 18–34 age group between 1992 and 1997 and an increase in the 35–55 age group. Discharges for detoxification increased in the South, rising from 14% to 25% between 1992 and 1997. We are not sure how to explain the shift to the South. A small part of the shift is due to the relative growth in the population in the South; however, the shift is too large for this to be a complete explanation. There does not appear to be one particular policy shift that would explain the shift since further analysis shows it occurs across payer groups.

Table 2. Characteristics of Stays for Substance Abuse Detoxification in The United States, 1992 and 1997

Characteristic	1992	1997
Male gender	71.1%	68.7%
Average age	39	41
Age groups:		
0 – 17	1.3%	0.8%
18 – 34	40.0%	29.1%
35 – 44	31.3%	38.0%
45 – 55	13.8%	19.1%
55 – 64	7.0%	7.4%
65 +	6.5%	5.6%
Missing	0.1%	0.0%
Region:		
Northeast	39.6%	34.2%
North Central	34.1%	31.0%
South	14.3%	25.4%
West	12.0%	9.3%
Type of insurance:		
Medicare	15.4%	16.1%
Medicaid	23.2%	29.4%
Private insurance	36.2%	32.2%
Self-pay	18.3%	16.7%
No charge	0.4%	1.1%
Other	6.0%	4.1%
Missing	0.6%	0.4%
Median income of patient's zip code area:		
\$0 – \$25,000	33.9%	37.3%
\$25,001 – \$30,000	21.1%	18.5%
\$30,001 – \$35,000	15.6%	14.3%
\$35,001 and over	25.5%	24.7%
Missing	3.9%	5.3%
Primary ICD-9-CM diagnosis:		
Alcohol psychoses	9.0%	2.6%
Drug psychoses	3.7%	7.2%
Alcohol dependence syndrome	50.2%	30.6%
Drug dependence	24.1%	26.5%
Nondependent drug abuse	1.1%	0.9%
Other diagnoses	11.9%	32.2%
Average length of stay (days)	7.7	5.2
Percent ER admissions	35.6%	40.1%
Discharge by disposition:		
Home	79.0%	79.3%
Institution	8.1%	9.7%
Died	0.2%	0.3%
Against medical advise	12.7%	10.6%
Average total charge (in 1997 dollars)	\$6211	\$5679

Source: Thomson Medstat analysis of HCUP data.

Note: The category "Other diagnoses" include a wide variety of both psychiatric and non-psychiatric diagnoses. For example, over 710 people were diagnosed with adjustment reaction.

About 16% of detoxification discharges were covered by Medicare as a primary payer. Medicaid discharges rose from 23 to 29%. Private-insurance-covered discharges declined from 36 to 32%. Self-pay discharges remained at about 17%. In 1992, 33.9% of discharges were from zip code areas with a median household income of \$0–\$25,000. This increased to 37.3% in 1997.

In 1992, the most common primary ICD-9-CM diagnosis for a discharge where a detoxification procedure was provided was alcohol dependence (50.2%); this diagnosis declined to making up only 30.6% of all discharges in 1997. The category of “other diagnosis”, which included non-substance abuse primary diagnoses, grew from 11.9% to 32.2% of all discharges between 1992 and 1997.

The average length of stay dropped by one third over the six-year period, from 7.7 days to 5.2 days. The percentage of admissions through the emergency room increased from 35.6% to 40.1%. The place to which persons were discharged remained relatively constant, although slightly less were discharged to institutions in 1992 (8.1%) as compared to 1997 (9.7%).

Consistent with the decline in length of stay, average costs per detoxification stay in 1997 dollars declined from \$6,211 in 1992 to \$5,679 in 1997.

Characteristics of persons receiving inpatient treatment during an inpatient stay with detoxification

Table 3 compares the characteristics of persons receiving and not receiving some type of rehabilitation during an inpatient stay for detoxification. All of the differences in characteristics between those with and without rehabilitation are statistically significant at the $p < .01$ level according to a chi-square or t-test. The tests are done across the rehabilitation and non-rehabilitation groups within each year (1992 and 1997).

Persons receiving rehabilitation were slightly more likely to be female and to have a slightly younger average age in both years. Patients aged 0–17 were significantly more likely to receive rehabilitation than patients in older age groups regardless of the year. Between 1992 and 1997, the probability of receiving rehabilitation dropped for both males and females and for every age category. For example, in 1992 more than two thirds of discharges of children aged 0–17 received rehabilitation when admitted for detoxification; by 1997 that percentage had dropped to a little more than one third of discharges of children aged 0–17.

The decline in rehabilitation occurred across all four regions of the county but was particularly dramatic in the Northeast. In 1992, 32% of hospitalizations for detoxification in the Northeast included treatment services, but in 1997 only 9% included rehabilitation. Persons in the Northeast were the least likely to receive rehabilitation in 1992 and 1997; persons in the South were the most likely to receive rehabilitation in both years.

Table 3. Characteristics of Persons Hospitalized for Detoxification in the United States Who Receive and Do Not Receive Treatment During the Stay, 1992 And 1997

Characteristic	1992		1997	
	With	Without	With	Without
Gender				
Male	37.5%	62.5%	21.2%	78.8%
Female	41.3%	58.7%	23.6%	76.4%
Average age	38	40	41	41
Age groups:				
0 – 17	68.3%	31.8%	37.5%	62.5%
18 – 34	40.5%	59.5%	22.7%	77.3%
35 – 44	38.1%	61.9%	21.8%	78.2%
45 – 55	35.1%	64.9%	20.6%	79.4%
55 – 64	34.5%	65.5%	21.0%	79.1%
65 and over	35.3%	64.7%	22.0%	78.0%
Region				
Northeast	32.0%	68.0%	9.0%	91.0%
North Central	43.2%	56.8%	21.7%	78.3%
South	46.7%	53.3%	35.9%	64.1%
West	38.2%	62.8%	26.1%	73.9%
Type of insurance				
Medicare	38.9%	61.1%	30.3%	69.7%
Medicaid	30.9%	69.1%	12.1%	87.9%
Private Insurance	50.1%	49.9%	28.5%	71.5%
Self-pay	29.1%	70.9%	19.8%	80.3%
No Charge	50.0%	50.0%	13.5%	86.6%
Other	28.5%	71.5%	17.3%	82.7%
Median income of patient's zip code				
\$0 – \$25,000	34.4%	65.6%	21.3%	78.9%
\$25,001 - \$30,000	40.2%	59.8%	23.0%	77.0%
\$30,001 - \$35,000	37.7%	62.3%	22.8%	77.2%
\$35,001 and over	43.4%	56.6%	21.5%	78.5%
Missing				
Primary ICD-9-CM diagnosis				
Alcohol psychoses	32.6%	67.4%	7.8%	92.2%
Drug psychoses	50.8%	49.2%	10.9%	89.1%
Alcohol dependence syndrome	42.3%	57.7%	31.7%	68.4%
Drug dependence	43.3%	56.7%	26.7%	73.3%
Nondependent drug abuse	40.7%	59.3%	25.6%	74.4%
Other diagnoses	14.1%	85.9%	12.3%	87.7%
Average length of stay	12.6	4.7	7.7	4.5
Admission source				
ER admission	28.6%	71.4%	14.7%	85.3%
Non-ER admission	44.2%	55.8%	26.8%	73.2%
(Notes at end of table)				
Discharge by disposition				
Home	41.3%	58.7%	23.3%	76.6%
Institution	27.3%	72.7%	9.8%	80.2%
Died	9.1%	90.0%	1.5%	95.8%
Against medical advice	29.0%	71.0%	16.2%	83.8%
Average total charge (in 1997 dollars)	\$8,226	\$4,894	\$5,999	\$5,589

Source: Medstat analysis of HCUP data.

Note: All t-tests and chi-square tests for treatment differences within categories of inpatient characteristics are statistically significant at $p < .01$ for each year.

Persons with private insurance and those with no-charges (a group including the uninsured receiving charity care and others receiving professional, relative, or friend courtesies) were the most likely of all the payer categories to receive rehabilitation in 1992. However, their probability of receiving rehabilitation declined substantially by 1997—from 50% to 29% for the privately insured and from 50% to 13% for the no-charge patients. It declined markedly for all other payer groups as well. Medicaid patients became the least likely to receive rehabilitation (12%) by 1997.

Persons living in postal areas with median incomes of \$25,000 or less were the least likely to receive rehabilitation in 1992 and 1997, although the differences by income were not large and became more compressed by 1997. Rehabilitation declined for each of the primary diagnostic categories but the decline was particularly dramatic for persons diagnosed with alcohol psychoses or drug psychoses.

The average length of stay in the hospital was significantly longer for persons with rehabilitation in both 1992 and 1997. Average length of stay decreased for both the rehabilitation and the non-rehabilitation groups, but the decline was much more substantial for rehabilitation groups. Persons without rehabilitation stayed 4.7 and 4.5 days in 1992 and 1997, respectively. Whereas in 1992, a person receiving rehabilitation stayed an average 12.6 days, in 1997 the stay was only 7.7 days. Consistent with the longer stay, persons receiving rehabilitation in 1992 had charges for total stay that were about 40% higher than those not receiving rehabilitation. However, in 1997, the difference in average charge per hospital stay between those receiving and not receiving rehabilitation was only 7%.

Admission through the emergency room decreased the probability of rehabilitation, compared to a planned admission, in both 1992 and 1997. This is of particular concern, given the increase in emergency room admissions. This suggests, that increasingly, patients in need of treatment are not successfully directed to treatment as a routine part of their medical care. In both 1997 and 1992, those discharged home were more likely to have received rehabilitation during the hospitalization than those discharged to institutions, those who died, or those who left against medical advice. Those discharged to other institutions were more likely to have received no rehabilitation in 1997, compared to 1992, suggesting that over time hospitals relied more on other institutions for treatment.

Multiple logistic regression was run on all the variables in Table 3 for 1992 and 1997 to predict receipt of rehabilitation. All of the variables were statistically significant at the .05 level or lower. The size of the coefficients on age and female were relatively unchanged in both years. In both years, the South was the region in which most patients obtained treatment. Some of the rankings among the payer categories changed within the years. Medicaid, private insurance, self-pay and no charge declined relative to “other payer.” The effect of ER admissions remained relatively strong and negative. The effect of income declined between 1992 and 1997. In 1992, diagnoses of drug or alcohol psychosis, dependence, or abuse were more likely to receive rehabilitation than “other diagnosis.” In 1997, the diagnoses alcohol and drug psychosis were less likely to receive rehabilitation than “other diagnosis.”

Reasons for the decline in rehabilitation

Although the rate of discharges for detoxification increased by 11% between 1992 and 1997, the probability that one would receive rehabilitation while in the hospital dropped by 46%. The decrease in the probability of receiving rehabilitation occurred across gender, age, region, insurance status, income levels, diagnoses, admission source, and discharge destination. Thus, changes in these factors do not appear to explain the decrease. We confirmed this last point by estimating a logistic regression controlling for gender, age, region, type of insurance, income, diagnosis, and admission source. We found that in 1992, persons were 2.2 times as likely to receive rehabilitation during an inpatient stay where detoxification was provided as they were in 1997.

Given that demographic, regional, and diagnostic factors do not seem to explain the decline in treatment, what factors are driving this trend? One hypothesis (that cannot be explored with HCUP data) is that in 1997, persons were more likely to receive treatment after discharge than in 1992. We tested this hypothesis on the privately insured Market-Scan population. According to that analysis, 54.1% of persons receiving inpatient detoxification in 1992 received mental health or substance abuse treatment within thirty days following discharge. By 1997, this number had only increased marginally to 59.2%. By 1999, the percentage had fallen to 43.0%. The probability of follow-up treatment after discharge was much higher among persons who had received only detoxification while inpatients than among persons who received rehabilitation as well as detoxification while inpatients. Among persons with rehabilitation and detoxification while inpatients the follow-up rate post-discharge was 22.8%. Among persons with only detoxification while inpatients the follow-up rate post-discharge was 76.4%. (For more detailed analysis of the MarketScan data see Mark, Dilonardo, Chalk, & Coffey, 2001).

Another hypothesis is that third-party payers reduced their payments to providers for substance abuse treatment or refused to cover treatment altogether. To examine the role of third-party payers, and more specifically, highly managed plans, we examined the probability of receiving rehabilitation during an inpatient stay in which a detoxification procedure was provided in relation to the HMO penetration rate in the county (Table 4). Persons discharged from counties with the lowest HMO penetration rates (less than 27% of the population enrolled in HMOs) were more likely to receive rehabilitation than were persons from counties with higher HMO penetration rates.

Table 4. Relationship Between Receipt of Treatment in 1997 and HMO Penetration in the County of The Hospital in 1998

HMO Penetration Rate	Percentage Receiving Treatment
Less than 27%	29.80%
27 - 34%	12.40%
35 - 45%	17.40%
46% and higher	15.70%

Source: Medstat analysis of HCUP and Area Resource File data.

Discussion

Summary

Despite the fact that inpatient detoxification for substance abuse is a common procedure, little is known about how it is used in the United States, who receives inpatient detoxification, the typical length of stay, and how these aspects changed during the 1990s. This paper addresses these gaps in knowledge.

The study reveals that most people who received inpatient detoxification in 1992 and 1997 did not also receive rehabilitation while an inpatient. The percentage also receiving rehabilitation declined between 1992 and 1997 from 38.9% to 21.1%. The decrease in the probability of receiving rehabilitation occurred regardless of patient characteristics. Average length of stay for detoxification dropped by one third over the six-year period, from 7.7 days to 5.2 days, and the percentage of admissions through the emergency room increased from 35.6% to 40.1%. Detoxification offers an opportunity to link patients with treatment. This analysis indicates that those opportunities may be missed.

One limitation of this study is that it examines only detoxification services in inpatient settings. Certainly, many patients receive treatment after they are discharged from inpatient detoxification units. And, increased managed care emphasis on outpatient, as opposed to inpatient, treatment may have moved such treatment to outpatient settings. Although we cannot address this question with the HCUP data, we have examined this issue in more detail in a second paper with private health insurance claims related to all settings of care for the period 1992 through 1999 (Mark et al., 2001). The results of that paper indicate that about one quarter of privately insured patients who received only detoxification during an inpatient stay do not subsequently receive even minimal treatment to address their substance abuse problem. We do not know the follow-up treatment rate for patients who have no insurance or public insurance. All insured, public-program, and uninsured clients are captured in the HCUP hospital discharge data. Thus it is possible that the decline in inpatient treatment is being compensated by an increase in outpatient treatment.

Another limitation is that we only capture formal treatment. Substance abuse treatment is provided in a variety of free, informal settings such as alcoholics anonymous and narcotics anonymous. The data in this study cannot address whether informal substance abuse treatment is being substituted for formal substance abuse.

The results of the study should be looked at in the context of more global changes in medical care broadly and substance abuse more specifically. Inpatient care for all medical care has been increased slightly from 35.0 million discharges in 1992 to 35.4 million discharges in 1997, however average length of stay declined from 5.9 to 4.9 days. Therefore, part of the trend away from inpatient treatment may reflect a trend a larger trend toward shorter lengths of stays. Expenditures for substance abuse treatment, however, have been growing more slowly than all health care (1.6% annual average inflation adjusted growth rate for substance abuse vs. 3.2% for all health care; Coffey et al., 2001).

Implications

One key finding of this study is that by 1997 only about one fifth of persons receiving an inpatient detoxification stay also received inpatient rehabilitation during their stay. A number of studies confirm that providing access to rehabilitation services immediately following detoxification for substance abuse is critical to positive outcomes for clients (Gerstein and Harwood, 1990). Detoxification that is not followed by rehabilitation misses an opportunity to develop a therapeutic partnership for change with the client. Such lost chances for changing client behavior are likely to result in continued addiction, adverse health consequences, and higher health care costs for these individuals, as well as greater social disruptions for their families, co-workers, acquaintances, and for society as a whole. Recycling clients through emergency rooms and inpatient detoxification is costly, as is the increased severity that may result from continued lack of treatment.

At the same time, the steep decline in the length of stay for those who received rehabilitation suggests that inpatient detoxification combined with inpatient “rehabilitation” may in actuality be inpatient detoxification and stabilization rather than “rehabilitation” per se. As pointed out by McLellan, Belding, McKay, Zanis, and Alterman (1997), the goal of detoxification-stabilization is removal of the physiological and emotional instability that impedes direct entry to rehabilitative treatment. While detoxification and stabilization are essential early stages in the continuum of care, substance abuse rehabilitation is still a necessary subsequent step for optimal outcomes.

Coordinating a continuum of care, however, following detoxification poses a challenge in the delivery of adequate and appropriate alcohol and drug treatment services both in the public and private sectors. Few public and private insurers, managed behavioral health care organizations, health care facilities, and treatment programs address the need to assure that individuals enter treatment following their discharge from detoxification programs. Managed care contracts (public or private) rarely address this issue. In 1998, only fifteen states addressed the continuum of care in their written Medicaid plans, Medicaid managed care contracts, quality assurance plans, or other formal agreements (DHHS, OIG, 1998). Most Medicaid agencies do not collect data on whether individuals are admitted to treatment following detoxification, and rarely do these programs apply case-management techniques to substance abuse services (DHHS, OIG, 1998).

Ensuring accountability for entry into rehabilitation treatment following detoxification, and for the process of care thereafter, is beginning to be addressed by the alcohol and drug treatment field and by accrediting bodies. The Washington Circle Group, a coalition of health care purchasers and other policy makers, developed performance indicators for health plans to promote assessment of whether individual patients enter treatment following detoxification and continue to be engaged in treatment. Application of such quality measures to both public and private health programs will focus attention on the function of detoxification in ameliorating and stabilizing the acute medical, substance use, and mental health symptoms that prevent patients from entering directly from detoxification into rehabilitation programs.

Based on these data, one cannot judge whether the fact that less than half of patients who are admitted to inpatient detoxification programs are, thereafter, admitted to subsequent rehabilitation treatment is due to denial or intransigence of patients or to the health care

system. The belief by some insurers and managed care organizations that detoxification is sufficient to address substance use disorders, in the absence of any other treatment services may also be an issue. Beyond education of such organizations about substance abuse treatment, one needs data on the cost of care for persons with detoxification and treatment and a determination of how dollars can be directed to needed services with better outcomes at the same costs.

Clearly, clinical staff have an acute responsibility for assessing and defining patients' needs for treatment as they complete inpatient detoxification and/or stabilization and especially to identify recipients of multiple detoxification and target them for enhanced clinical management. Interventions are available for those patients who are ambivalent about entering treatment following detoxification. Motivational techniques that prepare clients to enter treatment have been shown to be associated with greater participation in treatment and positive treatment outcomes (DHHS, 1999). These techniques emphasize that the responsibility and capacity for change lie within the client. The therapist assists and encourages the client during detoxification and stabilization to recognize a problem behavior, to regard positive change in their best interest, to feel competent to change, to develop a plan for change, to select an appropriate treatment setting, to take action by entering treatment, and to continue strategies that discourage a return to the problem behavior (DHHS, 1999).

In conclusion, more research is clearly needed on the range of detoxification programs (inpatient and outpatient) being provided and on processes at an individual, program, and systemic level to assist clients in moving from detoxification to rehabilitation treatment. Key questions to be addressed include which are the most effective methods for improving linkages between detoxification and rehabilitation, which types of linkages work best for patients at varying levels of readiness for treatment, and how such linkages are affected by financial factors. The results of such research will provide the evidence base from which appropriate organization and financing policies can be developed that support improvements in treatment for substance use disorders.

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