



# DSHS | Chemical Dependency Treatment, Public Safety

REPORT 11.140 | Implications for arrest rates, victims and community protection

## Providing chemical dependency treatment to low-income adults results in significant public safety benefits

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*In collaboration with DSHS Health and Recovery Services Administration, Division of Alcohol and Substance Abuse*

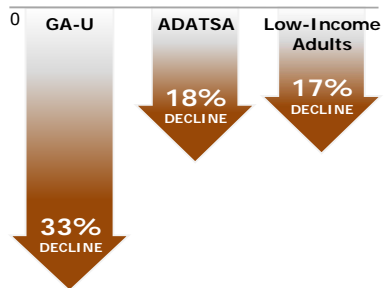
**T**HE DIVISION OF ALCOHOL AND SUBSTANCE ABUSE provides chemical dependency (CD) treatment to low-income adults in Washington State. This report examines the impact of CD treatment on criminal activity among non-Medicaid adults served by DASA, including:

- **General Assistance-Unemployable (GA-U)** clients who receive state-funded cash and medical benefits. The GA-U program serves adults without dependents who are physically or mentally incapacitated and are expected to be unemployable for more than 90 days.
- **Alcoholism and Drug Addiction Treatment and Support Act (ADATSA)** clients who receive state-funded medical and financial support. The ADATSA program serves indigent adults deemed unemployable due to chemical dependency.
- **Other low-income adults** with chemical dependency who are not enrolled in Medicaid, GA-U or ADATSA.

Chemically dependent low-income adults are frequently involved with the criminal justice system. The 30,673 GA-U, ADATSA, and low-income adult clients who needed or received DASA-funded CD treatment in CY 2006 were arrested 25,284 times in that year.<sup>1</sup> These same 30,673 clients were arrested 163,914 times over the 10-year period from July 1997 to June 2007 – an average of more than five arrests per person over the 10-year period.

### KEY FINDINGS

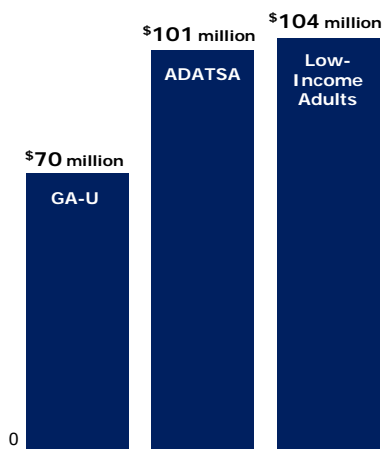
**Arrests decline significantly after chemical dependency treatment**



**The risk of arrest is significantly lower for clients who receive CD treatment.**

GA-U clients in CY 2006 who received CD treatment saw a 33 percent decline in the number of arrests per client in the following year, when compared to GA-U clients who needed but did not receive CD treatment. Arrest reductions of 18 and 17 percent were observed for CD treatment provided to ADATSA clients and other low-income adults, respectively.

**Present value of cost savings**



**The present value of future savings to victims and the criminal justice system associated with providing CD treatment to low-income adults is substantial:**

- \$70 million in savings for GA-U clients who received CD treatment in CY 2006.
- \$101 million in savings for ADATSA clients receiving CD treatment in CY 2006.
- \$104 million in savings for other low-income adults receiving treatment in CY 2006.<sup>2</sup>

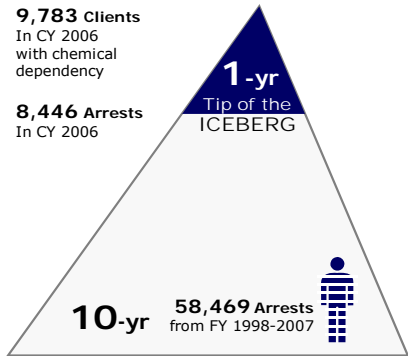
In many cases these savings result from engagement in CD treatment over several years and treatment episodes. The estimated savings exceed the likely life-cycle CD treatment costs for these clients, indicating that **CD treatment is a cost-effective use of public resources – even before considering beneficial impacts on morbidity, mortality, employment and tax revenue.**

<sup>1</sup> This count unduplicates 1,147 clients who received both GA-U and ADATSA benefits in the year.

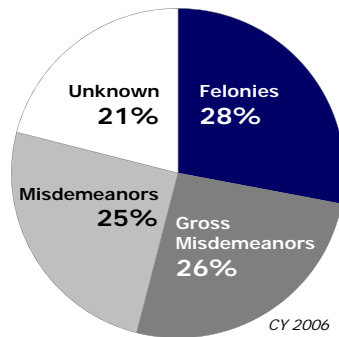
<sup>2</sup> Savings are based on estimates and assumptions from the DSHS Research and Data Analysis Division applied to the cost-benefit model developed by the Washington State Institute for Public Policy (WSIPP), and are not official WSIPP estimates.

**GA-U clients with chemical dependency problems are often arrested**

Past-year arrests are just the tip of the iceberg



More than half are felonies or gross misdemeanors

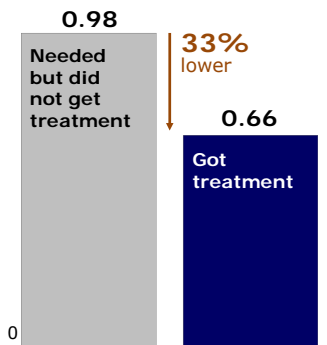


- Alcohol or Drug Related ..... 26%
- Theft, Burglary, Robbery, Forgery, Fraud ..... 16%
- Assault, Harassment ..... 9%
- Drivers License or Vehicle License Related ..... 8%
- Supervision, Parole Related ..... 7%
- Non-compliance ..... 6%
- Trespass, Malicious Mischief, Disorderly Conduct ..... 5%
- Domestic Violence and Related .. 4%
- Reckless Driving | Hit, Run..... 2%
- Family Support Related ..... 1%
- Sex Related ..... 1%
- Weapon Related ..... 1%
- Homicide..... 0%
- All Other ..... 13%

**The risk of arrest is lower for GA-U clients who receive treatment for their chemical dependency**

Chemical Dependency treatment reduces risk of arrest

Arrests per person per year



Among clients enrolled in GA-U medical coverage in CY 2006, clients receiving CD treatment experienced a 33 percent decline in the number of arrests per client in the following year, when compared to GA-U clients who needed but did not receive CD treatment. This analysis used a “difference-of-difference” regression model that controls for baseline differences in arrest rates between the treated and untreated client groups.

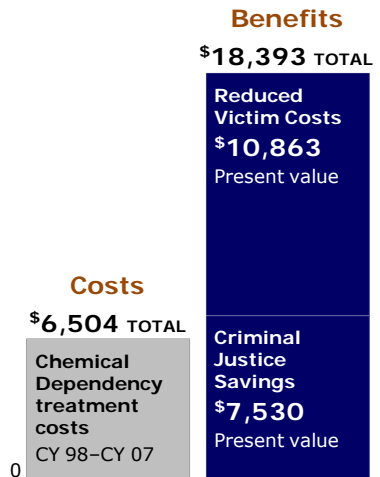
We translated this relative reduction into a mean treatment effect size using the criminal justice cost-benefit model developed by the Washington State Institute for Public Policy (WSIPP). We reduced the benefit (savings) estimates derived from the WSIPP model by 25 percent to recognize that treatment effects were derived from observational data rather than a randomized clinical trial.

**The benefits to public safety—reduced costs to crime victims and taxpayers—more than offset the cost of chemical dependency treatment**

The per-client present value of the reduced costs to crime victims and criminal justice systems from reduced criminal activity among GA-U clients receiving treatment in CY 2006 is \$18,393. Multiplying by the 3,823 GA-U clients who received CD treatment in CY 2006, this amounts to a present value of approximately \$70 million in savings.

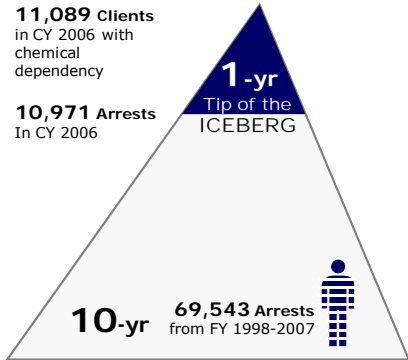
In many cases these lifetime savings result from engagement in CD treatment over a period of years and multiple treatment episodes. The average per-client 10-year (CY 1998 to CY 2007) CD treatment cost for the study population was \$6,504. Some clients will continue in treatment in the future, which will contribute to more persistent impacts on criminal activity and add somewhat to the overall average cost of treatment. However, the magnitude of the benefits clearly indicates that CD treatment is a cost-effective use of public resources, even before considering additional beneficial impacts on morbidity, mortality, employment and tax revenue.

The benefits exceed the cost of treatment

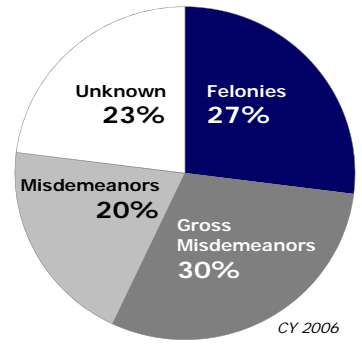


**Many ADATSA clients have extensive arrest histories prior to engaging in Chemical Dependency treatment**

Past-year arrests are just the tip of the iceberg



More than half are felonies or gross misdemeanors

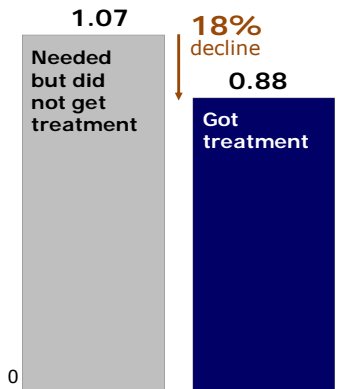


- Alcohol or Drug Related ..... 25%
- Theft, Burglary, Robbery, Forgery, Fraud ..... 17%
- Supervision, Parole Related..... 10%
- Drivers License or Vehicle License Related ..... 9%
- Assault, Harassment ..... 8%
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- Trespass, Malicious Mischief, Disorderly Conduct ..... 5%
- Domestic Violence and Related .. 4%
- Family Support Related ..... 2%
- Reckless Driving | Hit, Run..... 2%
- Sex Related ..... 1%
- Weapon Related ..... 1%
- Homicide..... 0%
- All Other ..... 9%

**The risk of arrest is lower for ADATSA clients who receive treatment for their chemical dependency**

Chemical Dependency treatment reduces risk of arrest

Arrests per person per year



Among clients enrolled in ADATSA in CY 2006, clients receiving CD treatment experienced an 18 percent decline in the number of arrests per client in the following year, when compared to ADATSA clients who did not receive CD treatment. This analysis used a “difference-of-difference” regression model that controls for baseline differences in arrest rates between the treated and untreated client groups.

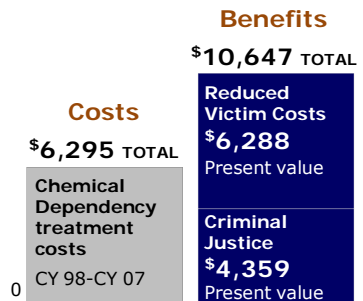
We translated this relative reduction into a mean treatment effect size using the criminal justice cost/benefit model developed by the Washington State Institute for Public Policy (WSIPP). We reduced the benefit (savings) estimates derived from the WSIPP model by 25 percent to recognize that treatment effects were derived from observational data rather than a randomized clinical trial.

**The benefits to public safety—reduced costs to crime victims and criminal justice systems—exceed the cost of CD treatment**

The per-client present value of the reduced costs to crime victims and criminal justice systems from reduced criminal activity among ADATSA clients receiving treatment in CY 2006 is \$10,647. Multiplying by the 9,462 ADATSA clients who received CD treatment in CY 2006, this amounts to a present value of approximately \$101 million in savings.

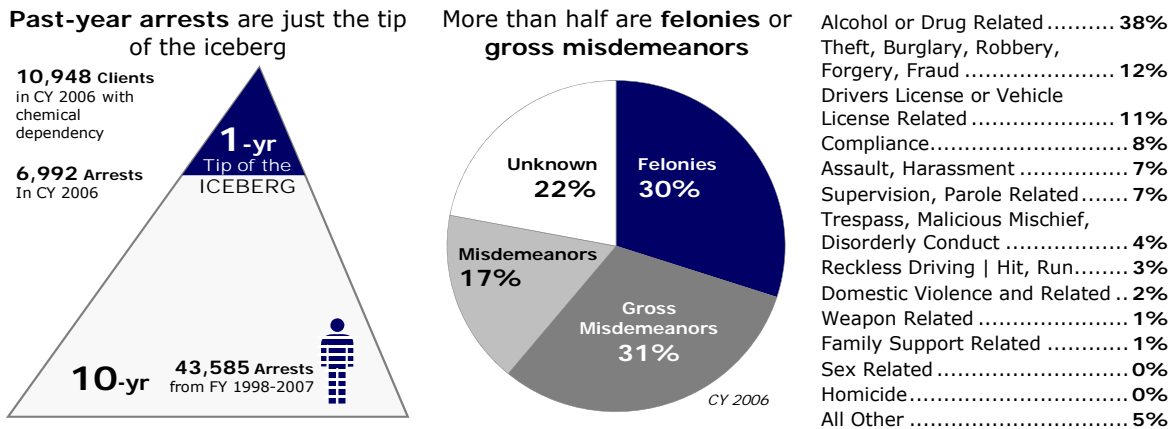
In many cases these lifetime savings result from engagement in CD treatment over a period of years and multiple treatment episodes. The average per-client 10-year (CY 1998 to CY 2007) CD treatment cost for the study population was \$6,295. Some clients will continue in treatment in the future, which will contribute to more persistent impacts on criminal activity and add to the overall average cost of treatment. However, the magnitude of the benefits indicates that CD treatment is a cost-effective use of public resources, even before considering additional beneficial impacts on morbidity, mortality, employment and tax revenue.

The benefits exceed the cost of treatment

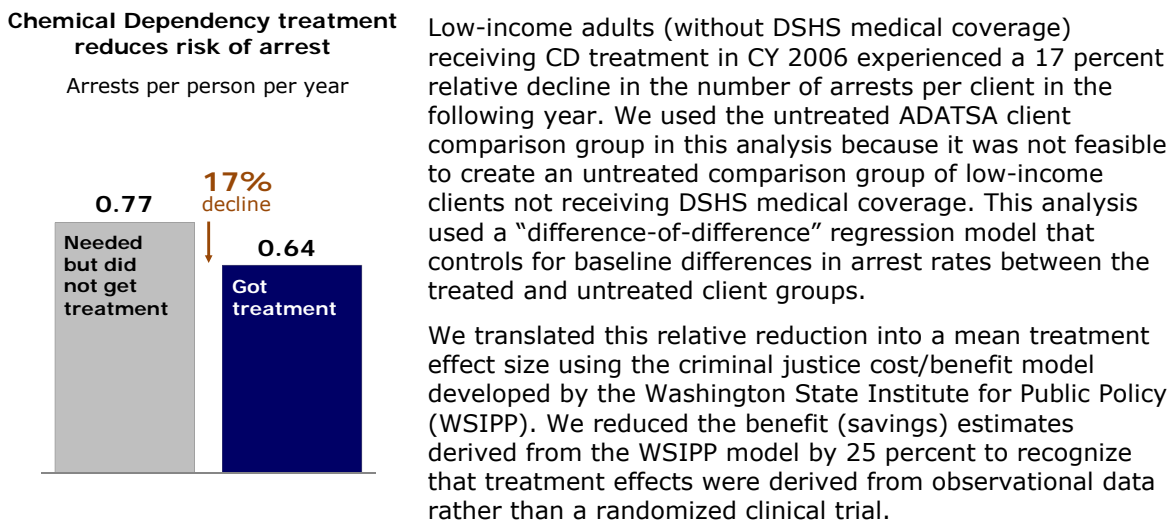


**OUTCOMES** | **Low-income Adults** (without DSHS medical coverage)

**Many low-income adults receiving DASA-funded CD treatment have extensive arrest histories prior to engaging in treatment**



**The risk of arrest is lower for low-income adults who receive treatment for their chemical dependency**

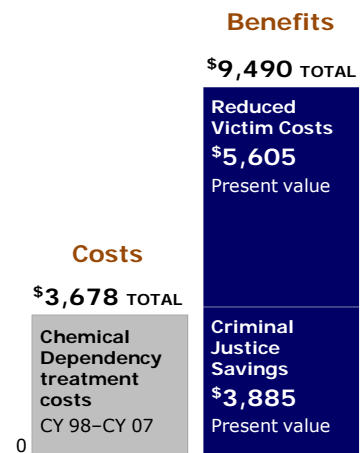


**The benefits to public safety—reduced costs to crime victims and criminal justice systems—exceed the cost of CD treatment**

The per-client present value of the reduced costs to crime victims and criminal justice systems from reduced criminal activity among low-income adults receiving treatment in CY 2006 is \$9,490. Multiplying by the 10,948 low-income adults who received CD treatment in CY 2006, this amounts to a present value of approximately \$104 million in savings.

In many cases these lifetime savings result from engagement in CD treatment over a period of years and multiple treatment episodes. The average per-client 10-year (CY 1998 to CY 2007) CD treatment cost for the study population was \$3,678. Some clients will continue in treatment in the future, which will contribute to more persistent impacts on criminal activity and add to the overall average cost of treatment. However, the magnitude of the benefits indicates that CD treatment is a cost-effective use of public resources, even before considering additional beneficial impacts on morbidity, mortality, employment and tax revenue.

**The benefits exceed the cost of treatment**



## TECHNICAL NOTES

**Data Sources.** Findings were derived from the following data sources:

- The Research and Data Analysis Division's Client Services Database provided a common identifier for linking client information from multiple data sources.
- DASA's TARGET data system provided information on CD treatment and detoxification services. Use of detoxification services indicates need for CD treatment, but is not considered to be treatment.
- Medical claims from the Medicaid Management Information System (MMIS) provided additional CD treatment service data not captured in TARGET. MMIS claims also provided diagnoses of substance use disorders used to flag clients with these conditions.
- OFM Eligibility data provided MMIS-based information on clients' medical coverage.
- Arrest data from the Washington State Patrol (WSP) identified clients who had been arrested. Local law enforcement agencies are generally required to report only felony and gross misdemeanor offenses into the WSP arrest database. This report somewhat understates the full volume of arrest events in the population because our data excludes some arrests for misdemeanor offenses that are not required to be reported in this database. Arrests for substance-related crimes were used to identify need for CD treatment. All charge descriptions in this report refer to arrest charges.

**Analytical methods.** Arrest impact analyses use a "difference-of-difference" regression model that controls for baseline differences in arrest rates between the treated and untreated client groups. The change in number of arrests from CY 2005 to CY 2007 is compared between clients receiving CD treatment in CY 2006 and an untreated comparison group of clients who received no CD treatment over the CY 2005 to CY 2007 time period.

The analysis for GA-U clients uses an untreated comparison group of GA-U clients who were flagged as having a need for CD treatment because one or more of the following conditions occurred in FY 2006:

- A medical claims diagnosis of substance abuse, dependence, or substance-induced psychosis;
- A CD detoxification episode recorded in MMIS or TARGET data; or
- An arrest on a substance-related charge recorded in the WSP database.

The analysis for ADATSA clients uses an untreated comparison group of clients who were enrolled in ADATSA medical coverage in CY 2006 but received no DASA-funded CD treatment in the CY 2005 to CY 2007 time period. Eligibility criteria for enrollment in ADATSA medical coverage require that these clients met chemical dependency related incapacity requirements in CY 2006. The analysis for other low-income adults used the untreated ADATSA client comparison group, because it is not feasible with DSHS client data to create an untreated comparison group of low-income clients not receiving DSHS medical coverage.

**WSIPP cost-benefit model.** Savings are based on estimates and assumptions from the DSHS Research and Data Analysis Division applied to the cost-benefit model developed by the Washington State Institute for Public Policy (WSIPP), and are not official WSIPP estimates.

Impact estimates developed by RDA were translated by WSIPP staff into standardized mean difference effect sizes, using the DCOX method for dichotomous outcomes as recommended by Lipsey.<sup>3</sup>

- $-.19$  for GAU
- $-.11$  for ADATSA
- $-.10$  for other low-income adults

The WSIPP model turns these effect sizes into estimated savings from avoided crimes. Estimated savings are long-term present value estimates of lifetime impacts for the population served, expressed in 2007 dollars. A three percent real discount rate was used to calculate the present value of the annual cash flows associated with the savings.

The WSIPP model accounts for two types of crime savings: one reflects the saving to taxpayers – when crime goes down, taxpayers may reduce the amount of money spent on the criminal justice system (local law enforcement, jail, court, and State Department of Corrections costs). There are also savings associated with costs avoided by people who would otherwise have been the victims of those crimes.

Before applying the reduction factor described below, the present value of estimated lifetime savings per average program participant are as follows:

- GAU: \$10,040 taxpayer benefit per person treated; \$14,484 victim benefit.
- ADATSA: \$5,812 taxpayer benefit per person treated; \$8,384 victim benefit.
- Other low-income adults: \$5,180 taxpayer benefit per person treated; \$7,473 victim benefit.

Each pair of savings may be added to get total benefits per treatment participant, by client group. The "average" participant represents the experience of both treatment completers and non-completers. We reduced savings estimates derived from the WSIPP model by 25 percent to recognize that CD treatment impact estimates were derived from observational data rather than a randomized clinical trial.

<sup>3</sup> Lipsey, M.W., & Wilson, D.B. (2001). Practical meta-analysis. Sage: Thousand Oaks, CA.

Additional copies of this paper may be obtained from: <http://www.dshs.wa.gov/RDA/>  
or <http://www1.dshs.wa.gov/dasa/> or through the Washington State Alcohol|Drug Clearinghouse by calling  
1-800-662-9111 or 206-725-9696 (within Seattle or outside Washington State), by e-mailing [clearinghouse@adhl.org](mailto:clearinghouse@adhl.org),  
or by writing to 6535 Fifth Place South, Seattle, Washington 98108-0243.

