

Joint Legislative Audit and Review Commission



**Mitigating the Costs of
Substance Abuse in Virginia**

NLPES Fall Training Conference

September 25, 2008



Overview of Study

- Determine the impact of substance abuse on State and local budgets
- Determine cost effectiveness of treatment and potential savings State and localities could achieve from enhanced substance abuse services*
- Recommend funding initiatives to provide needed services

*Focus of discussion

Primary Research Methods

■ Cost Reduction Analysis

- Cost Reduction = Costs* during 18 months before ending treatment – Costs during 18 months after ending treatment
- Net Cost Reduction = Cost Reduction – Cost of Treatment
- Compared net cost reductions** between treatment completers and comparison groups

*Cost to State and local budgets

**For prison-based and drug court treatment programs, compared the costs during the 18 months after treatment (including treatment costs) between treatment completers and comparison groups

- ## ■ Analysis of Societal Outcomes - compared recidivism (arrest, conviction, and incarceration) and employment rates between treatment and comparison groups









Overview of Data Collection




- Gathered data on Virginians who ended substance abuse treatment in 2005
 - Health care: Medicaid claims, substance abuse treatment
 - Public safety: Arrest, juvenile incarceration, jail, prison, probation, and parole records
 - Social welfare: Monthly TANF benefits, wages
- Gathered data needed to calculate average costs. For example, we obtained
 - State & local spending by law enforcement agencies and total # of arrests in FY 2006 to determine the average cost of an arrest
 - State & local spending by local and regional jails and total # of jail days in FY 2006 to determine average cost of a day in jail

Secondary Research Methods






- Reviewed prior studies of substance abuse treatment conducted by other states and national organizations
- Interviewed correctional, probation, and substance abuse treatment staff in ten regions of Virginia
- Visited treatment programs and talked to program participants
- Surveyed correctional, probation, and substance abuse treatment staff

Incarceration-Based Treatment Completion Mostly Reduced Costs and Improved Recidivism

	Change in Net Cost	Recidivism After Treatment	Employment / Earnings After Treatment
Prison Inmates in Therapeutic Communities (TC) Treatment Completers vs. Non-Completers			n/a
Jail Inmates in TC Treatment Completers vs. Non-Completers			
Jail Inmates in Services Other Than TC Treatment Completers vs. Non-Completers			










 Better
  Mixed
  Worse




Completing Transitional TC (TTC) Did Not Reduce Costs and Other Outcomes Were Mixed

Prison Inmates Completing TTC	Net Cost After Treatment	Recidivism After Treatment	Employment / Earnings After Treatment
vs. Prison Inmates Completing TC Only			
vs. Prison Inmates Not Participating in TC or TTC			n/a










 **Better**
  **Mixed**
  **Worse**

Treatment Completion Reduced Costs and Improved Outcomes for Offenders on Probation

	Change in Net Cost	Recidivism After Treatment	Employment / Earnings After Treatment
Adults on State Probation Treatment Completers vs. Non-Completers			
Adults on Local Probation Treatment Completers vs. Non-Completers			
Juveniles on Probation Treatment Completers vs. Non-Completers			













 **Better**  **Mixed**  **Worse**




Completing Chesterfield and Richmond Adult Drug Court Programs Reduced Costs and Improved Outcomes

Adults Completing Drug Court	Net Cost After Treatment	Recidivism After Treatment	Employment / Earnings After Treatment
vs. Drug Court Non-Completers			
vs. State Probation Treatment Completers			
vs. Jail Treatment Completers			

 Better
  Mixed
  Worse

Treatment Completion Usually Reduced Costs of Non- and Former Offenders, But Other Outcomes Mixed

	Change in Net Cost	Recidivism After Treatment	Employment / Earnings After Treatment
Non-Offenders			
Adult Treatment Completers vs. Non-Completers			
Juvenile Treatment Completers vs. Non-Completers			
Former Offenders			
Adult Treatment Completers vs. Non-Completers			
Juvenile Treatment Completers vs. Non-Completers			

 Better
  Mixed
  Worse

Results of TTC Analysis Troublesome

- TC and TTC programs based on evidence-based treatment models
- DOC has evaluated both TC and TTC programs several times and found them to be effective based on recidivism measures
- Study team very impressed with TC and TTC programs after talking with DOC administrative staff, treatment staff, and program participants

Why Did TTC Completers Have Higher Costs After Treatment?

- Differences in costs imposed after ending treatment or incarceration were small

Per Person Daily Cost Imposed After Treatment, on Average

TTC Completer	TC-Only Completer	Non-Participant
\$17.35	\$16.57	\$15.00

- Differences above due to all TTC completers on probation after ending treatment, compared to a portion of TC-only completers and non-participants
- Factoring in cost of treatment resulted in large differences

Per Person Daily Cost After Treatment Including Cost of Treatment, on Average

TTC Completer	TC-Only Completer	Non-Participant
\$34.21	\$20.13	\$15.00

How to Interpret Recidivism Results?

- Some differences in recidivism outcomes between treatment and comparison groups were small
 - How big should difference be to say with certainty that a difference exists?
- Using “population” rather than “sample” data, so statistical tests not helpful

Examples of Recidivism Outcomes

■ Large difference

Recidivism After Treatment for Adults on Community-Based Probation Who Completed Treatment Compared to Non-Completers

Recidivism	Completers	Non-Completers	Difference
% Arrested	28%	43%	-15%
% Convicted	20%	29%	-9%
% Incarcerated	31%	51%	-20%

■ Small difference

Recidivism After Treatment for Juveniles on Probation Who Completed Treatment Compared to Non-Completers

Recidivism	Completers	Non-Completers	Difference
% Arrested	27%	29%	-2%
% Convicted	23%	25%	-2%
% Incarcerated	37%	41%	-4%

Results from Secondary Analyses Indicate Treatment Programs Could Be More Effective

- Most agencies not evaluating their treatment programs
- Proven practices not consistently used by treatment providers
- Insufficient continuity of care and reentry initiatives for inmates released into community
- Service gaps and insufficient capacity result in some substance abusers getting “what’s available” rather than most appropriate services
- Studies conducted by other states and national organizations consistently found treatment to reduce costs and improve societal outcomes

Consideration of Limitations to Data Analyses

- One point-in-time evaluation of treatment programs
- Short period of study (18-months before and 18-months after) so results reflect the short-term
- Treatment and comparison groups not randomly assigned nor “perfect” matches, so unobservable differences could exist
- Relied on administrative databases not designed for evaluation – had to use what was available

Recommended Two-Tiered Approach

- First, make sure existing services are effective
 - Agencies should assess their technology and data needs so that they can evaluate their treatment programs on ongoing basis
 - State substance abuse services agency should determine resources needed to help providers identify proven practices and provide incentives for providers to implement them

- Once effectiveness is maximized, then consider expanding services