



Published in final edited form as:

*Psychiatr Serv.* 2014 June 1; 65(6): 718–726. doi:10.1176/appi.ps.201300249.

## Substance Abuse Intensive Outpatient Programs: Assessing the Evidence

**Dennis McCarty, Ph.D.,**

Department of Public Health & Preventive Medicine, Oregon Health and Science University, Portland, OR

**Lisa Braude, Ph.D.,**

DMA Health Strategies, Lexington, MA

**D. Russell Lyman, Ph.D.,**

DMA Health Strategies, 9 Meriam Street, Suite 4, Lexington, MA 02420-5312, Phone: 781-863-8003, Fax: 781-863-1519, russl@dmahealth.com

**Richard H. Dougherty, Ph.D., A.M.,**

DMA Health Strategies, Lexington, MA

**Allen S. Daniels, Ed.D.,**

Westat, Cincinnati, OH

**Sushmita Shoma Ghose, Ph.D.,** and

Westat, Appleton, WI

**Miriam E. Delphin-Rittmon, Ph.D.**

Office of Policy, Planning, and Innovation, Substance Abuse and Mental Health Services Administration, Rockville, MD

### Abstract

**Objective**—Substance abuse intensive outpatient programs (IOPs) are direct services for people with substance use disorders or co-occurring mental and substance use disorders who do not require medical detoxification or 24-hour supervision. IOPs are alternatives to inpatient and residential treatment. They are designed to establish psychosocial supports and facilitate relapse management and coping strategies. This article assesses their evidence base.

**Methods**—Authors searched major databases: PubMed, PsycINFO, Applied Social Sciences Index and Abstracts, Sociological Abstracts, Social Services Abstracts, Published International Literature on Traumatic Stress, the Educational Resources Information Center, and the Cumulative Index to Nursing and Allied Health Literature. They identified 12 individual studies and one review published between 1995 and 2012. They chose from three levels of research evidence

---

Correspondence to: D. Russell Lyman.

**Disclosures of Conflicts of Interest:** Dennis McCarty is the Principal Investigator on Research Service Agreements with Alkermes and Purdue Pharma. He is the Principal Investigator on three awards from the National Institute on Drug Abuse (R21 DA035640, R01 DA029716, U10 DA015815) and an investigator on four awards from the National Institutes of Health (R01 MH1000001, P50 DA018165, R01 DA030431, R21 DA031361).

(high, moderate, and low) based on benchmarks for the number of studies and quality of their methodology. They also described the evidence of service effectiveness.

**Results**—Based on the quality of trials, diversity of settings, and consistency of outcomes, the level of evidence for IOP research was considered high. Multiple randomized trials and naturalistic analyses compared IOPs with inpatient or residential care; these types of services had comparable outcomes. All studies reported substantial reductions in alcohol and drug use between baseline and follow-up. However, substantial variability in the operationalization of IOPs and outcome measures was apparent.

**Conclusions**—IOPs are an important part of the continuum of care for alcohol and drug use disorders. They are as effective as inpatient treatment for most individuals seeking care. Public and commercial health plans should consider IOP treatment as a covered health benefit. Standardization of the elements included in IOPs may improve their quality and effectiveness.

Substance abuse intensive outpatient programs (IOPs) are ambulatory services for individuals with substance use disorders who do not meet diagnostic criteria for residential or inpatient substance abuse treatment or for those who are discharged from 24-hour care in an inpatient treatment facility and continue to need more support than the weekly or bi-weekly sessions provided in traditional outpatient care (1). IOP services offer a minimum of 9 hours of service per week in three, 3-hour sessions; however, some programs provide more sessions per week and/or longer sessions per day, and many programs become less intensive over time (1,2). Because services are provided in outpatient settings, the duration may be longer than that required for inpatient services. IOPs allow individuals to remain in their own homes and communities, which may improve their adjustment to community life (1).

Since 2002, the annual census of specialty addiction treatment facilities in the United States has consistently identified intensive outpatient treatment programs as second in prevalence only to regular outpatient treatment for alcohol and drug use disorders. In 2011, there were 6,089 programs in the United States that reported offering IOPs (44% of 13,720 addiction treatment programs), and IOPs served 141,964 patients—12% of the 1.2 million patients in care (3).

This article reports the results of a literature review that was undertaken as part of the Assessing the Evidence Base Series (see text box 1). The purpose of this review was to provide policymakers, treatment providers, and consumers with extant information on IOPs so that they can make informed decisions when comparing these programs with alternative treatments. Public and commercial health plan administrators may use this information to assess the need to include IOPs as a covered benefit. Our assessment of IOPs defines the programs as a level of care, reviews available research, and evaluates the quality of the evidence, most notably compared with the effectiveness of inpatient treatment services.

## Description of the service

IOPs treat individuals with substance use disorders or co-occurring mental and substance use disorders who do not require medical detoxification or 24-hour supervision. They

provide a specified number of hours per week of structured individual, group, and/or family therapy as well as psychoeducation about substance use and mental disorders.

The American Society of Addiction Medicine (ASAM) defines five levels of care to guide practitioners in selecting the appropriate intensity for treating alcohol and drug use disorders: Level 0.5 (early intervention services), Level I (outpatient services), Level II (intensive outpatient services), Level III (residential and inpatient services), and Level IV (medically managed intensive inpatient services) (2). Thus, IOPs represent a higher level of care than usual outpatient services and a lower level of care than residential and inpatient services.

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines a set of core services for inclusion in IOPs, such as a specified number of hours of structured programming per week; individual, group, and/or family therapy; and psychoeducation about substance use and mental disorders (1). Table 1 summarizes the service.

IOP goals help the individual learn early-stage relapse management and coping strategies, ensure that the person has psychosocial support, and address individual symptoms and needs. However, broad variation across programs in terms of service delivery (e.g., mechanisms for screening and assessment), treatment planning and provision, crisis management, discharge planning, and the intensity and duration of care limit attempts to assess the quality and effectiveness of care across IOPs. Moreover, IOP services vary by setting: hospitals, community behavioral health centers, or day treatment programs. The ASAM criteria note that the duration of treatment varies with the severity of the person's illness and his or her response to the treatment intervention. Therefore, progress in a particular level of care, rather than a predetermined length of stay, determines an individual's movement through the treatment continuum.

In the clinical and research literature, IOPs may also include partial hospitalization and day treatment (ASAM Level II.5), both of which are used to treat people who have serious mental illness and/or substance use problems. For the purposes of this review, partial hospitalization and day treatment for substance use are included in the definition of an IOP. Day treatment models operate full-day schedules 5 to 7 days per week and may treat patients with co-occurring serious mental illness.

## Methods

### Search strategy

We identified and reviewed research from 1995 through 2012. We conducted a survey of major databases: PubMed (U.S. National Library of Medicine and National Institutes of Health), PsycINFO (American Psychological Association), Applied Social Sciences Index and Abstracts, Sociological Abstracts, Social Services Abstracts, Published International Literature on Traumatic Stress, the Educational Resources Information Center, and the Cumulative Index to Nursing and Allied Health Literature. We also examined bibliographies of major reviews and meta-analyses. We used combinations of the following search terms:

intensive outpatient treatment, substance abuse treatment, addiction treatment, drug rehabilitation, and alcohol treatment.

### **Inclusion and exclusion criteria**

This review was limited to U.S. and international studies in English and included the following types of articles: randomized controlled trials (RCTs), quasi-experimental studies, naturalistic assessments, and qualitative reviews. Studies were included if they compared levels of care (that is, inpatient or residential versus IOP or day treatment) for adult study participants seeking treatment for alcohol or illicit drug use. The ASAM Patient Placement Levels of Care (2) and the Center for Substance Abuse Treatment (CSAT) Treatment Improvement Protocol (TIP) on intensive outpatient programs (1) were also examined. Studies were excluded that examined residential treatment only, ambulatory treatment only, aftercare only, treatment for mental disorders only, developmental disability programs, hospital-based inpatient treatment programs without comparisons to less intensive services, and treatment services for adolescents.

### **Strength of the evidence**

The methodology used to rate the strength of the evidence is described in detail in the introduction to this series (<http://ps.psychiatryonline.org/Article.aspx?ArticleID=1759202>). The research designs of the identified studies were examined. Three levels of evidence (high, moderate, and low) were used to indicate the overall research quality of the collection of studies. Ratings were based on predefined benchmarks that considered the number and quality of the studies. If ratings were dissimilar, a consensus opinion was reached.

In general, high ratings indicate confidence in the reported outcomes and are based on three or more RCTs with adequate designs or two RCTs plus two quasi-experimental studies with adequate designs. Moderate ratings indicate that there is some adequate research to judge the service, although it is possible that future research could influence reported results. Moderate ratings are based on the following three options: two or more quasi-experimental studies with adequate design; one quasi-experimental study plus one RCT with adequate design; or at least two RCTs with some methodological weaknesses or at least three quasi-experimental studies with some methodological weaknesses. Low ratings indicate that research for this service is not adequate to draw evidence-based conclusions. Low ratings indicate that studies have nonexperimental designs, there are no RCTs, or there is no more than one adequately designed quasi-experimental study.

We accounted for other design factors that could increase or decrease the evidence rating, such as how the service, populations, and interventions were defined; use of statistical methods to account for baseline differences between experimental and comparison groups; identification of moderating or confounding variables with appropriate statistical controls; examination of attrition and follow-up; use of psychometrically sound measures; and indications of potential research bias.

## Effectiveness of the service

We described the effectiveness of the service—that is, how well the outcomes of the studies met the service goals. We compiled the findings for separate outcome measures and study populations, summarized the results, and noted differences across investigations. We evaluated the quality of the research design in our conclusions about the strength of the evidence and the effectiveness of the service.

## Results

### Level of evidence

The level of evidence for IOPs was considered high. Multiple randomized clinical trials and quasi-experimental studies have been conducted on IOPs that were designed to treat substance use disorders. We identified five studies based on four randomized trials that compared intensive outpatient or day treatment services with inpatient or residential treatment (4–8) and two studies of inpatient treatment versus IOPs that included both randomized study participants and individuals who refused randomization (9,10). Our search also revealed six naturalistic analyses of patients treated in inpatient and intensive outpatient settings (11–16) and one qualitative review of research published after 1995 (17). Table 2 contains a summary of the studies included in this review.

Most of the randomized trials had good internal validity and used the Addiction Severity Index (ASI), a well-validated treatment outcome measure. However, samples sometimes had small to modest sizes, and insufficient statistical power may have contributed to a lack of strong findings. Conversely, the naturalistic studies reported large sample sizes but had more variability in outcome measures. Nonetheless, findings from the randomized trials and naturalistic analyses appeared to complement each other.

### Patient populations and service settings

Alcohol dependence (7,8,13,17) and cocaine dependence (4,14) were the primary diagnoses of participants in studies of intensive outpatient services. Two randomized trials (5,18) and four naturalistic analyses (11,12,15,16) included people with alcohol and drug (undefined) diagnoses. There was demographic variation across study populations, including individuals who were uninsured and homeless in inner cities (11,12), employed men and women with commercial health plans (4,10,13), patients in the Veterans Affairs (VA) health system (9,16), and men and women treated in public systems of care (5,9,12,14,15). One study compared a 1-year day treatment program with a 1-year residential program (5,6). African Americans were the primary racial/ethnic group studied, and most study populations had good racial/ethnic mixtures. No studies compared the effects of IOPs across racial or ethnic groups.

Service settings for these studies included hospital-based inpatient and day treatment in VA (9,16) and community hospitals (4,7,8,13), residential programs (5,6,10), community-based public (5,6,9,12,14,15) and private (4,10,12,13) substance use treatment centers, and one drug treatment program based on therapeutic community principles (5,6). The services varied in intensity (i.e., hours per week), duration, content of the sessions, and therapeutic

approaches. Follow-up periods ranged from 3 months to 18 months. The dependent variables used to assess patient outcomes also varied, but abstinence (4,7,8) and changes in Addiction Severity Index scores (4,5,9–12,15,16) were most common. See columns 3 through 6 in Table 2 for details about the variability across studies.

### Effectiveness of the service

Variation in the operationalization of IOPs across studies and differences in outcome measures slightly tempered our assessment of inpatient and IOP equivalence. In most studies, the inpatient and outpatient services differed on many dimensions (e.g., setting, duration, intensity), although one investigation (7) used the same staff, facility, and therapeutic process and altered only the setting (inpatient versus outpatient) between experimental and control groups. The primary commonality was treatment in an intensive outpatient setting versus an overnight stay in a more controlled residential or inpatient setting (4–16), but variation in the operationalization of IOPs and outcome measures limited direct comparisons.

The randomized trials and quasi-experimental studies consistently reported significant reductions in problem severity and increases in days abstinent at follow-up interviews (between 3 and 18 months after baseline assessment) for study participants receiving intensive outpatient or day treatment services and for individuals in inpatient or residential care (Table 2). One trial with small sample sizes found higher rates of abstinence 3 months after treatment among individuals who received inpatient care compared with day treatment (63% versus 38%), but this effect was not observed at 6 months after treatment (4). In addition, all randomized trials reported similar reductions in Addiction Severity Index measures when inpatient and intensive outpatient settings were compared (5,6,9,10). Lastly, the studies that included participants who were randomized and those who self-selected levels of care reported a similar lack of overall differences in study outcomes when levels of care were compared (9,10). Indeed, a study based in the VA reported that two-thirds of the participants refused randomization, but outcomes were similar for randomized and nonrandomized study participants (9).

Although analyses of natural cohorts generally assume that patients treated in residential settings have more severe substance use problems than those treated in outpatient treatment settings, differential effectiveness based on problem severity was elusive in the articles we reviewed. Only two of six naturalistic analyses reported main effects for treatment setting. One was an analysis of Washington State treatment programs (15). Results showed that patients treated in an inpatient setting who stepped down to intensive outpatient treatment improved more than those treated only in intensive outpatient settings, because problem severity was greater at baseline among those admitted to inpatient care. Another analysis of a cohort of patients treated in a psychiatric hospital reported that patients who were alcohol dependent and treated in intensive outpatient care returned to “significant” drinking more quickly than those treated in inpatient care (13). The other four analyses did not find main effects for treatment setting (11,12,14,16).

There is some evidence that disorder severity may influence the effectiveness of IOPs compared with inpatient or residential treatment. In Minnesota treatment programs, patients

with recent suicidal ideation had better outcomes following residential care than patients who participated in intensive outpatient care (12). A secondary analysis of treatment for cocaine dependence noted that patients with more severe drug problems were more likely to benefit from long-term residential care than from less intensive levels of care (14). Finally, an analysis of patients in a VA program also suggested that those with more severe alcohol or drug problems had better response when treated in residential settings than in IOPs (16). Although there is still some debate about the equivalence of inpatient and intensive outpatient care for patients with the most severe levels of dependence, there appears to be general consensus that for most patients the levels of care are equivalent.

It is noteworthy that the current assessment of intensive outpatient services echoes findings from similar reviews conducted since the 1960s (18–28). Despite changing research methods and study populations, results are consistent—patient outcomes from inpatient, residential, and intensive outpatient services are positive and more similar than different. This consistency over time enhances confidence in the stability of the findings and the value of intensive outpatient services.

## Conclusions

Overall, the current literature suggests that a wide range of service intensities can be effective for individuals with substance use disorders. There is a high level of evidence—with the caveats we have noted—that IOPs are equally effective when compared with inpatient and residential treatments (see text box 2). IOPs have emerged as a critical facet of 21<sup>st</sup> century addiction treatment for people who need a more intensive level of service than usual outpatient treatment, and they allow participants to avoid or step down successfully from inpatient services. This is an important consideration for policymakers, providers, and individuals engaged in substance abuse treatment services when deciding which level of care is most appropriate for specific clinical situations.

Taken together, randomized trials and quasi-experimental studies consistently reported equivalent reductions in problem severity and increases in days abstinent at follow-up for participants who received intensive outpatient or day treatment services compared with those in inpatient or residential care. We found no studies comparing the service with wait-list or no-treatment control groups. Reviews of the literature point out many design and treatment differences that may affect conclusions about the effectiveness of inpatient versus outpatient services. A chapter in an ASAM-sponsored text (29) reiterated the debate on inpatient versus outpatient settings and concluded that engagement in longer, less-intensive services may have greater benefit than brief, intensive interventions without ongoing support, especially among individuals with more severe histories of addiction. The important feature appears to be continuity of care over a long duration, and this perspective is consistent with emerging models of recovery-oriented systems of care. However, the interaction between severity of alcohol and drug problems and setting of care has been elusive, and the effect (when present) appears to be small. Overall, studies found that 50% to 70% of their participants reported abstinence at follow-up, and most studies found that this outcome did not differ for inpatient versus outpatient settings of care. This makes cost,

treatment duration, and living in the community the major points of comparison between inpatient and IOP substance use services.

It is difficult to say which aspects of IOPs are most likely to be effective with specific populations. Naturalistic studies using large sample sizes found subtle improvements among people with the most serious substance use problems, suggesting that this level of institutional treatment may be helpful and/or necessary for a subset of people. However, a primary ongoing research need is to identify individuals with severe alcohol and drug use for whom inpatient or residential care is of greatest value. One complication is the variation in how residential care and intensive outpatient care are defined. This is an important distinction that needs clarification as provider systems move into an increasingly risk-based financing environment. Payers and providers should collaborate to define IOP services more consistently, so that effects are replicable across settings and patient populations. Likewise, there is a need for more research on the most effective length of IOP treatment. IOP models should clearly identify the type, duration, and intensity of IOP services. Researchers also need to determine the optimal type and level of stabilization services following discharge from IOP that will sustain the gains made during the IOP treatment episode.

Although African Americans were the dominant racial/ethnic group in many of the investigations comparing residential and inpatient services with intensive outpatient services, race/ethnicity varied substantially across the studies. The finding that IOP services are equivalent in outcomes to residential or inpatient care appears to generalize across racial and ethnic groups; however, we cannot make specific recommendations for IOP services related to race/ethnicity based on the current literature. Future studies may systematically vary components of IOPs to determine the more critical features for efficient and effective care.

Surprisingly, none of the studies examined in this review included the use of pharmacotherapy, which improves treatment outcomes when used in conjunction with therapeutic interventions. We believe that 21<sup>st</sup> century systems of addiction treatment should provide ongoing pharmacological and behavioral therapies within a continuing care model that increasingly relies on intensive outpatient settings rather than residential and inpatient care. Recent trials also document the value of enhancing intensive outpatient care with contingency management during intensive care (30) and during aftercare (31).

Without increased standardization, patients, payers, and policymakers will continue to have difficulty comparing IOP services with other levels of substance abuse treatment services. Requirements to adhere to the National Quality Forum Consensus Standards, for example, could help ensure that IOPs provide consistent and effective pharmacological and behavioral addiction treatments (32). Accordingly, this calls for improved assessment of the specific needs of each person requiring intensive substance use services in order to determine the appropriate level of care. Policymakers, payers, and consumers should consider demanding these assessments, and providers across all levels of care should receive the necessary training to complete them properly.



In summary, study conclusions are consistent and similar—outcomes reflecting alcohol and drug use at follow-up show reductions in substance use and increases in abstinence, and outcomes do not differ significantly between inpatient and intensive outpatient service settings. Although a few studies suggest that more impaired patients may have better outcomes if treated in inpatient settings as opposed to intensive outpatient settings, such differential effectiveness appears elusive and may apply only to the most severely impaired individuals. Compared with inpatient care, IOP services have at least two advantages: increased duration of treatment, which varies with the severity of the patient's illness and his or her response, and the opportunity to engage and treat consumers while they remain in their home environments, which affords consumers the opportunity to practice newly-learned behaviors. IOP treatment is an important service for inclusion as a covered benefit for people with substance use disorders. The diversity of settings and range of outcomes assessed, combined with the consistency of improvement over time, suggest that the effectiveness reflects the intensity and duration of treatment rather than a specific setting or patient population.

## Acknowledgments

Development of the Assessing the Evidence Base Series was supported by contracts HHSS283200700029I/HHSS28342002T, HHSS283200700006I/HHSS28342003T, and HHSS283200700017I/HHSS28300001T from 2010 through 2013 from the Substance Abuse and Mental Health Services Administration (SAMHSA). The authors acknowledge the contributions of Mary McCann, Andrea Kopstein, Kevin Malone, B.A., and Suzanne Fields, M.S.W., of SAMHSA; John O'Brien, M.A., from the Centers for Medicare & Medicaid Services; Garrett Moran, Ph.D., from Westat; and John Easterday, Ph.D, Linda Lee, Ph.D., Rosanna Coffey, Ph.D., and Tami Mark, Ph.D., from Truven Health Analytics. The views expressed in this article are those of the authors and do not necessarily represent the views of SAMHSA.

## References

1. Center for Substance Abuse Treatment. Treatment Improvement Protocol (TIP) Series. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2006. Substance Abuse: Clinical Issues in Intensive Outpatient Treatment.
2. American Society of Addiction Medicine. ASAM PPC-2R. Chevy Chase, MD: American Society of Addiction Medicine; 2001. ASAM Patient Placement Criteria for the Treatment of Substance-Related Disorders.
3. Substance Abuse and Mental Health Services Administration. BHSIS Series S-64, HHS Publication No SMA-12-4730. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2012. National Survey of Substance Abuse Treatment Services (N-SSATS): 2011. Data on Substance Abuse Treatment Facilities.
4. Schneider R, Mittelmeier C, Gadish D. Day versus inpatient treatment for cocaine dependence: an experimental comparison. *The Journal of Mental Health Administration*. 1996; 23:234–245.
5. Guldish J, Werdegard D, Sorensen JL, et al. Drug abuse day treatment: a randomized clinical trial comparing day and residential treatment programs. *Journal of Consulting and Clinical Psychology*. 1998; 66:280–289. [PubMed: 9583331]
6. Guldish J, Sorensen JL, Chan M, et al. A randomized trial comparing day and residential drug abuse treatment: 18-month outcomes. *Journal of Consulting and Clinical Psychology*. 1999; 67:428–434. [PubMed: 10369064]
7. Rychtarik RG, Connors GJ, Whitney RB, et al. Treatment settings for persons with alcoholism: evidence for matching clients to inpatient versus outpatient care. *Journal of Consulting and Clinical Psychology*. 2000; 68:277–289. [PubMed: 10780128]

8. Weithmann G, Hoffmann M. A randomized clinical trial of inpatient versus combined day hospital treatment of alcoholism: primary and secondary outcome measures. *European Addiction Research*. 2005; 11:197–203. [PubMed: 16110227]
9. McKay JR, Alterman AI, McLellan AT, et al. Effect of random versus nonrandom assignment in a comparison of inpatient and day hospital rehabilitation for male alcoholics. *Journal of Consulting and Clinical Psychology*. 1995; 63:70–78. [PubMed: 7896993]
10. Witbrodt J, Bond J, Kaskutas LA, et al. Day hospital and residential addiction treatment: randomized and nonrandomized managed care clients. *Journal of Consulting and Clinical Psychology*. 2007; 75:947–959. [PubMed: 18085911]
11. McLellan AT, Hagan TA, Meyers K, et al. “Intensive” outpatient substance abuse treatment: comparisons with “traditional” outpatient treatment. *Journal of Addictive Diseases*. 1997; 16:57–84. [PubMed: 9083825]
12. Harrison PA, Asche SE. Comparison of substance abuse treatment outcomes for inpatients and outpatients. *Journal of Substance Abuse Treatment*. 1999; 17:207–220. [PubMed: 10531627]
13. Pettinati HM, Meyers K, Evans BD, et al. Inpatient alcohol treatment in a private healthcare setting: which patients benefit and at what cost? *The American Journal on Addictions*. 1999; 8:220–233. [PubMed: 10506903]
14. Simpson DD, Joe GW, Fletcher BW, et al. A national evaluation of treatment outcomes for cocaine dependence. *Archives of General Psychiatry*. 1999; 56:507–514. [PubMed: 10359464]
15. McKay JR, Donovan DM, McLellan T, et al. Evaluation of full vs. partial continuum of care in the treatment of publicly funded substance abusers in Washington State. *American Journal of Drug and Alcohol Abuse*. 2002; 28:307–338. [PubMed: 12014818]
16. Tiet QQ, Ilgen MA, Byrnes HF, et al. Treatment setting and baseline substance use severity interact to predict patients' outcomes. *Addiction*. 2007; 102:432–440. [PubMed: 17298651]
17. Finney JW, Hahn AC, Moos RH. The effectiveness of inpatient and outpatient treatment for alcohol abuse: the need to focus on mediators and moderators of setting effects. *Addiction*. 1996; 91:1773–1796. [PubMed: 8997760]
18. Cole SG, Lehman WE, Cole EA, et al. Inpatient vs. outpatient treatment of alcohol and drug abusers. *American Journal of Drug and Alcohol Abuse*. 1981; 8:329–345. [PubMed: 7041624]
19. Armor, DJ.; Polich, JM.; Stambul, HB. *Alcoholism and Treatment*. New York, NY: John Wiley & Sons; 1978.
20. Diesenhau, H. *Alcohol and Health Monograph No 3 DHHS Pub No ADM-82-1192*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism; 1982. Current trends in treatment programming for problem drinkers and alcoholics; in *Prevention, Intervention and Treatment: Concerns and Models*; p. 219-290.
21. Edwards G, Guthrie S. A controlled trial of inpatient and outpatient treatment of alcohol dependency. *Lancet*. 1967; 1:555–559. [PubMed: 4163915]
22. Institute of Medicine. *Prevention and Treatment of Alcohol Problems: Research Opportunities*. Washington, DC: National Academy Press; 1989.
23. Emrick CD. A review of psychologically oriented treatment of alcoholism: the relative effectiveness of different treatment approaches and the effectiveness of treatment versus no treatment. *Journal of Studies on Alcohol*. 1975; 36:88–108. [PubMed: 238080]
24. Polich, JM.; Armor, DJ.; Braiker, HB. *The Course of Alcoholism: Four Years After Treatment*. New York, NY: John Wiley & Sons; 1981.
25. Institute of Medicine. *Broadening the Base of Treatment for Alcohol Problems*. Washington, DC: National Academy Press; 1990.
26. Saxe, L.; Dougherty, D.; Esty, K., et al. *The Effectiveness and Costs of Alcoholism Treatment*. Washington, DC: Office of Technology Assessment; 1983.
27. Sells SB, Simpson DD. The case for drug abuse treatment effectiveness based on the DARP research program. *British Journal of Addiction*. 1980; 75:117–131. [PubMed: 6930290]
28. Sells, SB.; Simpson, DD. *DARP Admission Cohort*. Cambridge, MA: Ballinger; 1976. *Studies of the Effectiveness of Treatments for Drug Abuse, Volume 5: Evaluation of Treatment Outcomes for 1972 - 1973*.

29. Finney, JW.; Moos, RH.; Wilbourne, PL. Effects of treatment setting, duration, and amount on patient outcomes. In: Ries, RK.; Fiellin, DA.; Miller, SC., et al., editors. *Principles of Addiction Medicine*. 4th. Philadelphia, PA: Wolters Kluwer/Lippincott Williams & Wilkins; 2009. p. 379-386.
30. Petry NM, Alessi SM, Hanson T. Contingency management improves abstinence and quality of life in cocaine abusers. *Journal of Consulting and Clinical Psychology*. 2007; 75:307–315. [PubMed: 17469888]
31. McKay JR, Lynch KG, Coviello D, et al. Randomized trial of continuing care enhancements for cocaine-dependent patients following initial engagement. *Journal of Consulting and Clinical Psychology*. 2010; 78:111–120. [PubMed: 20099956]
32. National Quality Forum. *Evidence-Based Treatment Practices*. Washington, DC: National Quality Forum; 2007. National Voluntary Consensus Standards for the Treatment of Substance Use Conditions.

**Text box 1****About the AEB Series**

The Assessing the Evidence Base (AEB) Series presents literature reviews for 14 commonly used, recovery-focused mental health and substance use services. Authors evaluated research articles and reviews specific to each service that were published from 1995 through 2012 or 2013. Each AEB Series article presents ratings of the strength of the evidence for the service, descriptions of service effectiveness, and recommendations for future implementation and research. The target audience includes state mental health and substance use program directors and their senior staff, Medicaid staff, other purchasers of health care services (for example, managed care organizations and commercial insurance), leaders in community health organizations, providers, consumers and family members, and others interested in the empirical evidence base for these services. The research was sponsored by the Substance Abuse and Mental Health Services Administration to help inform decisions about which services should be covered in public and commercially funded plans. Details about the research methodology and bases for the conclusions are included in the introduction to the AEB Series (<http://ps.psychiatryonline.org/Article.aspx?ArticleID=1759202>).

**Text box 2****Evidence for the effectiveness of substance abuse intensive outpatient programs (IOPs): high**

Despite some variations in programming and design, substance abuse IOPs compared with control conditions demonstrate consistent evidence for the following outcomes:

- Reduced drug and/or alcohol use from baseline to follow-up
- Few differences between IOPs and inpatient programs

**Table 1**  
**Summary of substance abuse intensive outpatient programs**

Feature	Description
Service definition	Substance abuse intensive outpatient programs (IOPs) are direct services for people with substance use disorders or co-occurring mental and substance use disorders who do not require medical detoxification or 24-hour supervision. The programs supply treatment for symptoms and/or disabilities associated with the disorder. Core services generally include a specified number of hours of structured programming per week; individual, group, and/or family therapy; and psychoeducation about substance use and mental disorders.
Service goals	<ul style="list-style-type: none"> <li>• Learn early-stage relapse management</li> <li>• Develop coping strategies</li> <li>• Establish or re-establish psychosocial supports</li> <li>• Address problems related to social, psychological, and emotional well-being</li> </ul>
Populations	<ul style="list-style-type: none"> <li>• Adults with substance use disorders (both alcohol and drug diagnoses)</li> </ul>
Settings for service delivery	<ul style="list-style-type: none"> <li>• Hospital-based inpatient and day treatment in Veterans Affairs and community hospitals</li> <li>• Social model residential programs</li> <li>• Community-based public and private substance abuse treatment centers</li> </ul>

**Table 2**  
**Summary of studies included in the intensive outpatient program (IOP) review<sup>a</sup>**

Study	Design, participants, setting	IOP treatment	Comparison treatment	Primary outcome measures	Primary outcome and between-group effects
<b>Randomized controlled trials</b>					
Schneider et al., 1996 (4)	Day treatment (n=32) versus inpatient (n=42). Study participants were seeking treatment for cocaine dependence from a large health maintenance organization in metropolitan Boston.	Day treatment: 2 weeks, Monday through Friday, 5 hours of services per day; weekly aftercare for up to 6 months (47% completed 14 days)	Inpatient care: 14 days in a nonhospital facility with 6 hours of services per day; referral to halfway house, aftercare, or a mental health provider (95% completed 14 days)	ASI at baseline and telephone interviews at 3 months (91% completed) and 6 months (85% completed) after treatment; self-report of abstinence	ASI problem severity declined for both groups at 3 and 6 months after treatment and did not differ between groups. Inpatients were more likely to report abstinence at 3 months (63%) compared with the day treatment group (38%). The groups did not differ at 6 months (46% versus 35%).
Guydish et al., 1998 (5) and 1999 (6)	Day treatment (n=114) versus residential treatment (n=147) in a therapeutic, community-oriented drug treatment program	Day treatment: 8 hours of treatment per day, 7 days per week for 6 to 8 months	Residential therapeutic community with 1-month orientation; 3 to 6 months active treatment; 3 to 6 months reentry	ASI at baseline and 6, 12, and 18 months follow-up; treatment retention; days of treatment	ASI problem severity scores (Alcohol, Drug, Employment, Legal, Medical, Psychological, and Social) declined significantly from baseline; improvements were maintained at 6, 12, and 18 months. Residential patients had more improvement on social and psychiatric problems; remaining outcomes did not differ.
Rychtarik et al., 2000 (7)	Individuals seeking treatment for alcohol dependency were randomized to IOP (n=63) versus inpatient and outpatient (n=58) versus outpatient (n=61)	IOP: 5 days per week for 28 days plus 3 months of weekly aftercare	Inpatient and outpatient: 28 days plus 8 sessions of outpatient plus weekly aftercare; OR, outpatient: 8 sessions in 28 days	Percentage of days abstinent	Days abstinent increased from pretreatment for all groups, and groups did not differ at 18-month follow-up: inpatient, 37% to 81%; IOP, 50% to 75%; outpatient, 41% to 76%. Patients with high alcohol involvement had better outcomes when treated in inpatient care.
Weithmann and Hoffman, 2005 (8)	Day hospital (n=56) versus inpatient (n=54) care in a German psychiatric hospital	Day hospital (same services and staff as inpatient)	Inpatient: same services and staff as day hospital	Percentage of days abstinent, assessed quarterly.	Days abstinent for both groups. There were no differences between levels of care.
<b>Randomized controlled trials that included study participants who refused randomization</b>					
McKay et al., 1995 (9)	Day hospital versus inpatient care: patients randomized (n=48) plus patients who refused randomization and self-selected level of care (n=96)	Day hospital: 27 hours per week for 4 weeks	Inpatient: 48 hours per week of group and individual counseling plus psychoeducation	ASI at baseline and at follow-up 3, 6, and 9 months after treatment	ASI problem severity declined in both groups at all measurement intervals. There were no differences between levels of care. Randomized and self-selected participants had similar outcomes.

Study	Design, participants, setting	IOP treatment	Comparison treatment	Primary outcome measures	Primary outcome and between-group effects
Witbrodt et al., 2007 (10)	Day hospital versus residential care: patients randomized (n=293) plus patients who refused randomization (n=403) and self-selected level of care	Day hospital (n=154 randomized; n=321 self-selected)	Social model residential care (n=139 randomized; 82 assigned)	ASI at baseline and at follow-up interviews at 6 and 12 months	ASI problem severity declined in both groups at both measurement intervals. There were no differences between levels of care.
<b>Analyses of natural cohorts</b>					
McLellan et al., 1997 (11)	Naturalistic analysis of adults (N=918) from 10 outpatient and 6 IOP programs	IOP: 3 or more hours per day at least 3 days per week (n=338)	Outpatient: 2 or fewer hours per session, 2 or fewer days per week (n=580)	ASI at baseline and 7 months after baseline	ASI problem severity declined in both groups. There were no differences between levels of care. Patients seen in IOP had more severe problems at admission.
Harrison and Asche, 1999 (12)	Naturalistic analysis of inpatient versus outpatient programs	Outpatient: 145 programs in Minnesota providing intensive levels of care (n=3,007)	Inpatient: 38 programs in Minnesota (n=1,156)	ASI at intake and at 6 months after intake	ASI problem severity declined in both groups. There were no differences between levels of care. Patients with recent suicidal ideation had better outcomes in inpatient care.
Pettinati et al., 1999 (13)	Naturalistic analysis of alcohol-dependent patients admitted to inpatient (n=93) or outpatient (n=80) care in a psychiatric hospital	Inpatient: 4 weeks of 12-step programming plus individual, group, and family therapy	IOP: 8 weeks of 12-step programming plus individual, group, and family therapy	SCL-90R; number of drinking days; return to significant drinking (days of drinking 3 or more drinks) or return to inpatient care	Survival analysis suggested that IOP patients returned to significant drinking more quickly (50% at 2 months) than inpatients (25% at 2 months). Six months after discharge, the percentage of patients with heavy drinking stabilized at about 50% in both groups.
Simpson et al., 1999 (14)	Naturalistic analysis—secondary analysis of data from DATOS assessing cocaine-dependent patients in three levels of care	Outpatient: 24 drug-free programs (n=458)	Residential: 19 long-term programs (n=542); Inpatient: 12 short-term programs (n=605)	Weekly cocaine use 1 year after discharge	Weekly cocaine use declined from 73% before treatment to 23% at follow-up and did not differ across groups. A significant interaction between level of care, problem severity, and retention in care suggested that patients with more severe problems were less likely to report weekly cocaine use following long-term residential care (23%) versus short-term residential care (37%).
McKay et al., 2002 (15)	Naturalistic analysis of inpatient plus outpatient (n=167) versus IOP only (n=96)	IOP: 2 programs in Washington State	Inpatient: one, 28-day inpatient program in Washington State	ASI at baseline and at 3 and 9 months after baseline	ASI problem severity declined in both groups at 3 months and 9 months. Participants in inpatient plus outpatient programs improved more because they were more severe at baseline.



Study	Design, participants, setting	IOP treatment	Comparison treatment	Primary outcome measures	Primary outcome and between-group effects
Tiet et al., 2007 (16)	Naturalistic analysis of outpatient and IOP (n=1011) versus inpatient and residential care (n=1520) among Veterans Affairs clients	Intensive outpatient (n=601) and outpatient (n=410)	Inpatient and residential (n=224), residential (n=390), and domiciliary (n=906) settings	ASI at baseline and at 6 months after baseline	ASI problem severity declined in both groups after baseline. There were no differences between levels of care except for the most severe cases.
<b>Qualitative review of studies published in 1995 or earlier</b>					
Finney et al., 1996 (17)	Qualitative review of 14 studies of inpatient versus outpatient programs	Settings where patients do not stay over night	Residential, 24-hour settings	Varied, as reported in the publications	Treatment intensity was related to better outcomes. Inpatient outcomes were superior in 5 studies (2 based on naturalistic cohorts). Day hospital outcomes were superior in 2 studies. There were no differences in 7 randomized studies.

<sup>a</sup> Studies are listed in chronological order under type of research design

Abbreviations: ASI, Addiction Severity Index; DATOS, Drug Abuse Treatment Outcome Study; SCL-90R, Symptom Checklist 90-Revised.