

# Retention

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## Treatment Retention and Follow-up Outcomes

The length of time clients stayed in treatment was directly related to improvements in follow-up outcomes, replicating findings from previous national treatment evaluations (DARP and TOPS). These findings applied to OMT, LTR, and ODF treatment programs in DATOS, but not to the brief STI services ([Hubbard, Craddock, Flynn, Anderson, & Etheridge, 1997](#)).

- In OMT, clients who remained in treatment for a year or longer were 4 times less likely than early dropouts (i.e., treated under 3 months) to use heroin weekly during the 1-year follow-up.
- In LTR and ODF, clients who remained in treatment for 3 months or longer had significantly better follow-up outcomes on a variety of criteria than did early dropouts (i.e., treated under 3 months). In both modalities, posttreatment outcomes continued to improve as treatment retention increased.
- In LTR, follow-up outcome differences between short-term (i.e., treated under 3 months) versus longer-term (i.e., treated 3 months or longer) clients were statistically significant for weekly cocaine use (36% vs 14%), heavy alcohol use (31% vs 11%), predatory illegal acts (23% vs 12%), sex-related HIV/AIDS risks (33% vs 26%), and unemployment on a full-time job (86% vs 71%).
- In ODF, follow-up outcome differences between short-term (i.e., treated under 3 months) versus longer-term (i.e., treated 3 months or longer) clients were statistically significant for weekly cocaine use (25% vs 14%), heavy alcohol use (18% vs 13%), suicidal thoughts or attempts (14% vs 9%), and sex-related HIV/AIDS risks (26% vs 19%).

The relationship of treatment retention with improvements in 12-month follow-up outcomes in the aggregate DATOS sample also was examined by using a quasi-experimental design to control for possible program-level effects within each modality ([Simpson, Joe, & Brown, 1997](#)). Subsamples of clients from the three major modalities – OMT, LTR, and ODF – were selected from programs with sufficient representation of both short and longer retention groups (n=788 clients). STI programs were excluded from this study because of their characteristic short

duration of treatment.

- Clients with longer stays in LTR (i.e., 3 months or more) and OMT (i.e., 12 months or more) had significantly better follow-up outcomes, replicating the findings on the aggregate DATOS sample reported above and those from previous national evaluation studies. (These results were based on analyses that controlled for variations between programs that might otherwise account for retention effects. Because of sampling restrictions and high program diversity, however, analyses for ODF in this study were inconclusive.)
- Several indicators of higher quality treatment delivery – most notably better client-counselor relationships, providing a wider range of services, and higher client satisfaction with the program – characterized programs with longer treatment retention rates.

Given the widely established findings on the importance of treatment retention in OMT, LTR, and ODF, individual programs were examined on the basis of how well they succeeded in retaining clients beyond the "minimum retention thresholds" shown to be associated with improved outcomes ([Simpson, Joe, Broome, Hiller, Knight, & Rowan-Szal, 1997](#)). Only programs with large sample representation (i.e., with 50 or more clients who completed intake) were included in these analyses. STI programs were excluded because of the short planned duration for services and lack of retention effects on outcomes. The study was based on 5,104 clients drawn from 10 OMT, 17 LTR, and 14 ODF programs.

- There was high diversity within each modality in how well programs were able to engage and hold clients beyond a minimum treatment retention criterion.
- At least half of the OMT programs in DATOS expected clients to stay in treatment for 24 months or more (ranging from 24 to 30 months). However, the median length of stay for OMT clients was 12 months; in the program with the lowest average retention rate, only 15% of the clients stayed 12 months or longer, versus 76% of the clients in the program with the best retention rate.
- Comparisons between OMT programs identified several factors related to their overall retention rates; these involved complex variations in age and gender, treatment history, psychological problems, cocaine and alcohol dependence, and needle sharing of clients admitted to different programs.
- At least half of the LTR programs in DATOS

expected clients to stay in treatment for 9 months or more (ranging from 4 to 24 months). However, the median length of stay for LTR clients was 3 months; in the program with the lowest average retention rate, only 21% of the clients stayed 3 months or longer, versus 65% of the clients in the program with the best retention rate.

- Comparisons between LTR programs identified several factors related to their overall retention rates; these involved complex variations in age as well as cocaine and alcohol dependence of clients admitted to different programs.
- At least half of the ODF programs in DATOS expected clients to stay in treatment for 6 months or more (ranging from 3 to 12 months). However, the median length of stay for ODF clients was 3 months; in the program with the lowest average retention rate, only 16% of the clients stayed 3 months or longer, versus 76% of the clients in the program with the best retention rate.
- Comparisons between ODF programs identified several factors related to their overall retention rates; these involved complex variations in cocaine and alcohol dependence as well as legal status of clients admitted to different programs.
- After controlling statistically for client differences (i.e., case-mix adjustments), there were still significant differences in retention rates between programs in all three modalities. These results suggest that treatment-specific factors at some programs may be more effective in retaining clients.
- Comprehensive studies of the interactions of client characteristics, treatment structure and process, and program response to client needs are being conducted to better understand differences in program effectiveness.

Age differences were examined by [Grella, Hser, Joshi, and Anglin](#) (1999) as a moderator of the relationships between client characteristics, treatment retention, and treatment outcomes in DATOS. Separate structural equation models were tested for 551 clients from 19 long-term residential (LTR) programs and 571 clients from 27 outpatient drug-free (ODF) programs. Younger adults (less than 30 years of age) comprised 51% of LTR subjects, and 39% of ODF subjects.

- Longer retention in treatment and higher self-efficacy to resist drug use had a positive effect on abstinence for both groups, however, the relationship between treatment retention and abstinence at follow-up was stronger for

younger adults in both modalities.

- Both age groups reduced their contact with other drug users following treatment, but the influence of drug-using peers was more strongly related to lowered feelings of self-efficacy to resist drug use among younger adults in LTR and among older adults in ODF.
- Older adults in LTR and ODF and younger adults in LTR who spent more time in DATOS treatment had stronger feelings that they would be able to resist drug use following treatment.
- Older adults in LTR who had longer prior treatment histories had lower levels of self-efficacy to resist drug abuse following DATOS treatment.
- The findings suggest that age-specific treatment protocols need to be implemented to address lowered self-efficacy among older adults with longer treatment histories, the influence of negative reference groups, and to increase treatment retention, particularly for younger adults.

## References

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Simpson, D. D., Joe, G. W., Broome, K. M., Hiller, M. L., Knight, K., & Rowan-Szal, G. A. (1997). Program diversity and treatment retention rates in the Drug Abuse Treatment Outcome Study (DATOS). *Psychology of Addictive Behaviors, 11*(4), 279-293. [\[Abstract\]](#)

Grella, C. E., Hser, Y., Joshi, V., & Anglin, M. D. (1999). Patient histories, retention, and outcome models for younger and older adults in DATOS. *Drug and Alcohol Dependence, 57*, 151-166. [\[Abstract\]](#)

## More about Retention in Special Populations

### **Criminal Justice:**

Hiller, M. L., Knight, K., Broome, K. M., & Simpson, D. D. (1998). Legal pressure and treatment retention in a

national sample of long-term residential programs. *Criminal Justice and Behavior*, 25(4), 463-481. [\[Abstract\]](#)

**Comorbid Clients:**

Broome, K. M., Flynn, P. M., & Simpson, D. D. (1999). Psychiatric comorbidity measures as predictors of retention in drug abuse treatment programs. *Health Services Research*, 34(3), 791-806. [\[Abstract\]](#)

**Crack/Cocaine Users:**

Rowan-Szal, G. A., Joe, G. W., & Simpson, D. D. (2000). Treatment retention of crack and cocaine users in a national sample of long term residential clients. *Addiction Research*, 8(1), 51-64. [\[Abstract\]](#)

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## Fake Success Rates: Retention and Completion

March 24, 2011 By [Steven Slate](#) [2 Comments](#)

There are a lot of issues involved with determining success rates for the various programs designed to help people with substance use problems. But how is success measured, that is, what constitutes success? Is it the reduction of substance use itself? Is it abstinence? Or is it the reduction of substance use related problems (less arrests, and/or better functioning in work and social situations)? Everyone seems to have different criteria for this. I think the most absurd criteria for success is whether or not people stay in and comply with treatment programs (retention). Witness this recent example of retention rates being conflated with success rates:

Mid Coast Hospital's Addiction Resource Center has received national recognition from the Network for the Improvement of Addiction Treatment (NIATx) for increasing access to science-based treatment protocols for addiction toprescription opioid drugs such as Codeine, Morphine, Oxycodone, Hydrocodone, and Fentanyl; and illicit drugs such as heroin.

Opening the door to such treatment in the Mid Coast region has resulted in improved patient access and outcomes. Wait times for treatment were reduced from 11 days to 2.5 days from first call for help, engagement (staying in treatment) improved from 20% to 85%, and treatment completion rates improved from 60% to 94%.

Highlighting the success of this approach to addiction treatment, Haram continued, "Through this process we were able to provide treatment to 200 more people per year, without any new state or federal dollars. In addition to this, the increased volumes brought the actual cost of treatment down 30% per person."

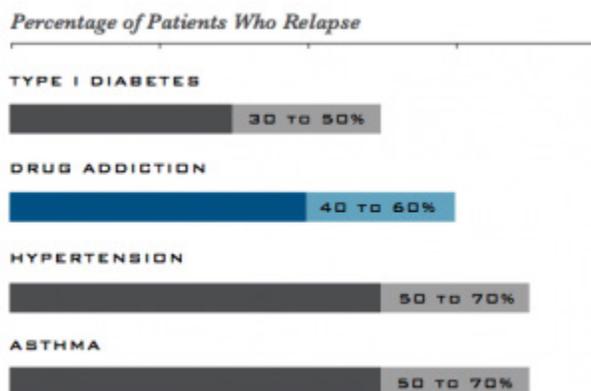
This is from the [hospital's](#) website. Here's a newspaper [article](#) where they cry about potential cuts to this "successful" program (those quotes are meant as sarcasm, in case you couldn't tell).

They mention improved patient outcomes – where are the statistics on that? No answer is given. One would think that if they had evidence of improved patient outcomes then they'd certainly offer it up. Instead, they give

us irrelevant statistics. This treatment center was declared a success, but the fact that they were able to get more people into the program and keep them there longer says nothing about whether the treatment is successful or not. Retention, engagement, and completion rates are for the most part, nonsense. If you have a program that works, then it's good to have high retention rates, and that means you'll help more people. But they skip right over measuring whether the program actually works, and declare retention rates as evidence of success. It may be a success for the bookkeepers, but I'm afraid the people being treated probably aren't that much better off.

Such distortions are not isolated to this example, they're part of a horrible trend in the treatment industry, which has basically given up on trying to objectively measure whether their programs actually help anyone, and instead simply measure whether people stay in the program, how long they stay in it, or whether one particular ineffective program is more "cost-effective" than another ineffective program. Since none of them actually beat the known rates of natural recovery, then none of them are really "cost effective". They're all a waste.

What you'll find out if you really start looking into treatment programs for addiction is that almost none of them are able to tell you what percentage of people actually stay sober after leaving the program ("patient outcomes" as mentioned above). Having given up on trying to objectively prove that their programs work, most treatment centers now say that "relapse is a part of recovery", declare that addiction is an incurable disease, and compare it to diabetes or asthma as a means to excuse their own failures in getting through to people – as exemplified by this statement from the [NIDA](#):



### A Deceptive Comparison by the NIDA

The chronic nature of the disease means that relapsing to drug abuse is not only possible but also likely, with relapse rates similar to those for other well-characterized chronic medical illnesses—such as diabetes, hypertension, and asthma (see figure, "Comparison of Relapse Rates Between Drug Addiction and Other Chronic Illnesses")—that also have both physiological and behavioral components.

Unfortunately, when relapse occurs many deem treatment a failure. This is not the case: successful treatment for addiction typically requires continual evaluation and modification as appropriate, similar to the approach taken for other chronic diseases. For example, when a patient is receiving active treatment for hypertension and symptoms decrease, treatment is deemed successful, even though symptoms may recur when treatment is discontinued. For the addicted patient, lapses to drug abuse do not indicate failure—rather, they signify that treatment needs to be reinstated or adjusted, or that alternate treatment is needed

With such leadership from our government, it's no wonder that these treatment centers feel no need to show long-term success. Achieving a true success – which I would define as a person leaving their addiction in the

past and moving on with life – has been officially deemed impossible. Success has been redefined, and is instead measured by a program’s ability to keep someone in treatment for life. This totally gels with the recovery culture’s claim that you can never become “recovered” and that you can only be in a constant state of “recovery” which of course includes a “one day at a time” lifelong struggle with addiction and repeated cycles through treatment programs. The treatment centers call this “managing your disease.” Witness this nonsense from an [upscale inpatient program](#):

For a long time alcohol treatment success was measured by whether or not the individual relapsed once the program was complete. This method is misleading in some ways. Experts have found that alcoholism is a disease like any other – and the individual who goes into “remission” or a recovery stage may indeed relapse over the course of their life. Thinking about alcoholism in these terms, it is hard to judge a program based only on relapse rates. Instead, programs must be judged successful in terms of how well they help their patients manage their disease.

Ah yes, the disease – what started out as a misguided understanding of substance use problems has now become the perfect marketing tool. More wisdom from the NIDA:

Treatment dropout is one of the major problems encountered by treatment programs; therefore, motivational techniques that can keep patients engaged will also improve outcomes. By viewing addiction as a chronic disease and offering continuing care and monitoring, programs can succeed, but this will often require multiple episodes of treatment and readily readmitting patients that have relapsed.

“By viewing addiction as a chronic disease” you can essentially throw all of your money down the drain on a life of treatment, and waste your life away, being brainwashed each time to believe that your disease will strike again and that “relapse” is inevitable. Treatment programs are just telling people to spend more and more time in treatment, as a 2008 report from Join Together proudly shows:

The Betty Ford Center in Rancho Mirage, Calif., for example, now has a 90-day residential treatment program. More than 50 percent of the clients in Promises Treatment Center in Malibu are in 45- to 90-day treatment programs; the young-adult program at Promises has been extended from 30 days to 90 days.

Visions, an adolescent addiction center in Malibu, increased its program length from 30 days to 45. Hazelden also is expanding to meet the demands for treatment programs of 90 days or more.

Although 28- or 30-day treatment programs are still common, addiction experts say that longer treatment programs will help to curtail the cycle of hospitalization and relapse.

“There was a belief that 30 days was the right number,” said David Sack, chief executive of Promises and an addiction psychiatrist. “But there was absolutely no data to say 30 days was the right number. What we’re seeing now is this much broader view for how to manage addiction.”

To what end? Does it actually create success. According to that report, longer stays can double the success rate of treatment – from 17 to 35% – this is still horrifically low (not to mention they don’t cite the exact source for those numbers, so I don’t know how reliable they are) – the fact that they would brag about such numbers is appalling. On the comments of the above article, an employee of a [California rehab](#) states:

Our experience in 4-6 month residential treatment is that 30-35% of admissions get clean and are still clean and sober at the 6-month follow up — a great outcome that makes a good case for long-term treatment.

It doesn't make a great case for long-term treatment! At any given moment, 75% of people who could be diagnosed as ever having "alcohol dependence" in their life, and who haven't been to a treatment program – are currently free of alcohol dependence. Most people get over their substance use problems whether or not they get any "treatment." If you wanna impress me, show me that people are actually better off in the long run having gone through your program, that is, show me that you're helping people who wouldn't have "recovered" on their own, or show me that you help people to change quicker than they would on their own – but don't brag about a 30-35% success rate, because that's just pathetic. It gets worse too. Many programs are now advising people to spend a year or more in treatment, and I recently heard from someone who sent their child to an 18-month program at the tune of \$80,000! Imagine the wonders you could teach your child with that much money. You could send them on a trip around the world for a year and a half, get them into college, or help them to start a business and experience real fulfilling success in a productive lifestyle – any of these experiences would be a far better option than wasting your time at a treatment center, sequestered from and learning nothing about life in the real world.

Many in the treatment world are beginning to understand just how pathetic their real success rates would actually sound. This is why they've turned instead to talking about retention rates and whatnot. Saying "treatment completion rates improved from 60% to 94%" sounds far better than saying that you have a 35% success rate – but it doesn't change the fact that your program is a failure. Ultimately, everyone who successfully ends their substance use problem chooses to end it, chooses to change their behavior, and chooses to move on with their life. Accordingly the goal in helping people should essentially be to persuade them to make these choices, and help them to develop the tools to do so (the tools lie in understanding the processes of decision-making, and in implementing an alternative more satisfying lifestyle than that of addiction). This however is not the goal of treatment programs. Their goal is only to persuade you to believe that you have a disease which robs of the ability to make your own choices, and that you'll need treatment for the rest of your life. Unfortunately for people who want real help, they're getting better and better at achieving this goal.

**Table 6.1 Completion of Planned Treatment among Substance Abuse Treatment Clients Aged 18 or Older at Admission, by Gender and Facility Type of Care**

Facility Type of Care	Gender			
	Women		Men	
	Number Completing Planned Treatment	Percent	Number Completing Planned Treatment	Percent
Outpatient nonmethadone	110,678	46.0 <sup>1</sup>	393,364	53.1
Nonhospital residential	42,803	60.4 <sup>2</sup>	176,250	68.2
Combination	80,201	62.3 <sup>2</sup>	236,851	54.6

<sup>1</sup> Difference between estimate for women and estimate for men is statistically significant at the 0.05 level.

<sup>2</sup> Difference between estimate for women and estimate for men is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).

**Table 6.2 Length of Stay (LOS), in Days, among Substance Abuse Treatment Clients Aged 18 or Older at Admission, by Gender and Facility Type of Care**

Facility Type of Care	Gender	
	Women	Men

	Number of Clients	Average LOS (in Days)	Number of Clients	Average LOS (in Days)
Outpatient nonmethadone	247,607	153.8	754,556	145.4
Nonhospital residential	72,325	34.0 <sup>1</sup>	264,029	60.5
Outpatient methadone	36,269	531.4	53,173	447.8
Combination	147,976	146.7	454,697	76.2

<sup>1</sup> Difference between LOS of women and LOS of men is statistically significant at the 0.001 level.

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).

**Table 6.3 Completion of Planned Treatment among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission, by Facility Clientele Composition and Facility Type of Care**

Facility Type of Care	Facility Clientele Composition			
	Women-Only Facilities		Mixed-Gender Facilities	
	Number of Clients Completing Planned Treatment	Percent	Number of Women Completing Planned Treatment	Percent
Outpatient nonmethadone	*	*	110,266	46.3
Nonhospital residential	8,898	65.2	33,905	59.3
Combination	165	13.9	80,036	62.7

\*Low precision; no estimate reported.

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).

## Logistic Regression Models

Gender was not associated with completion of planned treatment, after controlling for other client and facility characteristics ([Table 6.7](#)). Control variables associated with treatment completion were education at admission, primary source of referral for treatment, primary expected source of payment for treatment, and facility type of care. The odds of treatment completion were lower among adult clients with 8 to 11 years of education but with no high school degree, those whose primary expected source of referral was not the criminal justice system, and those whose primary source of payment was the criminal justice system compared with high school graduates, clients whose primary source of referral was the criminal justice system, and those whose primary expected source of payment was private health insurance. The odds of completing treatment were 3 times higher among adult clients discharged from nonhospital residential facilities than among adult clients discharged from outpatient nonmethadone facilities.

**Table 6.4 Length of Stay (LOS), in Days, among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission, by Facility Clientele Composition and Facility Type of Care**

Facility Type of Care	Facility Clientele Composition			
	Women-Only Facilities		Mixed-Gender Facilities	
	Number of Clients	Average LOS (in Days)	Number of Women	Average LOS (in Days)
Outpatient nonmethadone	2,484	295.5	245,123	152.4
Nonhospital residential	13,956	83.1 <sup>1</sup>	58,369	22.3

**Table 6.4 Length of Stay (LOS), in Days, among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission, by Facility Clientele Composition and Facility Type of Care**

Facility Type of Care	Facility Clientele Composition			
	Women-Only Facilities		Mixed-Gender Facilities	
	Number of Clients	Average LOS (in Days)	Number of Women	Average LOS (in Days)
Combination	1,454	51.9 <sup>2</sup>	146,522	147.7

<sup>1</sup> Difference between estimate for clients at women-only facilities and estimate for women at mixed-gender facilities is statistically significant at the 0.01 level.

<sup>2</sup> Difference between estimate for clients at women-only facilities and estimate for women at mixed-gender facilities is statistically significant at the 0.05 level.

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).

**Table 6.5 Completion of Planned Treatment among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission, by Availability of Child Care Services and Facility Type of Care**

Facility Type of Care	Child Care Services Offered		Child Care Services Not Offered		
	Number of Women Completing Planned Treatment	Percent	Number of Women Completing Planned Treatment	Percent	
	Outpatient nonmethadone		33,461	45.4	
Nonhospital residential	454	26.4	42,349	61.3	
Combination	11,819	43.1	68,382	67.5	

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phases I and II data, 1996-1999.

Receiving treatment at women-only facilities or at those offering child care services was not associated with treatment completion among women, after controlling for other client and facility characteristics ([Table 6.8](#)). Some control variables were associated with treatment completion among women. Women from minority racial groups, women whose primary source of referral to treatment was not the criminal justice system, and women whose presenting substance abuse problem was drug abuse only were less likely to complete treatment than were white women, women whose primary source of referral was the criminal justice system, and women whose presenting substance abuse problem was alcohol abuse only. Unexpectedly, women at facilities offering combined substance abuse treatment and mental health services were less likely to complete treatment than were women receiving treatment at facilities not offering combined substance abuse treatment and mental health services, although this result may reflect the larger proportion of clients with co-occurring substance abuse and mental health disorders at facilities offering combined substance abuse treatment and mental health services. Women receiving treatment at nonhospital residential or combination facilities were more likely to complete planned treatment than were women receiving treatment at outpatient nonmethadone facilities. Women receiving treatment at facilities offering prenatal care services were also more likely to complete treatment than were women receiving treatment at facilities not offering prenatal care services.

**Table 6.6 Length of Stay (LOS), in Days, among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission, by Availability of Child Care Services and Facility Type of Care**

Facility Type of Care	Child Care Services Offered		No Child Care Services Offered	
	Number of Women	Average LOS (in Days)	Number of Women	Average LOS (in Days)
Outpatient nonmethadone	76,348	168.4	171,259	147.3

**Table 6.6 Length of Stay (LOS), in Days, among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission, by Availability of Child Care Services and Facility Type of Care**

Facility Type of Care	Child Care Services Offered		No Child Care Services Offered	
	Number of Women	Average LOS (in Days)	Number of Women	Average LOS (in Days)
Nonhospital residential	1,719	96.7 <sup>1</sup>	70,606	32.5
Outpatient methadone	3,731	386.8	32,538	548.0
Combination	41,069	353.0	106,906	67.5

<sup>1</sup> Difference between estimate for women at facilities offering child care services and estimate for women at facilities not offering child care services is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).

## Survival Analysis Models

Gender was not associated with LOS, after controlling for other client and facility characteristics ([Table 6.9](#)). Some control variables were significantly associated with LOS among adult clients. Adult clients whose source of referral for treatment was not the criminal justice system were more likely to leave treatment earlier than were clients whose referral source was the criminal justice system. Adult clients discharged from nonhospital residential or combination facilities also were more likely to leave treatment earlier than were adult clients discharged from outpatient nonmethadone facilities. Adult clients whose primary expected sources of payment were no payment, client self-payment, or Medicare/Medicaid stayed in treatment longer than did adult clients whose primary expected source of payment was private health insurance.

Receiving treatment at women-only facilities or facilities offering child care services was positively associated with LOS among women, after controlling for other client or facility characteristics ([Table 6.10](#)). Some control variables were associated with LOS. Women who did not complete high school, women whose source of referral for treatment was not the criminal justice system, and women at nonhospital residential or combination facilities were more likely to leave treatment earlier than were high school graduates, women referred by the criminal justice system, or women at outpatient nonmethadone facilities. Contrary to expectations, receiving treatment at facilities offering prenatal care or transportation services was associated with leaving treatment earlier among women. Women whose primary expected source of payment was no payment, client self-payment, Medicare/Medicaid, or the criminal justice system stayed in treatment longer than did women whose payment source was private health insurance. Women at facilities offering combined substance abuse treatment and mental health services also stayed in treatment longer than did women at facilities not offering combined substance abuse treatment and mental health services.

**Table 6.7 Adjusted Odds Ratios (ORs) of Completion of Planned Treatment among Substance Abuse Treatment Clients Aged 18 or Older at Admission Discharged from Nonhospital Residential Facilities, Outpatient Nonmethadone Facilities, or Combination Facilities**

Independent Variable	OR (95 Percent CI)
<i>Female Gender</i>	1.05 (0.85, 1.31)
<i>Age at Admission</i>	1.01 (1.00, 1.03)
<i>Race (compared with white)</i>	
All other races	0.82 (0.50, 1.35)
Unknown/not mentioned	1.08 (0.60, 1.92)

**Table 6.7 Adjusted Odds Ratios (ORs) of Completion of Planned Treatment among Substance Abuse Treatment Clients Aged 18 or Older at Admission Discharged from Nonhospital Residential Facilities, Outpatient Nonmethadone Facilities, or Combination Facilities**

<b>Independent Variable</b>	<b>OR (95 Percent CI)</b>
<i>Education at Admission (compared with high school graduate/GED)</i>	
Fewer than 8 years	1.09 (0.51, 2.34)
8 to 11 years and less than high school graduate	0.59 (0.38, 0.93)
College/postgraduate	0.94 (0.71, 1.27)
Unknown/not mentioned	0.71 (0.31, 1.65)
<i>Non-Criminal Justice Source of Referral for Treatment</i>	
<i>Primary Expected Source of Payment for Treatment (compared with private health insurance, fee-for-service, or HMO/PPO/managed care)</i>	
No payment or client self-payment	0.69 (0.40, 1.19)
Medicare/Medicaid	0.59 (0.33, 1.08)
Criminal justice system	0.52 (0.27, 0.99)
Other funding	0.66 (0.32, 1.37)
<i>Facility Type of Care (compared with outpatient nonmethadone)</i>	
Nonhospital residential	3.19 (1.71, 5.94)
Combination	1.82 (0.80, 4.12)

CI = confidence interval; GED = general equivalency diploma; HMO = health maintenance organization; OR = odds ratio; PPO = preferred provider organization.

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).

**Table 6.8 Adjusted Odds Ratios (ORs) of Completion of Planned Treatment among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission Discharged from Nonhospital Residential Facilities, Outpatient Nonmethadone Facilities, or Combination Facilities**

<b>Independent Variable</b>	<b>OR (95 Percent CI)</b>
<i>Women-Only Facilities</i>	
<i>Child Care Services Offered</i>	0.76 (0.25, 2.38)
<i>Age at Admission</i>	0.74 (0.25, 2.19)
<i>Race (compared with white)</i>	1.04 (1.00, 1.08)
All other races	0.45 (0.22, 0.92)
Unknown/not mentioned	0.60 (0.27, 1.33)
<i>Education at Admission (compared with high school graduate/GED)</i>	
Fewer than 8 years	0.36 (0.02, 8.35)
8 to 11 years and less than high school graduate	0.57 (0.21, 1.54)
College/postgraduate	0.87 (0.46, 1.63)
Unknown/not mentioned	1.84 (0.29, 11.62)
<i>Non-Criminal Justice Source of Referral for Treatment</i>	
<i>Primary Expected Source of Payment for Treatment (compared with private health insurance, fee-for-service, or HMO/PPO/managed care)</i>	
No payment or client self-payment	0.29 (0.09, 0.95)
No payment or client self-payment	0.87 (0.24, 3.14)

**Table 6.8 Adjusted Odds Ratios (ORs) of Completion of Planned Treatment among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission Discharged from Nonhospital Residential Facilities, Outpatient Nonmethadone Facilities, or Combination Facilities**

<b>Independent Variable</b>	<b>OR (95 Percent CI)</b>
Medicare/Medicaid	0.84 (0.30, 2.31)
Criminal justice system	0.71 (0.09, 5.64)
Other public funding	1.35 (0.39, 4.66)
<i>Married/Common Law at Admission</i>	0.90 (0.44, 1.82)
<i>Have a Child/Children at Admission (compared with no child/children)</i>	
Have child/children	0.81 (0.33, 1.99)
Unknown/not mentioned	2.87 (0.89, 9.29)
<i>Facility Type of Care (compared with outpatient nonmethadone)</i>	
Nonhospital residential	3.31 (1.12, 9.78)
Combination	3.65 (1.14, 11.67)
<i>Presenting Substance Abuse Problem at Admission (compared with alcohol abuse only)</i>	
Drug abuse only	0.47 (0.23, 0.97)
Alcohol and drug abuse	0.72 (0.26, 2.01)
Substance not specified	2.07 (0.43, 10.00)
<i>Prenatal Care Services Offered</i>	3.65 (1.51, 8.84)
<i>Transportation Services Offered</i>	0.68 (0.30, 1.52)
<i>Combined Substance Abuse Treatment and Mental Health Services Offered</i>	0.37 (0.15, 0.90)
Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).	

**Table 6.9 Adjusted Hazard Ratios (HRs) of Length of Stay (LOS) among Substance Abuse Treatment Clients Aged 18 or Older at Admission Discharged from Nonhospital Residential Facilities, Outpatient Nonmethadone Facilities, or Combination Facilities**

<b>Independent Variable</b>	<b>HR (95 Percent CI)</b>
<i>Male Gender</i>	1.02 (0.88, 1.18)
<i>Age at Admission</i>	1.00 (0.99, 1.00)
<i>Race (compared with white)</i>	
All other races	0.93 (0.77, 1.12)
Unknown/not mentioned	0.91 (0.75, 1.09)
<i>Education at Admission (compared with high school graduate/GED or more)</i>	
Less than high school graduate	1.02 (0.90, 1.16)
Unknown/not mentioned	0.82 (0.58, 1.15)
<i>Non-Criminal Justice Source of Referral for Treatment</i>	1.29 (1.06, 1.58)
<i>Primary Expected Source of Payment for Treatment (compared with private health insurance, fee-for-service, or HMO/PPO/managed care)</i>	
No payment or client self-payment	0.64 (0.49, 0.83)
Medicare/Medicaid	0.64 (0.47, 0.87)
Criminal justice system	0.72 (0.51, 1.01)
Other funding	0.66 (0.47, 0.93)

**Table 6.9 Adjusted Hazard Ratios (HRs) of Length of Stay (LOS) among Substance Abuse Treatment Clients Aged 18 or Older at Admission Discharged from Nonhospital Residential Facilities, Outpatient Nonmethadone Facilities, or Combination Facilities**

<b>Independent Variable</b>	<b>HR (95 Percent CI)</b>
<i>Facility Type of Care (compared with outpatient nonmethadone)</i>	
Nonhospital residential	2.38 (1.59, 3.57)
Combination	1.94 (1.33, 2.82)

CI = confidence interval; GED = general equivalency diploma; HMO = health maintenance organization; HR = hazard ratio; PPO = preferred provider organization

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).

**Table 6.10 Adjusted Hazard Ratios (HRs) of Length of Stay (LOS) among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission Discharged from Nonhospital Residential Facilities, Outpatient Nonmethadone Facilities, or Combination Facilities**

<b>Independent Variable</b>	<b>HR (95 Percent CI)</b>
<i>Women-Only Facilities</i>	
	0.34 (0.13, 0.89)
<i>Child Care Services Offered</i>	
	0.51 (0.36, 0.73)
<i>Age at Admission</i>	
	1.00 (0.99, 1.01)
<i>Race (compared with white)</i>	
All other races	0.97 (0.71, 1.33)
Unknown/not mentioned	1.26 (0.89, 1.77)
<i>Education at Admission (compared with high school graduate/GED or more)</i>	
Less than high school graduate	1.32 (1.07, 1.63)
Unknown/not mentioned	0.95 (0.65, 1.39)
<i>Non-Criminal Justice Source of Referral for Treatment</i>	
	1.32 (1.02, 1.70)
<i>Primary Expected Source of Payment for Treatment (compared with private health insurance, fee-for-service, or HMO/PPO/managed care)</i>	
No payment or client self-payment	0.67 (0.46, 0.97)
Medicare/Medicaid	0.54 (0.38, 0.78)
Criminal justice system	0.51 (0.31, 0.83)
Other funding	0.74 (0.47, 1.17)
<i>Married/Common Law at Admission</i>	
	1.11 (0.87, 1.42)
<i>Have a Child/Children at Admission (compared with no child/children)</i>	
Unknown/not mentioned	1.15 (0.74, 1.78)
Have child/children	0.83 (0.63, 1.09)
<i>Presenting Substance Abuse Problem at Admission (compared with alcohol abuse only)</i>	
Drug abuse only	0.83 (0.65, 1.04)
Alcohol and drug abuse	0.77 (0.60, 1.00)
Substance not specified	0.51 (0.26, 0.98)
<i>Facility Type of Care (compared with outpatient nonmethadone)</i>	
Nonhospital residential	4.39 (2.62, 7.35)
Combination	2.65 (1.84, 3.82)

**Table 6.10 Adjusted Hazard Ratios (HRs) of Length of Stay (LOS) among Female Substance Abuse Treatment Clients Aged 18 or Older at Admission Discharged from Nonhospital Residential Facilities, Outpatient Nonmethadone Facilities, or Combination Facilities**

<b>Independent Variable</b>	<b>HR (95 Percent CI)</b>
<i>Prenatal Care Services Offered</i>	1.48 (1.09, 2.02)
<i>Transportation Services Offered</i>	1.61 (1.11, 2.34)
<i>Combined Substance Abuse Treatment and Mental Health Services Offered</i>	0.61 (0.47, 0.80)

CI = confidence interval; GED = general equivalency diploma; HMO = health maintenance organization; HR = hazards ratio; PPO = preferred provider organization.

Source: SAMHSA, Office of Applied Studies, Alcohol and Drug Services Study (ADSS), Phase I data (1996-1997) and Phase II data (1997-1999).

## Summary

Descriptive analyses presented in this chapter suggested that

- women were less likely than men to complete treatment at outpatient nonmethadone or nonhospital residential facilities,
- women were more likely than men to complete treatment in facilities offering a combination of types of care, and
- women averaged shorter stays in treatment than men in nonhospital residential facilities.

However, gender was not associated with completion of planned treatment or LOS in treatment, after controlling for a number of client and organizational characteristics. In addition, receipt of treatment at women-only facilities and at facilities offering child care services was not associated with completion of planned treatment among women, after controlling for other client and organizational characteristics, but both components of substance abuse treatment programming for women were associated with longer stays in treatment. It is likely that for women, treatment programming that specifically targets their needs is an important contributor to the positive treatment outcomes associated with increased levels of services.

## Chapter 7. Conclusions and Implications

Female substance abusers have a distinct set of issues that suggest the need for substance abuse treatment programming for women. Gender differences in substance abuse treatment barriers, utilization, and retention, as well as substance use epidemiology, social context, etiology, and physiological consequences, point to disadvantages for women. Substance abuse treatment programming for women may include such services as child care, transportation, prenatal care, woman-focused HIV risk reduction and mental health services, and women-only programs that create a treatment environment focused on women's issues.

This report extends our knowledge by providing information on factors that may impact substance abuse treatment retention among women. Valuable new information is provided on the effectiveness of substance abuse treatment programming for women, gender differences among substance abuse treatment clients, availability of substance abuse treatment programming for women, and the extent to which programming for women is associated with treatment retention. The findings are from analyses of nationally representative data

on substance abuse treatment facilities and clients. These data from the Alcohol and Drug Services Study (ADSS) enable consideration of treatment services across the broad range of settings in which substance abuse treatment is delivered, as well as among diverse treatment clients in programs nationwide.

This chapter explores the implications of these findings in key areas for policymakers, the treatment community, and researchers.

## **Availability and Effectiveness of Substance Abuse Treatment Programming for Women**

[Chapter 2](#) explored the prior research on availability and effectiveness of substance abuse treatment programming for women. Few sources of data about availability were identified. Literature reviewed identified experimental research that showed that child care services increased length of stay (LOS) among women, particularly in residential treatment (Hughes et al., 1995). Women-only treatment decreased substance use and improved employment outcomes (Dahlgren & Willander, 1989). Mental health services also increased LOS and reduced substance use and HIV risk behaviors (O'Neill et al., 1996), prenatal care services improved birth outcomes among pregnant women (Carroll, Chang, Behr, Clinton, & Kosten, 1995; Elk, Mangus, Rhoades, Andres, & Grabowski, 1998), and supplemental education sessions improved attitudes about safer sex and increased self-esteem (Hiller, Rowan-Szal, Bartholomew, & Simpson, 1996; Volpicelli, Markman, Monterosso, Filing, & O'Brien, 2000).

[Chapter 5](#) examined ADSS data about the availability of components of substance abuse treatment programming for women and reported that outpatient methadone facilities were least likely to offer child care services, even though this type of care serves the greatest proportion of female substance abuse treatment clients. Analyses also showed that components of substance abuse treatment programming for women are available in a minority of treatment facilities. Women-only facilities and child care services were associated with increased LOS (but not with treatment completion) among women ([Chapter 6](#)). Facilities treating women only served a higher proportion of black clients than mixed-gender facilities, and facilities offering child care services served a higher proportion of female clients and clients whose treatment was paid for by Medicaid (an indicator of poverty) than did facilities not offering child care services.

### **Implications for Service Delivery**

Findings suggest that incorporating components of substance abuse treatment programming for women into standard care is beneficial for women and their children. Women-only facilities may need to expand their orientation from gender-focused to culturally competent (Trepper, Nelson, McCollum, & McAvoy, 1997) to tap into strengths in the African-American community that may help their clients (Hill, 1993). Such strengths may include peer sources of community/social support (Eng & Young, 1992), religiosity and faith-based leadership (Holt, Lewellyn, & Rathweg, 2005), extended family networks (Dilworth-Anderson, 1992), and authoritarian parenting styles that benefit children (Taylor, Chatters, Tucker, & Lewis, 1990).

Staff at substance abuse treatment facilities may require knowledge of different cultural perspectives and skills to use in cross-cultural situations (Brach & Fraser, 2000). This knowledge may be gained in a variety of ways, such as training clinical staff on how to work with different racial and ethnic groups, recruiting clinical staff of the same race and ethnic identity as clients, and using community health workers for outreach and health promotion activities (Campbell & Alexander, 2002 ; Howard, 2003). Tailoring treatment programs to meet special needs of certain population subgroups not only makes treatment more attractive to those who need it, but

also helps to address many of the logistical and pragmatic barriers to treatment faced by special populations (Weiss, Kung, & Pearson, 2003).

Variability in services offered in addition to child care across facilities may contribute to positive treatment outcomes for women. Facilities offering child care services were more likely to be larger facilities and to offer prenatal care services; transportation services; and special programs for women, pregnant women, dual-diagnosis clients, and AIDS/HIV-positive clients than were facilities that did not offer child care services. Although analyses of retention in [Chapter 6](#) controlled for some of these organizational characteristics, effectiveness of child care services should be examined in controlled studies to isolate the specific effects of child care over and above benefits of other components of substance abuse treatment programming.

## **Implications for Treatment Access**

Outpatient methadone facilities may need to explore creative arrangements to increase access to child care services for the women they serve (through vouchers, subsidies, on-site drop-in care, or other mechanisms). Even among types of care that more frequently offer child care services, the quantity and accessibility of these services was not measured. In-depth study is needed to explore whether female clients with children who need care actually receive the services offered by facilities, versus limited numbers of child care slots prohibiting these women from receiving timely and appropriate child care services to facilitate their entry into and retention in treatment. In addition, research is needed to determine whether child care services in settings such as outpatient methadone treatment are beneficial for women, since prior research has concentrated primarily on women in residential treatment being allowed to bring their children into treatment with them.

Poor, minority women may be the primary targets of substance abuse treatment programming for women. Thus, policymakers may want to create financing systems to encourage the development, expansion, or improvement of substance abuse treatment programming for women in order to reduce health disparities. Service delivery providers should also acknowledge and address barriers and stressors experienced by African Americans, including discrimination (Collins et al., 2000), single-parent households (Graefe & Lichter, 2002; Lane et al., 2004), socioeconomic stressors (Murry, Brown, Brody, Cutrona, & Simons, 2001), neighborhood environments (Williams & Jackson, 2005), and mistrust of medical or government systems (Gamble, 1997). Recognizing the diversity of clients at women-only substance abuse treatment facilities also is important because diversity in health beliefs and attitudes about substance abuse and treatment may affect the utilization of services (Levi & Easley, 1999). Programs that employ culturally appropriate frameworks can help substance-abusing minority women enter into treatment programs and remain in recovery (Lewis, 2004).

Although such approaches as women-only treatment, child care services, and other components of substance abuse treatment programming for women may help to increase access to treatment for women, in-depth study is needed to explore whether high-risk female clients with more severe substance use disorder-related problems are receiving the intensity of care they need. Better information about severity of substance abuse and actual services received is necessary to understand the impact of substance abuse treatment programming for women on treatment access, retention, and outcomes in field settings. It is also important to note that other treatment services and behavioral interventions not considered here may improve treatment retention and longer-range treatment outcomes (McLellan & McKay, 1998), including the provision of case management (Wechsberg, 1995), education and employment training (Etheridge, Hubbard, Anderson, Craddock, & Flynn, 1997), and comprehensive mental health services (Grella, 1997). In addition, research is needed to identify potential moderators of effectiveness, such as facility size, client characteristics, or quality of family and social support resources. Research also needs to evaluate costs in relation to benefits and effectiveness of women-only treatment or child care services.

## **Implications for Treatment Providers**

Women-only facilities and child care services can be crucial investments for providers in achieving critical measures of success. However, at the provider level, if provider organizations grow larger and more centralized to capture economies of scale, it is possible that they may not be able to fill an adequate number of treatment slots if they serve women only. It is possible that larger facilities may need to offer women-only programming within their mixed-gender venue, for example, by offering women-only units, programs, workshops, or groups. The effectiveness and implementation of such arrangements would require further study. Conversely, costs of providing other components of substance abuse treatment programming for women, such as child care or other services, may be prohibitive for smaller facilities with lower levels of funding. Policymakers and providers might explore the feasibility and benefits of adding such services to existing treatment programming.

## **Gender Differences in Substance Abuse Treatment Client Characteristics**

[Chapter 4](#) explored in detail differences and similarities between female and male substance abuse treatment clients. Female clients were more likely to have children at admission than were male clients. In outpatient nonmethadone treatment, which represents the largest proportion of substance abuse treatment clients, females were less likely than males to be employed full-time. Within this service type, females were more likely than males to live with children but no other adult(s) at admission, to be referred to treatment by a welfare office or other social service agencies, to use Medicaid to pay for treatment, and to be admitted for drug abuse only.

## **Implications for Treatment of Specific Populations**

Providers and policymakers may be in a position to support fragile families by considering women substance abusers' roles as primary caretakers of children. Child care services, parenting education and support, home visiting, and mentoring are important for addressing state policies regarding preservation and reunification of families while ensuring children's safety and well-being as women seek and receive substance abuse treatment and aftercare (Chaffin, Bonner, & Hill, 2001; Gruber, Fleetwood, & Herring, 2001; Miller, Fox, & Garcia-Beckwith, 1999). Furthermore, because socioeconomic status among women is a potential barrier to receiving and completing treatment and maintaining sobriety, housing, educational opportunities, job training, employment, insurance coverage, and financial planning and management are important services for female substance abuse treatment clients (McLellan et al., 2003). With the recent welfare reform legislation, it may be important to examine gender differences in benefits of treatment with respect to economic and employment outcomes (Grella, Scott, & Foss, 2005; Luchansky, Brown, Longhi, Stark, & Krupski, 2000; Oggins, Gydish, & Delucchi, 2001). Research also is needed to identify barriers for women entering treatment-based vocational training and job counseling to understand how women with substance use disorders fare in employment programs (Gutman, McKay, Ketterlinus, & McLellan, 2003).

In [Chapter 6](#), descriptive and multivariate analyses yielded different results regarding the roles of gender and substance abuse treatment programming for women in treatment retention. Descriptive analyses showed that women were less likely to complete planned treatment and averaged shorter stays in treatment than men in residential treatment facilities, despite the greater availability of women-only treatment and child care services in this type of care ([Chapter 5](#)). However, despite numerous treatment barriers among women, as cited in previous literature, multivariate analyses showed that gender was not associated with retention.

## **Implications for Treatment Outcomes**

Because retention, and especially LOS, is related to long-term treatment outcomes (sobriety, employment, criminality, sex risk behaviors, family preservation, etc.), the lower completion rate and shorter average stay for women in residential treatment may be a cause for concern. Residential treatment settings typically admit patients with greater addiction severity than outpatient facilities. Due to the lack of consistent findings in this study and existing substance abuse treatment literature, more research is needed on gender differences in all types, stages, and levels of care. In future studies of retention disparities, special attention should be given to how gender interacts with drug use severity.

## **Issues in Women's Substance Abuse Treatment Research**

As noted in [Chapter 2](#), much of the research reported upon in the literature has relied on analyses of small, nonrepresentative samples. Large-scale data collection efforts, such as ADSS, have made strides in improving the data available to researchers. However, these data pose challenges as well.

[Chapter 3](#) noted that many ADSS measures of programming were not defined or standardized, and services were reported as offered, but actual exposure, receipt, and intensity of services were not measured. An important limitation of the analyses in this report is that they are based on cross-sectional data; thus, they represent a single snapshot in time and cannot capture the dynamic nature of treatment service programming and utilization. Also, cross-sectional data do not allow for causal inferences (e.g., that women-only treatment or child care services cause longer stays in treatment). Thus, confounding factors linked to client characteristics, facility characteristics, and retention may explain findings. Although multivariate analyses controlled for many client and facility characteristics, data on the level of treatment need and care received were not considered. Another limitation of the analyses is that missing information about mental illness and pregnancy prevented examination of benefits among women with co-occurrence or among pregnant women.

Few studies have examined the reliability and validity or overall quality of facility administrator reports of facility size, characteristics of client populations, costs and revenues, and other facility characteristics through reinterview techniques or checking against other documents and collateral sources. However, as part of ADSS, investigators conducted a detailed audit of administrator reports of client populations and cost data (Office of Applied Studies [OAS], 2003). They found original administrator reports on client admissions to be less in need of revision than were data on average LOS, costs, and revenues. These data considerations suggest the need for closely controlled data collections on both client and facility characteristics, along with validation of client and administrator reports and other data.

Although ADSS used a structured client record abstraction data collection instrument, the quality and quantity of data collected by programs are highly variable. Records data often underreport drug and alcohol abuse and dependence, and some services may not be recorded if they are not reimbursed on a unit basis (Garnick, Hodgkin, & Horgan, 2002). The data are potentially not as rich as client interview data, are often incomplete, and vary considerably in quality and content across programs. However, client record abstracts may yield more

accurate information about sensitive behaviors than do self-reports, which are subject to considerable bias and potential under-reporting (Harrison & Hughes, 1997). Collecting data from client record abstracts rather than from personal interviews also decreases the considerable costs and research burden to clients, as well as the problems associated with recall.

## **Implications for Future Research**

Because performance-based programming is a priority at the national and State levels, more detailed service and cost information will be needed. The use of uniform client assessment procedures, as well as the development of management information systems, will enhance performance monitoring. Standardized measures of special programming for women are necessary for future research endeavors. More research also is needed to establish causal relationships between programming, retention, and longer-term outcomes. Specific analyses of especially vulnerable populations are needed, including women with co-occurring mental illness and substance use disorders, pregnant women, HIV-positive women, impoverished women, those with more than one child, domestic violence and child maltreatment victims, immigrants, and other disenfranchised racial/ethnic subgroups.

## **Conclusions**

Substance abuse treatment programming for women is increasingly available but has not been adequately studied. This report has presented new research that helps to fill this gap. It gives policymakers and service providers at the Federal, State, and local levels a better understanding of why substance abuse treatment programming for women is needed, who has access to it, and needs of female clients that are unique from needs of male clients.

Several overarching conclusions emerge from the findings presented. Substance abuse treatment programming for women is beneficial for women and their children. Availability of such programming appears to be limited, despite positive associations with LOS in treatment. In multivariate analyses, gender was not associated with retention.

On the other hand, important differences between men and women were identified in descriptive analyses. Women in residential facilities exhibited lower levels of retention than men. In all types of care, female clients were more likely to have children at admission than males. In outpatient nonmethadone treatment, females exhibited lower levels of socioeconomic status than did males.

High-risk populations (women who are homeless, mentally ill, HIV positive, or violence victims) may need more intensive and specialized services. For example, a small pilot study in South Carolina found that rural HIV-positive women benefitted from a peer counseling intervention to help them access and begin substance abuse treatment (Boyd et al., 2005). Women with substance use and mental disorders may experience additional economic, social, and health problems that may adversely affect their ability to access and remain in treatment. However, providing treatment services to these vulnerable populations presents a difficult challenge to treatment providers because of the intensive, lengthy treatment required.

Large national datasets, such as ADSS, are available for additional study. Such datasets provide policymakers and researchers with an important base from which to study substance abusing populations and the systems providing services to these populations. A key implication of this report's analyses is that improvement of quality of data could come from standardizing and defining measures. Clear definitions are needed for assessing clients and for defining the types of services they receive.

Managed care for substance abuse treatment services has shifted treatment from inpatient to outpatient treatment settings, thus bringing focus to outpatient nonmethadone and outpatient methadone facilities as settings where large proportion of women are served. Health economics research is needed to conduct cost analyses in these two settings. More detailed information about women, women's services, and retention in these settings also is needed.

Although more research is needed to determine causality of associations and to examine special populations of women, this report clearly shows that women in substance abuse treatment have needs that are unique and that components of substance abuse treatment programming are positively linked with treatment retention, after controlling for many potential confounders. It is hoped that the research presented here will help to inspire increased and improved policies and services and new research that will continue to improve the lives of women and their children.

## COMPONENTS OF SUCCESSFUL TREATMENT PROGRAMS

R. Jeffrey Goldsmith, M.D.

Engagement and Retention  
Extinguishing Craving  
Comprehensive Approach  
Skilled Staff

Research findings suggest that physicians who understand the many interventions that have been shown to be effective in treating addictive disorders will have multiple opportunities to help patients with alcohol and other drug problems. Indeed, physicians play a crucial role in the identification and engagement of patients in addiction treatment, as well as in the management of denial and enhancement of motivation for treatment. Many addiction medicine specialists participate in the development of a comprehensive treatment plan, while others are in a position to supervise and coordinate the treatment team. Understanding the various components of treatment and their effectiveness, as well as how they should be grouped and sequenced, is essential.

### **Engagement and Retention**

Engagement and retention are among the more important factors in the treatment process. Recent studies show that more treatment generally results in better outcome (DeLeon, 1991). While this has surface validity, it is not clear whether the finding reflects the actual influence of treatment or simply the ability of good-prognosis patients to stay in treatment, or both. Further, studies with time limited residential programs have found that program completion--rather than just total number of sessions--is significantly related to outcome (Welte et al, 1981). This may reflect the patient's capacity to commit to the treatment regimen.

Engaging a patient who is markedly ambivalent about giving up alcohol or drugs requires working with issues of poor motivation and denial. Miller and Rollnick (1991) have developed a technique of motivational interviewing that strives to enhance motivation, while Goldsmith (1990) has developed a denial-focused psychotherapy that improves motivation by expanding self-awareness. Both strategies have been successful in working with ambivalent patients. The use of coercion (such as court ordered treatment) also seems to enhance engagement (Brandsma, 1980).

Because alcohol and drug addiction are chronic illnesses, treatment and recovery are long-term processes. Outpatient treatment beyond three months (with or without inpatient treatment) is associated with greater abstinence in a dose-related fashion (Hoffmann & Miller, 1992). Valliant (1983) reports that psychological adjustments of abstinent patients were similar to those of drinkers when the patients had less than three years' abstinence. At 10 years' abstinence, however, the patients' level of psychosocial adjustment was the same as for nondrinkers.

Continuity of care is another important element in the retention of patients. Maintaining continuity between intake and counseling sessions has been correlated with higher retention rates (Nirenberg, Sobell & Sobell, 1980). Counselors

who call patients and send them letters immediately on a missed appointment increase their rates of patient retention (Koumans, Muller & Miller, 1967).

Individualized treatment plans negotiated with patients also have been associated with higher retention and improved outcomes (Adelman & Weiss, 1989). This is understandable in light of the multiple life problems that addicted persons bring to treatment. Such crises may motivate the patient to avoid the negative consequences of addiction, such as legal problems or family break-up, and offer an opportunity for therapeutic bonding. Management of such a crisis can enhance a commitment to abstinence and strengthen the alliance between the therapist and patient. Conversely, crisis also can distract from an abstinence orientation and become a behavioral form of denial. Other factors associated with improved engagement and retention include the treatment of psychiatric comorbidity (Woody et al, 1991), the inclusion of family members in the treatment process (McCrary, 1984), and the adoption of a culturally sensitive approach (Butler, 1992). Dual diagnosis programs find that retention is enhanced and recovery from both the addictive disorder and psychiatric illness improved when the disorders are treated concurrently (Woody et al, 1991). Minority patients drop out of some programs in greater numbers; therefore, programs that use culturally sensitive strategies increase retention rates. Such strategies begin with staff training and networking in minority communities to establish credibility. They also involve adapting intake and treatment procedures to fit the cultural style of the community. Where possible, inclusion of family members and significant others improves treatment retention for both inpatients and outpatients.

### **Extinguishing Craving**

Research at the Philadelphia Veterans Administration Hospital has demonstrated that certain sub-groups of addicts experience a marked conditioned withdrawal response when viewing videotapes of people using or buying drugs, or when shown drug paraphernalia (Childress et al, 1992). Such conditioned responses can be extinguished through controlled exposure to triggering events, or "cues," resulting in fewer relapses. Also, avoidance of the environmental cues that stimulate craving ("stimulus avoidance") can be effective. Indeed, this concept underlies Alcoholics Anonymous' recommendation to avoid "people, places, and things" connected to the drinking days. These principles, combined with relapse prevention techniques, are critical elements of long-term recovery.

### **Comprehensive Approach**

Continued refinement of the array of treatment components to meet the needs of specific patients appears to be critical. Elements whose utility are supported by recent research include individual, family and group therapy (including self-help groups).

INDIVIDUAL THERAPY. Individual counseling with alcoholics and addicts is helpful (Moos, Finney & Cronkite, 1990), as is psychotherapy. Treatment of psychiatric co-morbidity also is associated with improved treatment outcomes (Woody et al, 1990), particularly where the co-morbid illness is depression. There is a consensus that psychotherapy with alcoholics and addicts must begin with abstinence or a focus on abstinence (Kaufman & Reoux, 1988; Khantzian, Halliday & McAuliffe, 1990; Zweben, 1986). Once abstinence is secured, the focus can shift to include other pertinent issues.

FAMILY INTERVENTION. Research into family dynamics with alcoholics and addicts have shown two patterns of family functioning, both of which appear to be maladaptive or dysfunctional (Steinglass et al, 1987). One pattern occurs while the alcoholic or addict is engaged in alcohol or other drug use, while the other occurs during a period of abstinence. Family therapy is important to correct these maladaptive patterns, to catalyze growth, and to reduce the likelihood that family tension will trigger a relapse. Studies in the 1950s (Glieberman et al, 1956) found that the outcome was better for the alcoholic if the spouse was treated concurrently in a separate group, followed by conjoint sessions. More recent studies have shown that spousal participation not only improves the alcoholic's commitment to abstinence, but also can diminish the rate of marital separation by focusing conjoint sessions on the spousal relationship (McCrary, 1984, 1985). For all of these reasons, family interventions are critical elements of comprehensive treatment.

GROUP INTERVENTION. Many studies have found that group therapy focusing on social skills, coping styles, education about the addictions, interpersonal dynamics, and the treatment of self-deficits is useful in achieving and retaining recovery (Brandsma & Patterson, 1985; Moos, Finney & Cronkite, 1990; Brown, 1985; Khantzian, Halliday & McAuliffe, 1990). Such groups usually are part of a comprehensive program that includes individual and family counseling. Their focus can vary to meet individual needs: social skills, assertiveness training, and interpersonal groups all address the interpersonal styles that are critical in maintaining effective family, social, and economic functioning. Educational groups focus on correcting popular myths about alcohol and drug addiction and suggesting useful pathways to recovery. Psychotherapy and "feelings" groups encourage the expression of affect, tension, frustration, fear, etc. They allow for the projection of issues onto the group members and provide insight into and resolution of conflicts through identification with

the members' and the group's capacity to solve problems. Expressive arts therapy groups (music, art, psychodrama, etc.) offer alternative modes for the expression of issues troubling, distracting, or holding back patients.

The dynamics of groups allow and even encourage interpersonal feedback, which evokes issues of confrontation, understanding, compassion, trust, and support. Group leaders can facilitate the healthy development of these issues or interfere with their emergence, depending on their leadership skills. Group composition also can be important to the group process: group therapy research suggests that women do better in all-female groups, while men do better in coeducational groups (Aries, 1976). Reasons postulated for this difference are that women seem to be inhibited in the presence of men, while men are more open to talk about feelings with women present. Structuring groups to reflect these differences can be a problem in the typical addiction treatment setting, where men usually outnumber women by as much as 10 to 1.

Participation in Twelve Step groups also improves recovery for most patients. Recent CATOR studies have shown that people who were regular participants in Alcoholics Anonymous (AA) had longer periods of sobriety than those who did not attend (Hoffmann & Miller, 1992). What makes AA and other Twelve Step groups so special is the spectrum of interventions that occur as part of the Twelve Step recovery process (Chappel, 1992). These groups have the capacity for intensive, structured involvement and an individualized program. In populous parts of the country, Alcoholics Anonymous meetings occur at all times of the day, seven days a week. This allows for continuity as well as intensity ("90 meetings in 90 days"). For the ambivalent patient, the meetings offer understanding, acceptance, and education about the illness and the road to recovery. In addition, hearing other people's stories becomes a subtle confrontation, encouraging the listener to think about those issues and situations that make him or her uneasy. The newly abstinent AA member often needs support from and affiliation with non-drinkers, including some help with feelings of being "lost" without drugs or alcohol. Working the Twelve Steps deepens introspection, accelerates recovery, and enhances the individual's sense of competence, which has been eroded by the addictive process (Goldsmith, 1993). It also sets into motion a process that puts the addict in touch with his or her inner life, psychological pain and maladaptive behaviors, which he or she can work on, and avoids blaming external forces that cannot be controlled. It sets into motion "change" in a process of acceptance, forgiveness, and making amends, which frees the person from the mistakes and misconduct of the past, while it encourages a healthy responsibility for those acts.

The spiritual side of the Twelve Steps offers a broader view of life that opens up the psyche to the common experience of the human condition and with it, the cleansing feelings of connectedness, appreciation, gratitude, and serenity. When the change to a new spiritual orientation is sudden, it is similar to a conversion experience, bringing with it a change in personality, new energy, endurance, and inner harmony (James, 1958). When the change is gradual, it resembles the "simple growth into new habits."

### **Skilled Staff**

Research into the effects of the quality and type of therapist who treats the addict provides another key to successful treatment outcome. Research into psychotherapy has found considerable variation from one therapist to the next, even when the treatment protocol is strictly followed. , Crits-Christoph, Beebe and Connolly (1990) developed a strategy to analyze studies for the impact of the therapist on treatment outcomes. Some of their studies found virtually no therapist effect, while others found that as much as 29 % of the total variance could be attributed to differences in therapist styles.

What accounts for this variation? Graduate training is not the issue; some of the studies that show considerable variance used professionally trained, licensed therapists, such as psychologists and psychiatrists. Staff codependency has been suggested as an explanation for sub optimal therapist interventions (Imhof, 1990). This includes behaviors triggered from past experiences in an alcoholic or drug addicted family, as well as behaviors triggered by actions on the part of current patients. Health caregivers are known to have negative attitudes about alcoholics and addicts when they begin training (Bergen, Price & Kinney, 1980); for many, these attitudes become more negative over the course of their education (Chappel & Schnoll, 1977). One survey discovered that 13 % of therapist positions available had been vacant, almost half of them for more than six months (Crits-Christoph, Beebe & Connolly, 1990).

Perhaps the most significant staff skill is the therapist's ability to engage the patient to continue in treatment. To study this factor, McCaul and Svikis (1991) focused on interventions that could be made with the counselors in order to enhance retention of addicts in treatment. Simply, they established a minimum participation level for routine clients and set out to study the past and future participation rate for individual and group counseling. A supervisory monitoring system was established to give monthly feedback on the caseload performance for each counselor; this feedback produced a significantly greater retention of clients. Thus, the capacity to engage and retain patients appears to be a variable that is amenable to positive changes in staff and supervisory behaviors.