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# Virginia Adult Drug Treatment Court Evaluation

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The National Center for State Courts

Statewide Advisory Board

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# Summary of Project



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To complete a two-phased cost-benefit analysis of Virginia's felony adult drug treatment courts.

- Phase 1: Establish that Virginia's Adult Drug Treatment Courts are demonstrating an impact on recidivism and achieving other program goals.
- Phase 2 (current phase): Complete a cost-benefit analysis comparing the costs and benefits for participants in drug court versus defendants who are incarcerated or sentenced to probation.

# Selection of the Comparison Group



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The drug court sample was statistically matched at the jurisdictional level with defendants in the potential pool of comparison group candidates (e.g. the Richmond drug court sample was matched with defendants from the pool of potential comparison group candidates convicted in Richmond).

Participants were matched on:

- Prior criminal history
- Instant offense
- Gender
- Age
- Race

RESULT = 972 drug court participants matched with 972 members of a comparison group

# Final Steps for Selection of Groups



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- All cases in the drug court sample and their corresponding case in the comparison group, were removed if they had not exited the program by September 2010.
- Finally, a very small number of additional cases were removed from both samples based on criminal history charges that deemed them ineligible.
- The resulting samples were:
  - Drug court group = 748
  - Comparison group = 807

# Key Questions For Report 2



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1. What program characteristics are associated with the graduation rates and recidivism rates?
2. Controlling for differences in demographics and criminal history, does drug court reduce recidivism as compared to traditional case processing and probation supervision?
3. How much does an adult drug court in Virginia cost?
4. What is the impact on the criminal justice system of sending defendants through a drug court compared to traditional court processing?

# Research Question 1



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*What program characteristics are associated with the graduation rates and in-program recidivism rates?*

# Individual Factors Examined



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- Being a high school graduate
- Being a college graduate
- Charges at entry
- Having pre-program arrests - other than the placement offense(s)
- Having pre-program convictions
- Age at entry
- Gender
- Race

# Program Factors Examined



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- Having MRT as part of your programming
- Having a written sanctioning system
- Having a law enforcement representative on your team
- Having specific periods of clean time required for graduation
- Dismissing charges as a result of graduation

\*\*Also studied the interaction between program factors and individual factors



# Predictors of Graduation



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Factor	Interpretation
Being placed into drug court on just drug offenses*	<b>The odds of graduation for drug offenders are significantly higher than the odds for technical violators:</b> Odds of graduating for a participant with a drug offense are 80 percent higher than the odds of an otherwise similar technical offender
Having pre-program arrests**	<b>Every additional pre-program arrest decreases odds of graduating:</b> Every pre-program arrest decreases the odds of graduating by 5 percent.
Having pre-program convictions**	<b>Every additional pre-program conviction increases odds of graduating:</b> Every pre-program conviction increases the odds of graduation by 7 percent
Age***	<b>Every year of age increases the odds of graduating:</b> Every year of age increases the odds of graduating by 6 percent.
Having written sanction guidelines*	<b>Being provided written sanction guidelines, <u>increases</u> the probability of graduation:</b> The odds of graduating for participants with no prior felonies from drug courts that provide them with written sanction guidelines are 335 percent higher than the odds for similar participants from drug courts that do not provide such guidelines to participants.
Interaction between having prior felony convictions and written sanction guidelines*	<b>The probability of graduation for offenders with no prior felonies increases if their court supplies them with written sanction guidelines:</b> The probability of graduation for offenders with no prior felonies increases if their court supplies them with written sanction guidelines as opposed to drug courts that do not supply guidelines to similar participants (95% vs. 82%, respectively). There is no evidence of effect effect on participants with prior felonies.

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# Predictors of In-Program Recidivism



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Factor	Odds Ratio
Having pre-program felony convictions***	<p><b>Pre-program felonies increase the odds of in-program reoffending:</b> Odds of in-program reoffending for a participant with at least one pre-program felony conviction are 271% percent higher than the odds for an otherwise similar offender with no prior felonies.</p>
Age***	<p><b>Every year of age decreases the odds of in-program reoffending:</b> Every year of age decreases the odds of in-program reoffending by 6 percent.</p>
MRT*	<p><b>The odds of in-program reoffending for participants of drug courts that employ MRT are significantly less the odds for similar participants from drug courts that do not employ MRT:</b> The odds of committing in-program offenses for participants of drug courts that employ MRT are 65 percent less than the odds for similar participants from drug courts that do not employ MRT.</p>
Charges dropped for graduates*	<p><b>The odds of in-program reoffending for participants from drug courts that drop charges for graduates are significantly higher than the odds for similar participants from drug courts that do not drop charges for graduates:</b> The odds of in-program reoffending for participants from drug courts that drop charges for graduates are 146 percent higher than the odds for similar participants from drug courts that do not drop charges for graduates</p>

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## Research Question 2



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*Controlling for differences in demographics and criminal history, does drug court reduce recidivism as compared to traditional case processing and probation supervision?*

# Analysis One: Cox Multivariate Survival Analysis: Explanatory Variables



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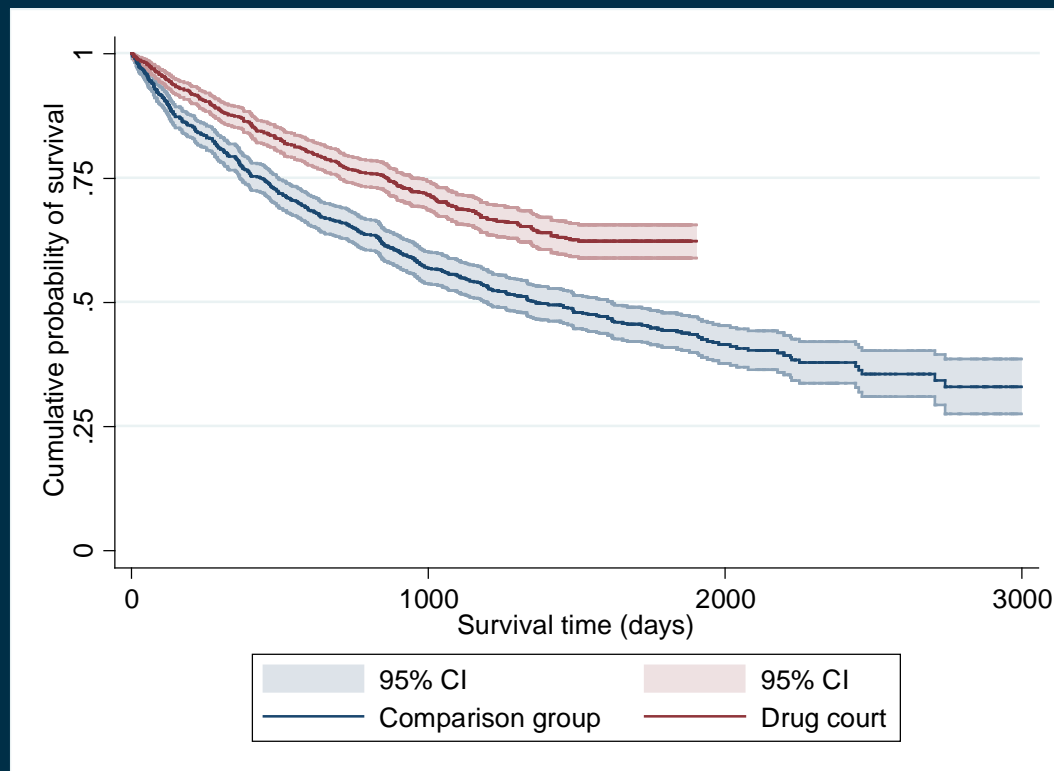
- Demographics
  - Age
  - Gender
  - Race (white v. nonwhite)
- Criminal history
  - # prior arrests
  - # prior convictions
  - Any prior felony conviction
  - Any prior drug arrest
- Referral offense
  - Technical probation violation or public order only
  - Technical violation + any other offense
  - Property + drug offense
  - Property offense only
  - Drug offense only

# Kaplan-Meier Survival Analysis



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## Cumulative Probability of Survival Without Reconviction, Drug Court Participants v. Comparison Group Defendants



n = 1,891; 830 failures. Survival times calculated beginning at date of program entry for drug court participants and at date of disposition for comparison group defendants. Failure = arrest leading to conviction.

# Analysis Two: Hierarchical Logistic regression: Predictors of Post-Program Recidivism (arrest resulting in conviction within 2 years of exit)



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Factor	Odds Ratio
Drug Court*	<b>Participation in drug court decreases the odds of recidivism by 55 percent relative to the comparison group</b>
Program-level variables (MRT, minimum clean time requirement, charges dismissed at graduation, sanctioning guidelines)	<b>No effect on recidivism</b>
Age***	<b>Every year of age decreases the odds of recidivism:</b> Every year of age decreases the odds of recidivism by 3 percent.
Gender*	<b>Females are less likely to recidivate:</b> The odds of recidivism for a female are 34 percent less than the odds for a male.
Number of pre-program convictions*	<b>Each pre-program conviction increases the odds of recidivism:</b> Odds of recidivism increase by 4 percent with every additional pre-program conviction

# Analysis Two: Predictors of Post-Program Recidivism (arrest resulting in conviction within 2 years of exit)



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Factor	Odds Ratio
Having a pre-program felony convictions***	<b>Pre-program felonies increase the odds of recidivism:</b> Odds of recidivism for a participant with at least one pre-program felony conviction are 146 percent higher than the odds for an otherwise similar offender with no prior felonies.
Referred for technical violation + another charge**	<b>The odds of recidivism for participants referred to drug court for a technical violation in combination with another offense are significantly higher than the odds for similar participants referred for technical violations only:</b> The odds of recidivism for participants referred to drug court for a technical violation in combination with another offense are 95 percent higher than the odds for similar participants referred for technical violations only
Referred for drug and property charges**	<b>The odds of recidivism for participants referred to drug court for a drug and property offenses in combination are significantly higher than the odds for similar participants referred for technical violations only:</b> The odds of recidivism for participants referred to drug court for drug and property offenses in combination are 104 percent higher than the odds for similar participants referred for technical violations only

# Analysis Three: Hierarchical Poisson Regression: Predictors of Number of Offenses within Two Years of Exit (Drug Court Participants Only)



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Factor	Incident Rate
Graduation***	Graduation from Drug Court cuts the number of offenses expected by half
Age*	Older Drug Court participants at entry are expected to commit offenses at a lower rate, approximately 98% per year of difference
Prior Felony*	Having a felony conviction prior to participation in drug court doubles the number of expected offenses within two years of exit

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## *Cost-Benefit Analysis Approach*

# TICA Model



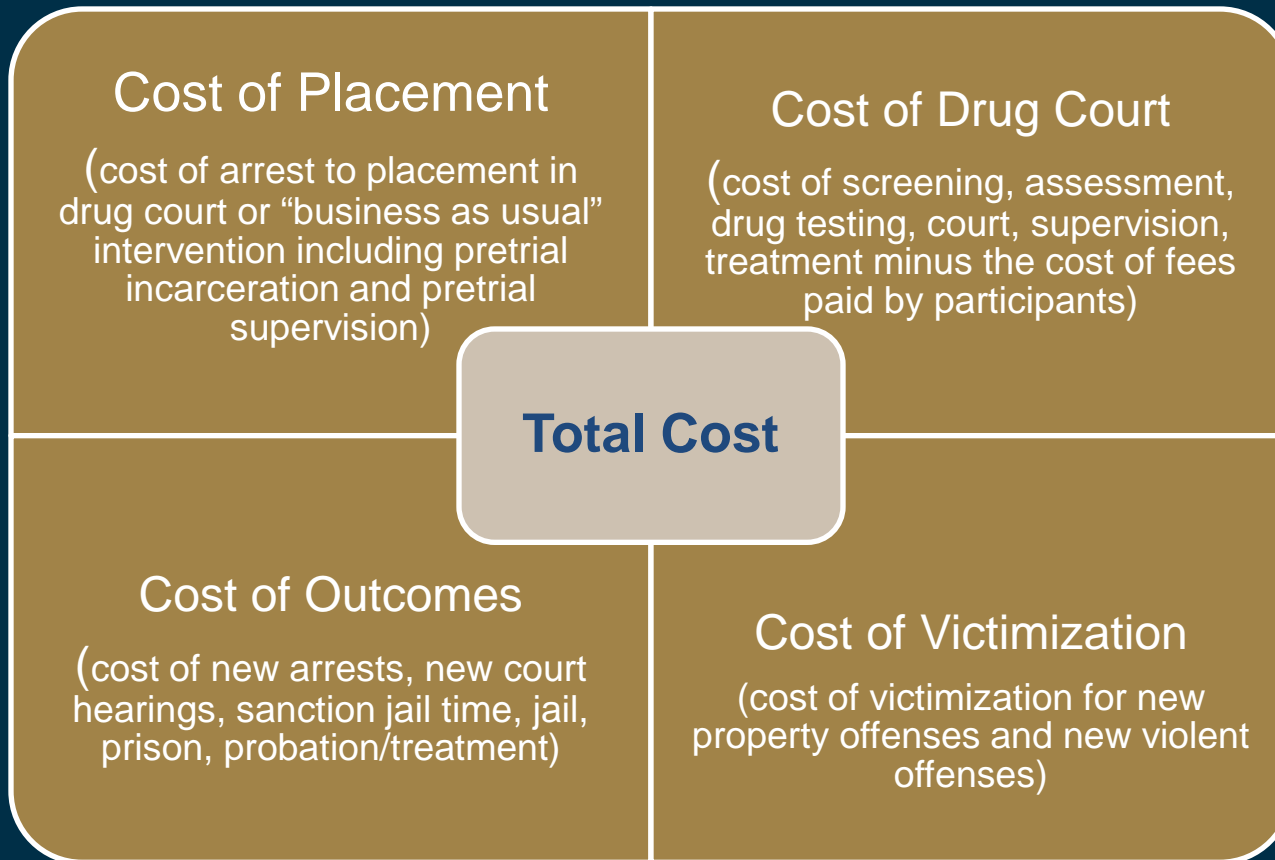
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Steps	Information Source
<b>Step 1:</b> Understand the program process and identify where all the transactions are happening.	Site visits, surveys with participants, Judges and prosecutors
<b>Step 2:</b> Identify the parties involved and measure how much time is spent on the transaction	Site visits, surveys with participants, Judges and prosecutors
<b>Step 3:</b> Identify how many times each participant completed each type of transaction	Drug Court database, state police data, LIDS data, DOC data, PTCC data
<b>Step 4:</b> Multiply the average price of the transaction by the number of transactions of that kind	Drug Court database, state police data, LIDS data, DOC data, PTCC data

# Four Domains of Cost



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## Research Question 3



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*How much does an adult drug court in Virginia cost?*

# Average Cost of a Drug Court Per Person



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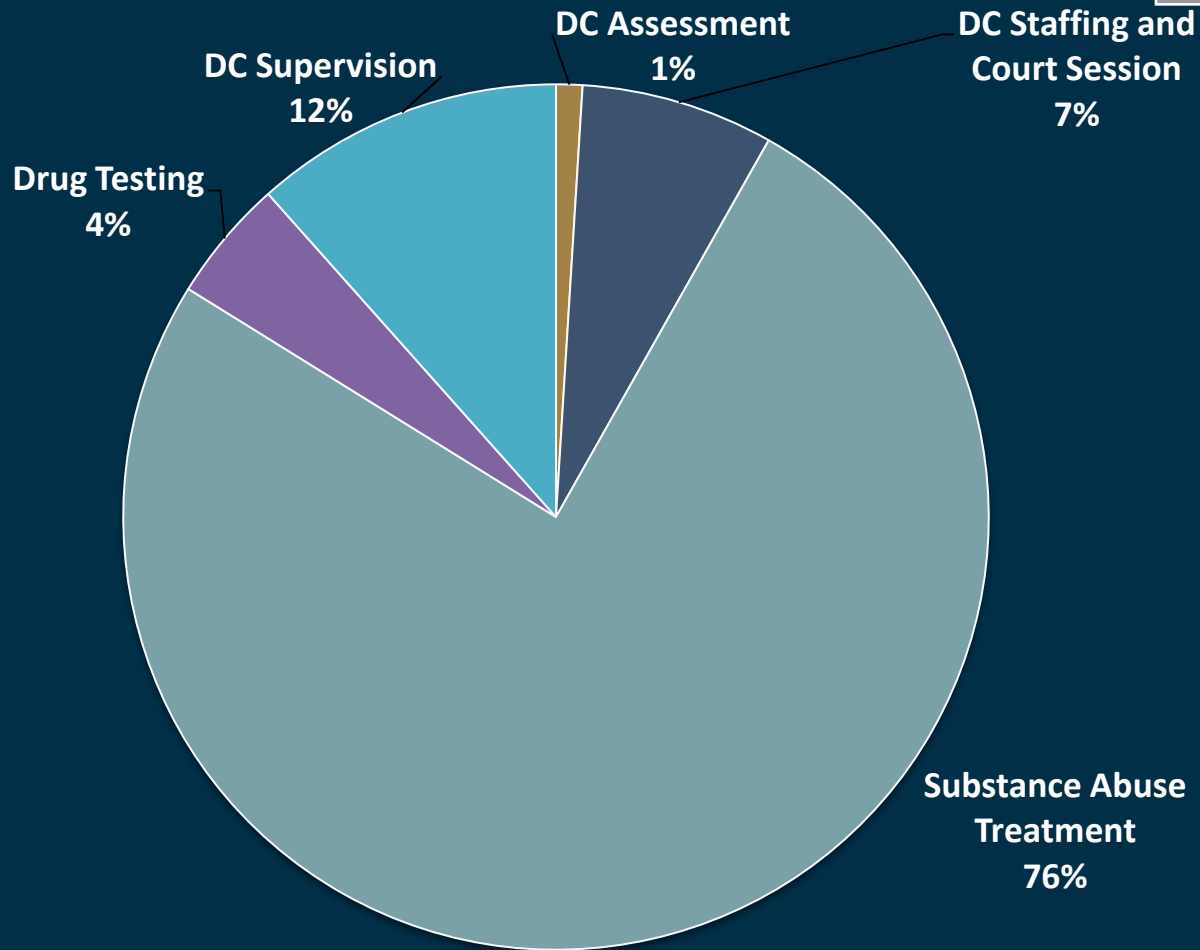
The average cost of a participant in a  
Virginia Drug Court is \$17,900.

NOTE: This is NOT a per year cost-figure – this is the total cost from assessment to graduation or termination including cost of assessment, treatment, supervision, court oversight and drug testing.

# Drug Court Costs Per Person



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## Research Question 4



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*Do drug courts save money compared to “business as usual” case processing?*



As noted earlier, we examined costs in four areas to determine cost savings

- Difference between cost of placement into DC or “Business as Usual”
- + Difference between cost of outcomes between the two groups
- + Difference between cost of victimization between the two groups
- + Cost of Drug Court
- Fees paid to be in Drug Court

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+/- cost savings for Drug court





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## Cost Calculations

	DC Group	“Business as Usual” Group	Difference
Placement	\$1,442	\$4,651	(\$3,209)
Drug Court	\$17,901		\$17,901
Outcome	\$10,914	\$36,754	(\$25,840)
Victimization	\$14,584	\$22,668	(\$8,084)
Total	\$44,840	\$64,074	(\$19,234)

# Do Drug Courts Save Money as Compared to “Business as Usual” Processing?



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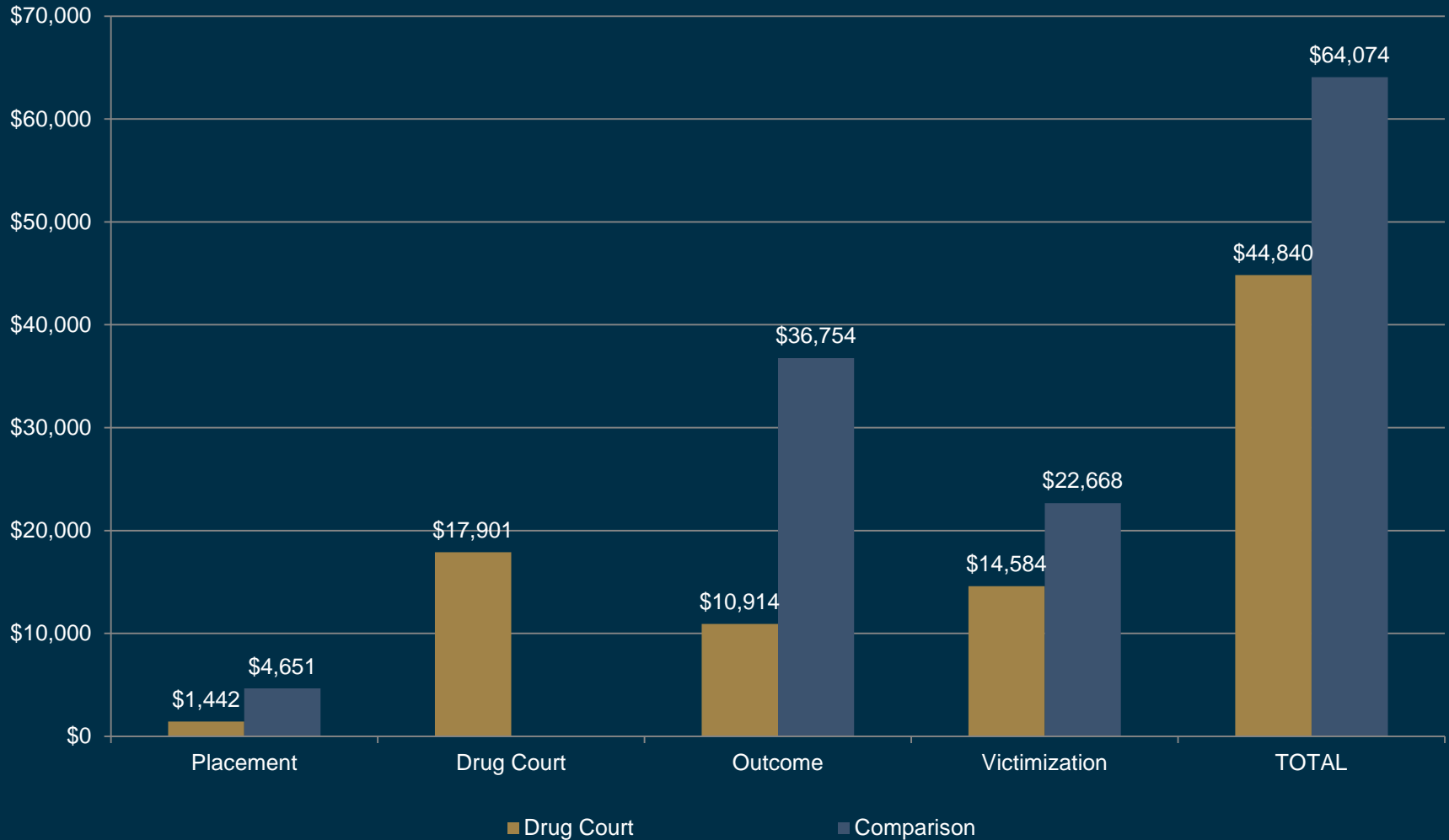
YES! Virginia’s Drug Courts save \$19,234 per person as compared to “business as usual” processing.

This equates to \$18,022,258 in savings for the 937 participants served in FY11.

# Costs Comparison for All Costs



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# Do Drug Courts Save Money as Compared to “Business as Usual” Processing?



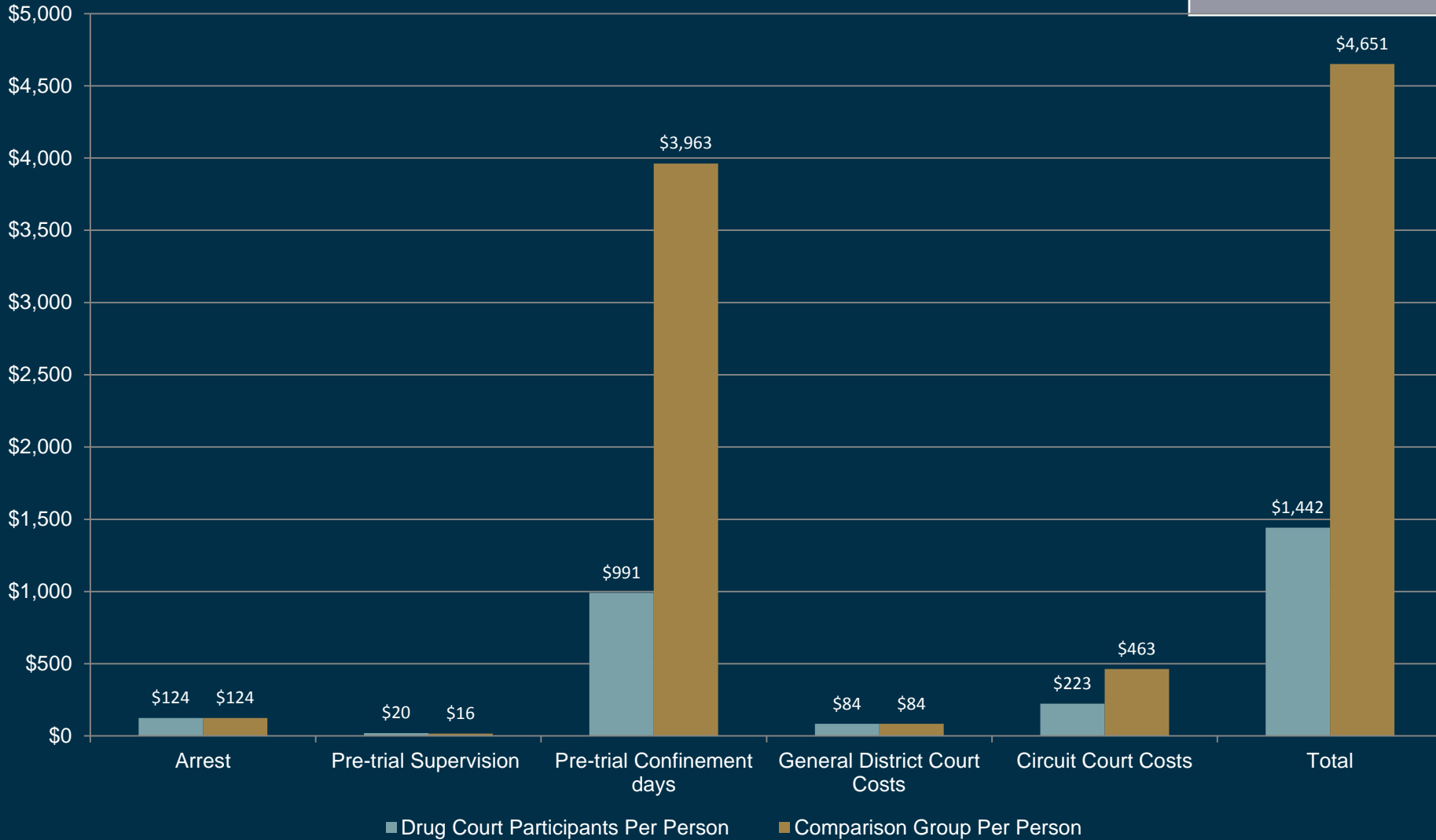
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## Placement Costs Delineated

# Placement Costs



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# Do Drug Courts Save Money as Compared to “Business as Usual” Processing?



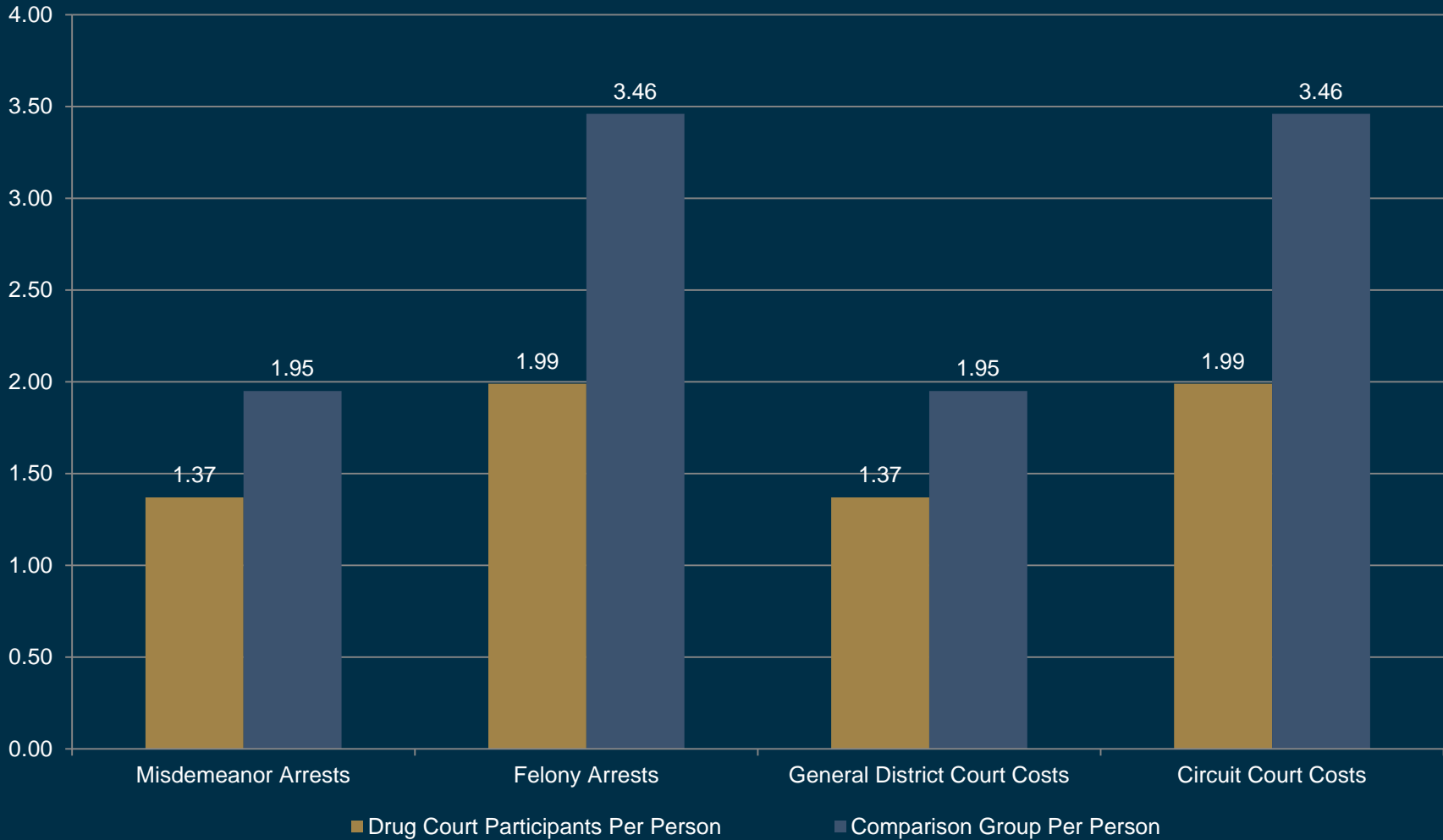
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## Outcome Costs Delineated

# Outcome Arrest & Court Rates Per Person



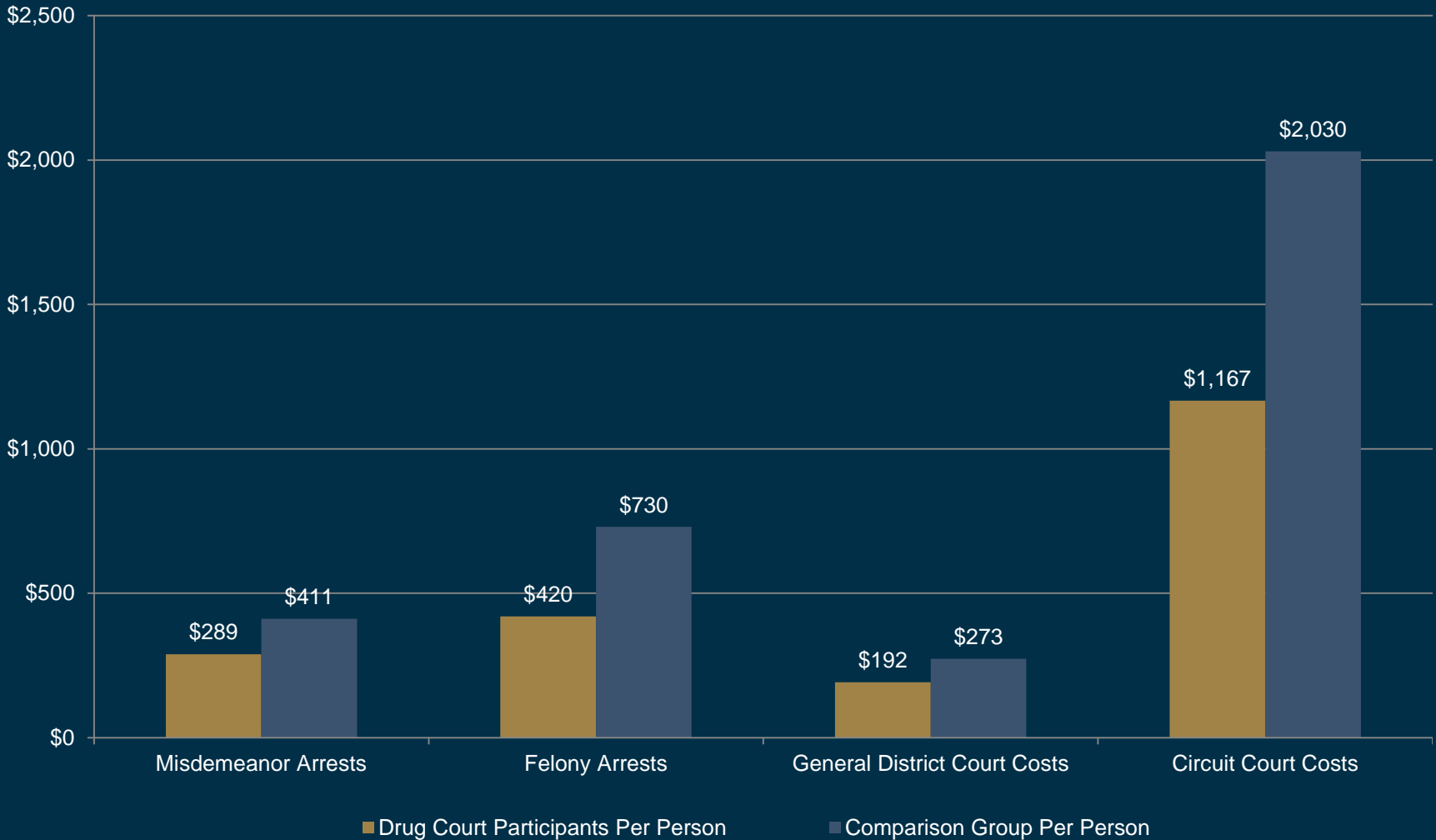
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# Outcome Arrest & Court Costs Per Person



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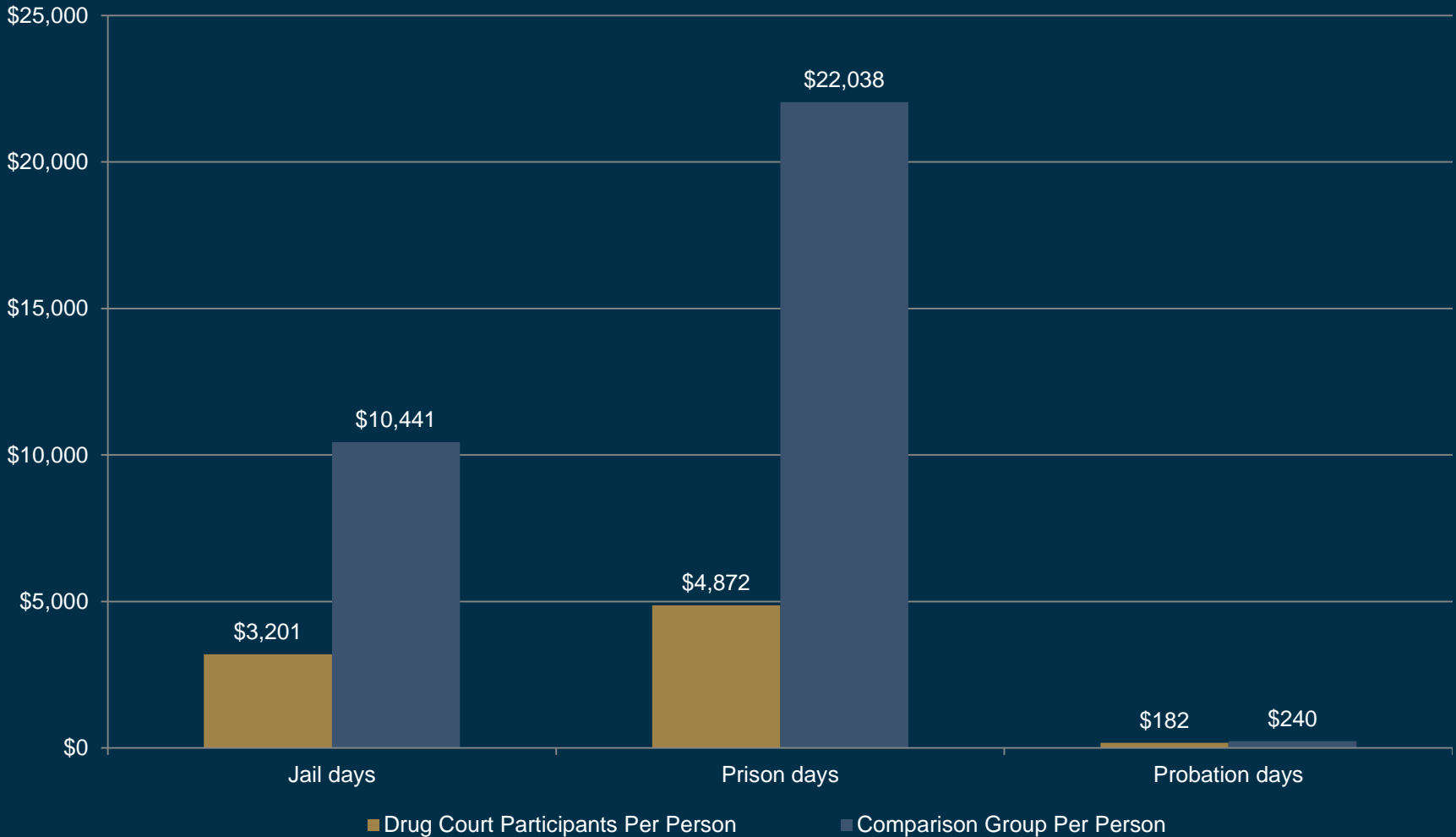




# Outcome Confinement & Supervision Costs Per Person



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# Do Drug Courts Save Money as Compared to “Business as Usual” Processing?



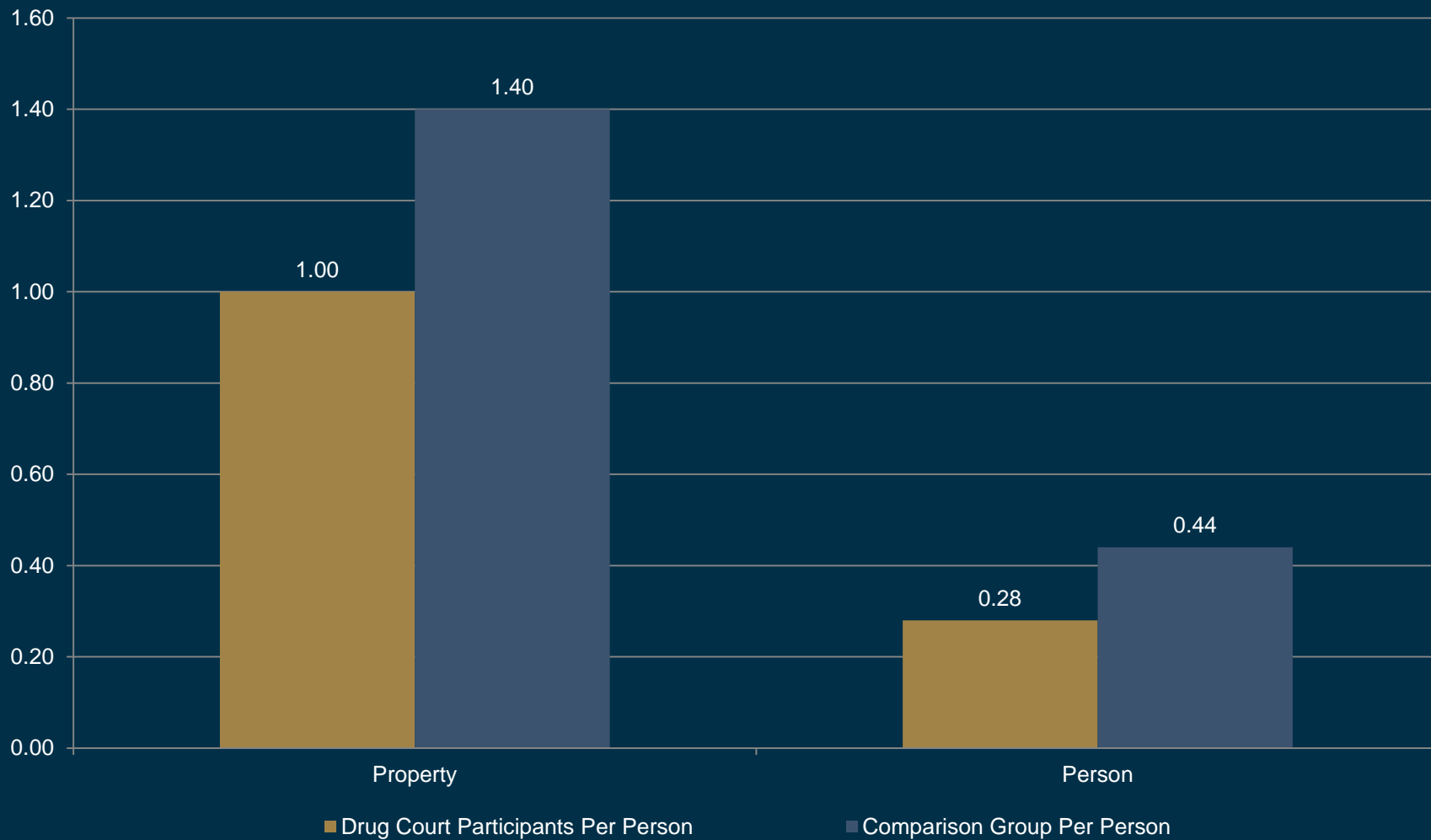
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## Victimization Costs Delineated

# Recidivism Victimization Rates Per Person



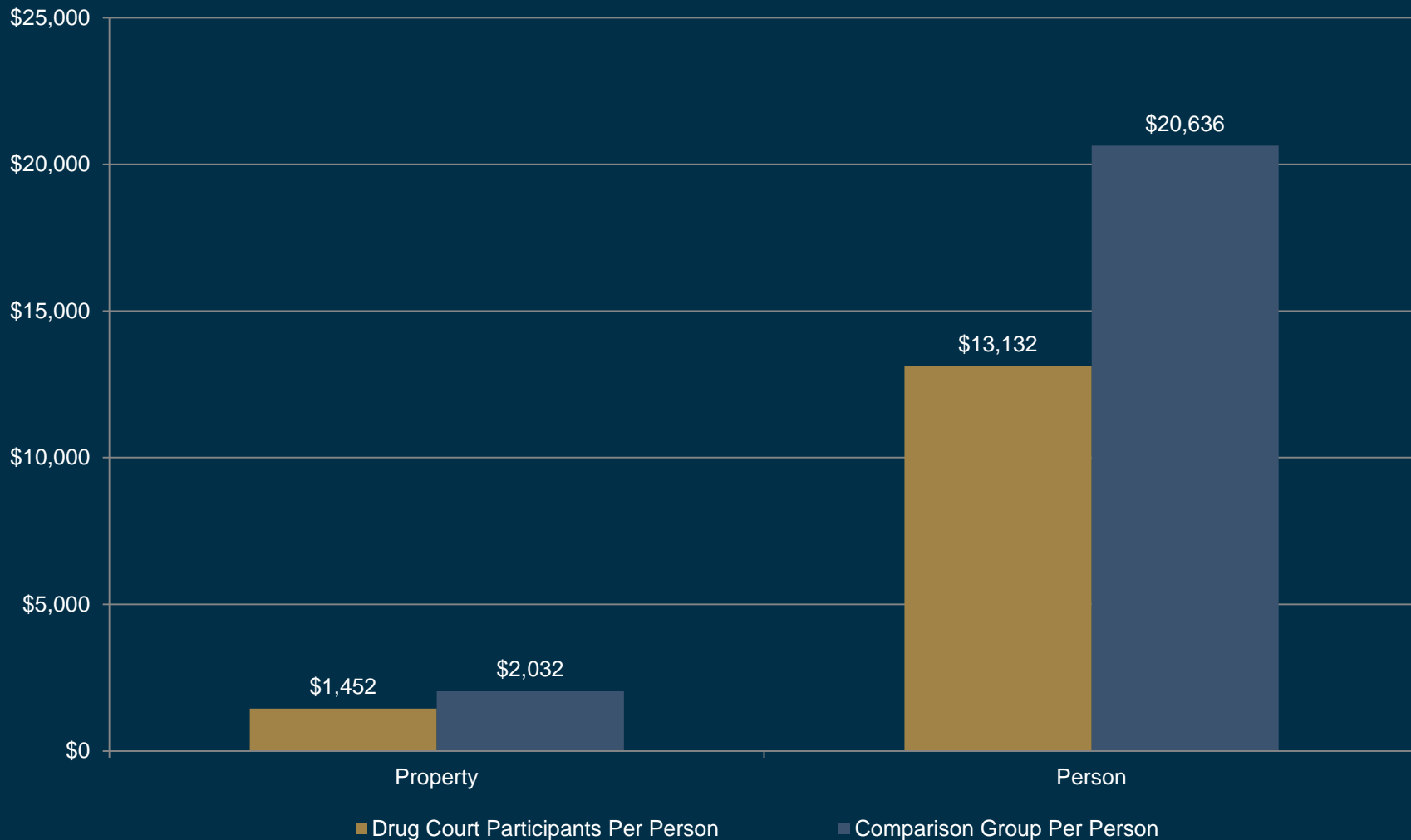
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# Recidivism Victimization Costs Per Person



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**Questions?**