

A Meta-analysis of Missouri Drug Court Performance Measures

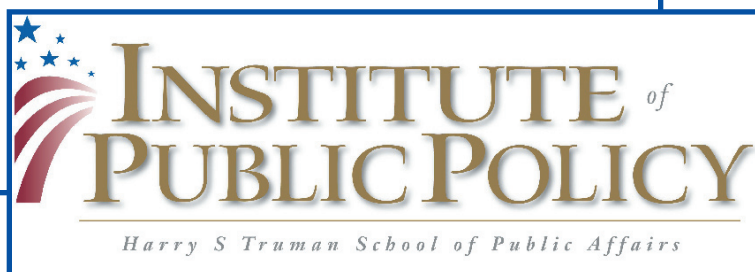
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Introduction

The first Missouri drug court was established in the early 1990s to focus the state's effort towards treatment and other alternatives to incarceration and probation. Drug courts are popular and the number of such courts, now nearly 100, continues to expand. This report is part of an effort to assess how Missouri's drug courts are faring in comparison to those of other states. This analysis uses published reports and studies on the performance and cost of drug courts in Missouri and elsewhere to assess how Missouri's success compares to the experiences of other states. This report is based upon a larger assessment of Missouri drug courts conducted in 2005 for the Missouri Office of State Courts Administrator (Richardson et al., 2005).

The data used in the analysis are from a 2001 study by the University of Missouri School of Social Work (UMSSW) that evaluated outcomes of Missouri drug courts (Sundet, Dannerbeck, & Lloyd, 2001). Data were collected on 14 courts around Missouri (10 adult courts, 3 juvenile courts and 1 family court) and measured graduate recidivism, participant retention, cost/benefit of participation, as well as various participant demographics. The studies of drug courts in other states, reviewed for comparison, were published between 1998 and 2005.

In a report to the Missouri Office of the State Courts Administrator in 2004, the National Center for State Courts presented a set of performance measures by which outcomes for Missouri's drug courts could be evaluated (National Center for State Courts, 2004). The report divided the performance

measures among adult and juvenile/family courts. A set of goals was established for each court type, and each goal was associated with one or more performance measures. The Missouri Drug Courts Coordinating Commission subsequently adopted these goals for drug courts. Examples of the performance measures include reducing post-graduation recidivism, retaining drug court participants in drug court, and establishing and maintaining an acceptable graduation rate.

This brief outlines the goals set out in the 2004 report and evaluates how drug courts in other states compare with drug courts in Missouri using these standards. A wide range of studies and evaluations of drug courts, including nearly 500 studies, along with the abstracts of over 1,000 more were examined to determine how Missouri drug courts have fared in comparison to drug courts in other states. This analysis focuses on the 86 reports with data relevant to Missouri's performance measures.

Missouri drug courts are on par with or exceeding the results for drug courts in other states for the performance measures in which data were available. For example, Missouri drug courts had a lower rate of recidivism than drug courts from seven other studies for which comparable data were available; had a graduation rate exceeding the national average; and had among the highest entry and exit employment rates of all studies reviewed. The only indicator for which Missouri drug courts lagged behind other courts was retention rate of participants. Missouri's drug court retention rate lagged behind the national average determined from data in 10 studies of other drug courts that used comparable measures.



The performance measures adopted by the Missouri Drug Courts Coordinating Commission (DCCC) include seven goals for Missouri adult drug courts and eight goals for juvenile and family drug courts, each with one or more performance measures. Among these, the most significant in terms of comparability to other studies were:

- Reduce post-graduation recidivism among drug court participants (goal 1 for all drug courts);
- Retain drug court participants in drug court (goal 2 for adult courts and goal 3 for juvenile/family courts);
- Establish and maintain an acceptable graduation rate (goal 3 for adult courts); and
- Provide cost-effective alternatives to traditional incarceration and probation (goal 4 for adult courts and goal 6 for juvenile/family courts).

Missouri Drug Courts

Missouri had 54 adult, 11 family, and 18 juvenile drug courts as of April 2005, located throughout the state. Drug court admissions and requirements vary from court to court. Each drug court determines what admission processes it will use for admitting participants; there are currently six types used by Missouri drug courts. The drug court programs vary in length from a minimum of 8 to 18 months, at the discretion of the drug court. Offenders do not graduate until all requirements are met, which may take much longer than the minimum time, depending upon the progress of each participant. Court oversight, tracking, and treatment plans are customized for each offender to address specific problems related to that individual's addiction. There are significant variations among the courts in the number of treatment phases in the program and how rapidly a participant can move through the program. There are also large variations in the number of participants from large urban courts with 300 participants to small rural courts with less than 10 participants. The significant resources difference between urban and rural areas, such as access to treatment and funding levels, make it difficult to compare drug courts in Missouri.

Adult Drug Courts

Adult drug courts primarily serve participants 18 years of age and older and cases in which no abused and neglected children are involved. Seventy-one of the 86 studies reviewed for this project related specifically to adult drug courts.

One study of particular note is A Cost-Benefit Analysis of the St. Louis City Adult Felony Drug Court (Loman, 2004), which is highlighted in several figures in this report. The St. Louis analysis, released in 2004, provided a detailed look at the costs and benefits of participants who completed drug court prior to 2001. The overall findings indicate drug court costs exceeded the costs of probation, but the net savings over time due to drug court participation exceeded the higher initial investment. Based on savings over four years, for every additional \$1 spent on drug courts above the cost of probation, \$6.32 was returned in net savings.

Goal 1: To reduce post-graduation recidivism of drug court participants

Missouri drug courts are performing well in terms of graduate recidivism. According to the UMSSW study, recidivism among Missouri drug court graduates, over a period of 12 months after graduation, was less than the average of seven studies reviewed using comparable measures (8.7% versus 13.7%), as illustrated in Figure 1. Felony arrests among graduates were also lower in the UMSSW study (2.9%) than in a study of Kentucky drug courts using similar measures (8.5%). No studies reported rates of felony convictions for Missouri drug court graduates, although felony convictions ranged from 3.1 percent to 10 percent in the three studies reporting this measure. Only one of the three studies reporting felony convictions indicated a time frame, 12 months, over which graduate data were gathered.

Tracking the recidivism of drug court graduates is a labor intensive process. Arrest records must be



obtained through searches of local law enforcement databases or paper files. The performance goals for Missouri Drug Courts call for a five year follow-up on the rate of recidivism for graduates. None of the studies reviewed, however, measured recidivism over this long of a time period and Missouri is just beginning to collect the data necessary to assess long term recidivism.

Few studies reported recidivism in terms of felony arrests. The studies reporting re-arrests on felony charges and felony convictions, however, did not provide sufficient comparison data to assess the effect of drug courts on this measure. The UMSSW study of Missouri drug courts reported the rates of felony arrests over a 12-month period following graduation to be 2.9 percent. Only one other study, the Kentucky Drug Court Outcome Evaluation (T. Logan, Hoyt, & Leukefeld, 2001), reported over a similar period of time and the study reported a much higher rate of felony re-arrests (8.5%) than did Missouri drug courts.

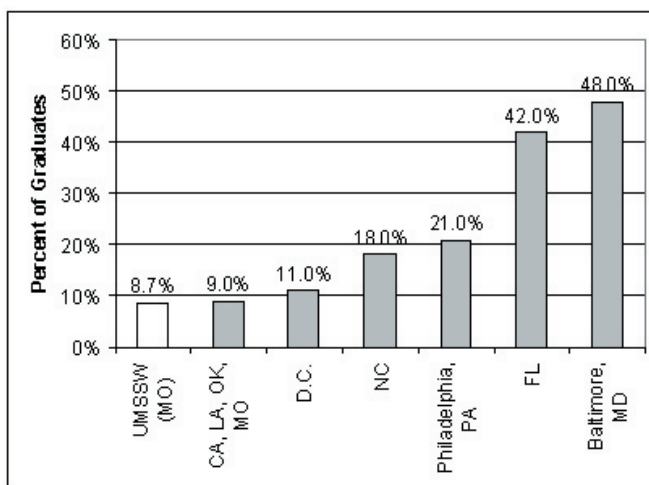


Figure 1. Graduate Recidivism Measured 12 Months After Drug Court graduation

Goal 2: Retain drug court participants in drug court

Drug court retention is defined as the portion of participants in drug court who are either still participating or have graduated during a specified time frame. The reference time frame can vary for

each reporting court or for each study. Missouri drug courts have fared less favorably in terms of retention of participants compared with other drug courts. Missouri drug courts retained 55.9 percent of participants in the program according to the UMSSW study (Sundet et al., 2001). This is lower than the average retention rate of 67.1 percent from 10 studies reporting retention data and the national retention rate of 67 percent reported by the Office of Justice Programs (OJP) Drug Court Clearinghouse and Technical Assistance Project (OJP Drug Court Clearinghouse and Technical Assistance Project, 2001). The range of retention rates among the 10 studies was 46.0 to 83.1 percent.

Although Missouri's average retention rate of 55.9 percent is lower than both the national average reported by the Drug Court Review (National Drug Court Institute, 2004) and below the average of the 10 studies used in this analysis, it is important to point out that the Missouri retention rate was current as of 2001 and for only 10 courts in the state. Consequently, these data may not provide a good indication of Missouri's overall retention rate among drug court participants.

Goal 3: To establish and maintain an acceptable graduation rate

Graduation rate is different from retention in that it only considers the portion of those who enroll in drug court and graduate versus those that are removed or drop out before graduating. Among 31 evaluations of adult drug courts reporting graduation and termination data, the range of graduation rates was 27.5 percent in the District of Columbia courts (Harrell, Cavanagh, & Roman, 2000) to 80.9 percent in the Philadelphia, PA treatment court (Goldkamp, Weiland, & Moore, 2001) with an average calculated rate of 49.6 percent. Missouri's graduation rate as reported by the UMSSW study was 50.4 percent (Sundet et al., 2001), slightly higher than the average previously mentioned and the national average of 49.8 percent as reported by the OJP Drug Court Clearinghouse and Technical Assistance Project in 2001. These findings are presented in Figure 2.



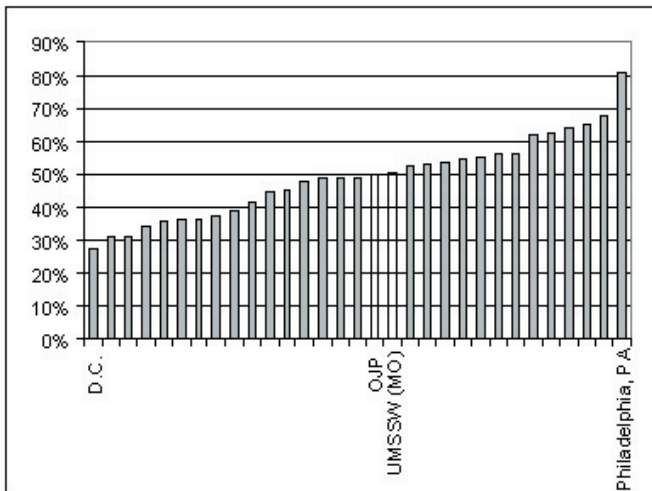


Figure 2. Graduation Rates of Adult Drug Courts

Goal 4: To provide cost-effective alternatives to traditional incarceration and probation

There are numerous ways to calculate costs, and cost reporting varied significantly among the studies. The UMSSW study reported annual costs per participant of \$5,042, but the Missouri Office of the State Courts Administrator (OSCA) indicated this cost was a high estimate based upon an unlikely scenario in which the offender received all possible treatment options and services. On the other hand, the costs do not appear unreasonable in light of the Cost-Benefit Analysis of the St. Louis City Adult Felony Drug Court, which reported the total cost of a drug court graduate at approximately \$7,793 (Loman, 2004). Because drug court graduates in the St. Louis study took 16.4 months to complete the program, the annual cost estimate would be \$5,700 per participant, which is \$658 more than the annual cost estimate reported by the UMSSW study. Either cost figure suggests Missouri drug courts cost approximately \$7,000 less per participant than incarceration, which averaged \$14,290 in FY 2005. The costs in both studies also fall below the average cost of \$6,377 reported in several comparable studies of drug courts in other states.

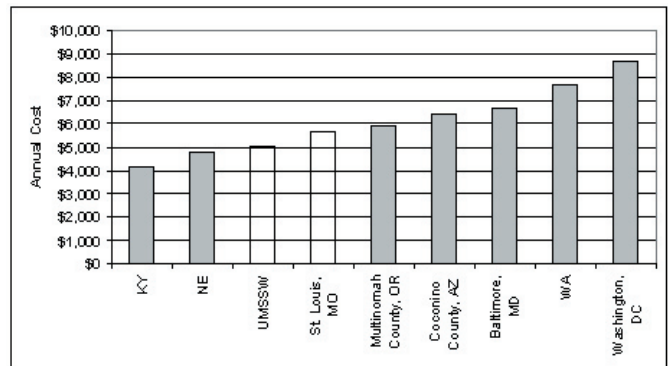


Figure 3. Annual Cost of Drug Court per Participant

Other studies compared drug court costs to probation and parole costs. In each of these studies, the initial cost of drug court exceeded the cost of probation/parole. When assessing the long-term benefits of drug court, however, the benefit of avoided costs and increased wages outweighed this extra program cost in every study, providing a strong argument in favor of drug court as an alternative. For example, the St. Louis cost-benefit analysis reported a total drug court cost, per participant, that exceeded the cost of probation by \$1,449 per year. It also reported that the benefits accrued from participation in drug court amounted to \$7,707. With this level of benefit over the cost of drug court, it is clear that the financial benefits of drug court outweigh the extra cost over probation. The avoided costs that lead to this benefit are derived from several factors. Part of the avoided costs come from lower recidivism of drug court graduates (so less law enforcement, court, parole, and jail time). Other avoided costs are due to higher education and employment levels, fewer victimization costs (including vehicle crashes and violent crimes), and greater accountability (fewer drug-exposed babies, less abuse and neglect, and more child support).

Avoided costs were calculated in varying ways by studies. Below is a compilation of the categories which were used to calculate avoided costs, although not all of them were used in every study. The table includes graduate contribution to avoided costs such as wages earned and taxes paid, figures used in some studies to offset the cost of drug court.



Table 1. Types of Avoided Costs

Avoided costs	
Criminal justice costs	
Crime victim costs	
Drug exposed infants	
Vehicle crash costs	
Recidivism costs	
	Supervision
	Jail time
	Police
Accounting costs (paid "out of pocket" by drug courts)	
Public assistance programs	
Treatment costs	
Health care costs	
TANF/ADFC and Food Stamps	
Graduate Contributions	
Taxes and FICA paid	
Wages earned	

Goal 5: Increase the personal, familial, and societal accountability of drug court participants

Performance measures under goal 5 include change in employment and education status, birth of drug-free babies, drivers' license restoration and collection of monetary penalties. There was little information, in the UMSSW study or the studies of other drug courts, that support discussion of the latter two (drivers' license restoration and collection of monetary penalties).

The average increase in the employment rate from entry to exit was 50 percent among the studies reviewed. The UMSSW study reported Missouri drug court participants increased the rate of employment by only 25.3 percent. However, Missouri drug court participants also had one of the highest pre-drug court employment rates (75%) and the highest exit employment rate (94%) (Sundet et al., 2001) of all the reviewed studies (Figure 4).

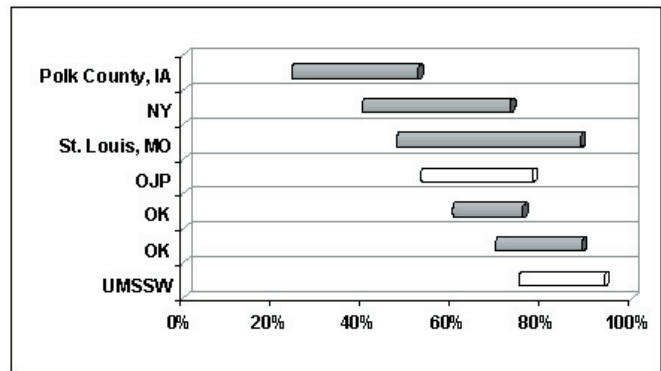


Figure 4. Adult Drug Court Entry and Exit Employment Rates

Nine studies reported data on change in education status with participants in Missouri drug courts ranked third highest. Overall, 30 percent of participants in Missouri drug courts improved their level of education. Nationally, however, the average increase in education status reported by the OJP Drug Court Clearing House and Technical Assistance project was 43 percent (OJP Drug Court Clearinghouse and Technical Assistance Project, 2001), Figure 5.

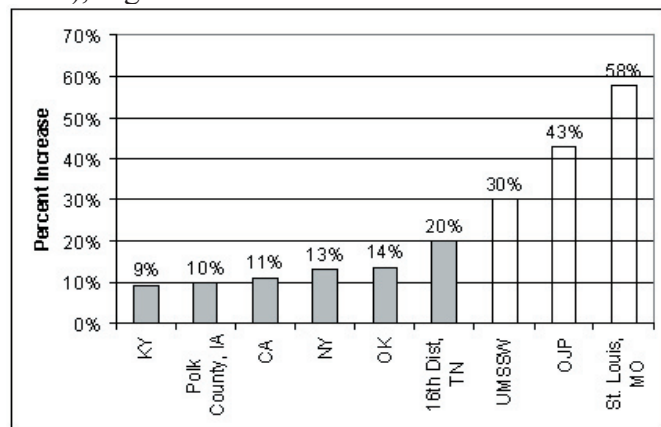


Figure 5. Adult Drug Court Percent Increase in Education Status

The UMSSW study reported 45 babies had been born drug-free to participants in the program as of 2001 (Sundet et al., 2001). The study did not, however, report how many babies had been born overall, so the significance of this number can not



be determined. Other studies also reported the number of drug-free babies born, but similar to the UMSSW study, they lacked adequate information with which to compare the number of drug-free babies to the total number of babies born. The UMSSW study pointed out that the estimated cost of a drug addicted baby, during its first year of life, was between \$240,000 and \$350,000. Therefore, an additional benefit of drug courts is the cost averted from each drug-free baby attributable to the program.

The St. Louis City cost benefit study reported an annual cost of drug-exposed babies averaged between \$41,000 and \$55,000 over the first 18 years of life (Loman, 2004). If the midpoint of \$48,000 in annual costs is applied to the 45 babies born drug free in Missouri, according to the UMSSW study, the avoided cost over the first 18 years of those babies' lives is \$38.9 million. According to the Missouri FY2006 budget request for drug courts, 193 drug free babies were born to drug court participants between FY2001 and FY2005. These babies represent an avoided cost, over the first 18 years of their lives, of \$166.8 million. Additionally, the budget request projects 50 drug-free babies will be born in FY2006, adding an additional \$43.2 million in avoided costs to this estimate. Unequivocally, this avoided cost provides strong evidence for the cost effectiveness of drug courts.

Goal 6: Provide timely processing of drug court participants

Another measure of quality is the efficiency with which drug courts are able to process new enrollees and begin treatment. The UMSSW study reported data on processing time quite differently from other studies, stating the percent of participants who waited for different periods of time to begin drug court after admission as opposed to an overall waiting period average. The largest percentage of participants (31%) waited 0 to 90 days while some waited more than 360 days (Sundet et al., 2001). Among other studies, which reported an average time for all participants, the wait time ranged from

as little as two weeks (14 days) (T. K. Logan, Williams, Leukefeld, & Minton, 2000) to 57 weeks (399 days) (Harrell, Roman, & Sack, 2001). Therefore, it is difficult to compare Missouri drug court performance on this goal with other states, but almost 70 percent of Missouri drug court participants waited more than 90 days.

Juvenile/Family Drug Courts

Juvenile courts primarily serve those participants 17 years old and under with drug related convictions. Family drug courts on the other hand, are "designed to help abused and neglected children by addressing parental substance abuse within the context of family court child-protection cases" (Harrell & Goodman 1999, 1). The DCCC identified 8 goals with 36 performance measures for family and juvenile drug courts.

There are 10 studies in the dataset reporting outcome measures for juvenile, family, juvenile/family, or adult/juvenile drug courts. Due to the fact that many of the studies combined data from different type of courts, it is difficult to isolate good comparison data for the Missouri drug court performance measures. Additionally, the UMSSW study reports on only a few of these performance measures for Missouri.

Goal 1: To reduce post-graduation recidivism/re-entry of drug court participants into the court system

The UMSSW study did not report data related specifically to the performance measures for this goal. Recidivism, also a performance measure for this goal, was not reported specifically for juvenile/family courts in the UMSSW study. Among the other juvenile/family studies reporting recidivism, however, the average rate was 30.5 percent.

Goal 2: To reduce drug and alcohol use among family and juvenile drug court participants while in the drug court program



Four juvenile studies reported the number or percentage of negative urinalysis (UA) tests. Only three of these reported percentages that could be compared. According to the UMSSW study, Missouri drug court participants tested negative 72 percent of the time (Sundet et al., 2001) compared to 24 percent of participants in Kentucky (Hiller, Narevic, & Leukefeld, 2001) and 76 percent in Maine (Anspach, Ferguson, & Phillips, 2003). The UMSSW study was the only one to report UA numbers for family courts and reported participants tested negative 65 percent of the time.

Goal 3: To retain participants in family and juvenile drug court

The UMSSW study reported that Missouri's juvenile drug courts had a 58.5 percent retention rate, which was very close to the average rate of 60.3 percent among the six studies reviewed. The Missouri family drug courts examined in the UMSSW study had a retention rate of 42.6 percent, but no other studies of family drug courts reported retention rates.

The graduation rate among Missouri's juvenile drug courts was 52.9 percent, essentially the same as the average of eight studies analyzed (52.6%). The Missouri family drug court in the UMSSW study had a graduation rate of 38 percent but there were no other family court studies with which to compare this rate (Sundet et al., 2001).

Goal 4: To provide timely processing of juvenile and family drug court cases

No data were available in the UMSSW study regarding the processing time for juvenile or family drug court cases. In fact, only one study reported data on this outcome measure (Clackamas County, Oregon) with an average time of two weeks (S. M. Carey, 2004).

Goal 5: To increase personal, familial, and societal accountability of drug court participants

Only one of the juvenile/family studies reviewed reported any change in employment status, a measure of accountability. In the Campbell County, Kentucky Juvenile Drug Courts the percent of employed participants doubled (8% to 16%) (Hiller et al., 2001). The UMSSW study did not report similar numbers but did report results from personal interviews of nine respondents. Because of the extremely small sample size and other extenuating circumstances, these were not considered representative numbers by which to judge Missouri drug courts.

Very little useful information was found in the UMSSW study or the other studies regarding the change in education level, employment status, collection of monetary obligations, or driver's license status of participants in juvenile or family courts. Therefore, there is no adequate evaluation of Missouri drug courts performance in these areas.

One study of graduate exit surveys in the St. Louis City drug court revealed that residential stability (defined only by respondent declaration of having stable residence) was much improved after completing drug court (75.2% versus 98.6%) (Wagner, 2001). However, these data were not specific to any one type of drug court and cannot be directly attributed to family courts. No other studies measured residential stability.

Goal 6: To provide cost-effective alternatives to out-of-home placement

The UMSSW study estimated the annual cost of Missouri drug courts to be \$5,042 per participant, but it was not clear if this figure applied to juvenile and family courts. No studies compared juvenile or family drug court costs to any type of "out-of-home placement," and therefore there was little that could be discussed regarding this goal. Likewise, information on drug-free babies was reported by the UMSSW study, but how many were born specifically in juvenile or family court is unclear. Only one other study of a juvenile drug court, in Campbell County, Kentucky, had data on drug-free babies and that study reported one baby had



been born drug-free to a participant in the program (Hiller et al., 2001).

Conclusion

Problems that made this analysis more difficult included different methods for reporting costs, different definitions of recidivism, a lack of data for juvenile and family drug courts and the relatively recent establishment of drug courts in the nation. In addition, courts differ considerably in the length of the time participants are required to spend in the program, the frequency of drug testing, and the types of treatment participants receive. These problems limit the studies that can be used in this analysis but do not invalidate the findings reported here.

Among the performance measures evaluated in this analysis, Missouri drug courts are either exceeding or are on par with most of the averages of the studies reviewed. A major limitation of this study was the lack of available information on juvenile and family drug courts relating to the goals and performance measures laid out for Missouri drug courts. Even in the UMSSW study, very little data were found that could be used to adequately assess Missouri drug court performance in terms of these measures. Clearly, more data would enhance analyses of Missouri drug courts and, in recognition of this need for more data, the Drug Courts Coordinating Commission significantly increased data collection efforts in January 2005 through the online Treatment Court Reporting Form (TCRF) to be utilized by all drug courts in Missouri. These data should allow for a more rigorous assessment of the performance of Missouri drug courts in the future. Further study and analysis of Missouri drug courts will be well served by data that is more current than was available for this analysis. Likewise, if the performance measures outlined in the 2004 report by the National Center for State Courts are implemented and reported consistently statewide, then evaluation of Missouri drug courts will be more accurate and helpful in determining strengths

and weaknesses in the program.

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