

Estimating economic costs of prosecuting simple drug possession in Baltimore City

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EXECUTIVE SUMMARY

The overdose crisis continues to worsen in the U.S., and criminalization of drugs has failed to reduce drug availability, demand or use. Instead, arrest and incarceration of people who use drugs (PWUD) has been demonstrated to *increase* risks of health harms (including overdose) and further entrench racial/ethnic, socioeconomic, health, and carceral disparities. As jurisdictions across the U.S. reconsider whether to prosecute simple drug possession, data are needed to guide decision-making.

Our objective was to determine the opportunity cost of prosecuting simple drug possession (i.e. the time and resources spent on this, as opposed to spending these resources on an alternative activity) in Baltimore City. Using key informant interviews, we characterized possible outcomes of a simple drug possession arrest (**Figure 1**). We then micro-costed personnel effort and non-personnel costs of prosecuting these offenses, from a payer's (i.e., government) perspective. The analysis was conducted using interviews with key informants (N=5 current and former prosecutors and public defenders, law enforcement, and policy and litigation experts) and a secondary round of independent expert review (N=4).

Estimated cost of prosecuting a single individual for simple drug possession ranged from \$1,642 - \$9,554, depending on ultimate criminal disposition (outcome of arrest). Based on data from the last two years of routine simple drug possession prosecution in Baltimore City (2018-2019), we **estimated total number of hours of personnel effort spent on prosecuting simple drug possession to range from 85,030–234,239 in 2018 and 61,488 – 169,378 in 2019.** Accounting for personnel, laboratory drug testing, and court proceedings, **estimated costs to the government were \$4.8 – \$18.0 million in 2018 and \$3.4 - \$13.1 million in 2019.** Findings represent an **underestimate of the true costs of prosecution** due to omission of key government expenses, including costs of drug courts, diversion programs, spending on health and public assistance programs exacerbated by arrest and incarceration, and individual and societal costs of consequences like loss of employment or housing (**Box 1**).

Nonetheless, **this study points to a substantial time and resource investment on the part of the government in prosecuting nonviolent simple drug possession offenses.** This is particularly relevant amid the historic caseloads and personnel retention issues impacting prosecutors' offices in the post-pandemic era. Given extensive evidence that criminalization is an ineffective deterrent for drugs and a driver of negative health outcomes in the community, findings provide impetus for policymakers to carefully weigh the costs and perceived benefits of prosecuting simple drug possession.

BACKGROUND

The overdose crisis continues to worsen in the U.S: over 107,000 overdose deaths occurred in 2021,¹ a 15% increase from the prior year, with the steepest increases seen in racial/ethnic minorities.² Maryland has the seventh highest age-adjusted overdose fatality rate nationally, with fatalities consistently concentrated in Baltimore City.³ Effective policies to reverse these trends and address disparities are urgently needed.

The criminal prosecution of illicit drug possession has been a cornerstone of U.S. drug policy. However, data show it has been ineffective at deterring drug availability – which remains at an all-time high⁴ – and *increases* risks of overdose, infectious disease acquisition, trauma and mental health disorders, and housing, food, and financial

insecurity among people who use drugs.⁵ Notably, risk of overdose is significantly elevated after detention. Enforcement of drug criminalization has also historically been concentrated among low-income and Black communities, driving disparities in arrest and incarceration and their consequences for individuals and communities. In the interest of public health, racial equity, and efficiency in resource allocation, policymakers are considering alternatives to criminalization of simple possession.

In response, many prosecutors nationwide are shifting resources away from enforcing criminalization of drug possession.^{6,7} Prosecutorial discretion is employed regularly on a case-by-case basis depending on the balance of priorities and resources at any given time; recently, more formal non-prosecution policies have been used to make specific changes in the absence of legislative

reform. As many offices grapple with high case-loads, low morale, low clearance rates for violent crime, high staff turnover and limited resources, non-prosecution policies may allow for personnel effort to be redirected from low-level nonviolent offenses to more serious violent crimes.

This approach was adopted in Baltimore City, where 37% of the state's drug and alcohol intoxication fatalities occur.⁸ In March 2020, Baltimore City State's Attorney Marilyn Mosby announced a non-prosecution policy applied to several nonviolent low-level offenses, including drug possession, to avert the risk of COVID-19 transmission in the criminal legal system. One year later, she formalized her administration's non-prosecution policy for low-level drug offenses in Baltimore City, stating: "*We...no longer default to the status quo to criminalize mostly people of color for addiction*" and "*prosecuting low-level offenses with no public safety value is counterproductive to the limited law enforcement resources we have...I want my prosecutors working with the police and focused on violent offenses.*"⁹ An evaluation of this policy found significant reductions in both street arrests and arrests appearing in the court system for simple drug possession.¹⁰ No accompanying increase in public concern (measured by 911 calls) was observed, and fewer than 1% of individuals whose warrants or pending charges were cleared by this decision later committed crimes impacting public safety[†] in the 14 months afterwards.¹¹ After defeating Ms. Mosby in the 2022 election, State's Attorney Ivan Bates announced in January 2023 that he would rescind non-prosecution policies and resume prosecuting simple drug possession in the city.¹²

Data on the opportunity costs of prosecuting simple drug possession offenses, and the potential to reallocate resources associated under a non-prosecution scenario, are lacking. Also critical is the need for the public to understand the financial implications of the different approaches to address simple drug possession. We aimed to characterize different outcomes and estimate costs of a simple drug possession arrest in Baltimore City in 2018-2019, prior to the State's Attorney's non-prosecution policy, to inform ongoing policy decisions related to the public health and safety consequences of substance use in Baltimore City and beyond.

METHODS

Approach

To estimate costs of criminalizing simple drug possession, we first developed a simple framework of possible outcomes arising from a street-level arrest prior to the non-prosecution policy, hereinafter referred to as the "drug possession criminal procedure" (DCP; **Figure 1**). An individual arrested for simple drug possession moves through stages with numerous potential exits. To estimate overall costs of prosecuting simple drug possession, we used key informant estimates and publicly available data to estimate the proportion of people who progressed through each stage of the DCP, from booking to post-trial outcomes (e.g., incarceration), and the costs associated with each possible outcome. We conducted 5 qualitative interviews with current and former State Attorney's Office and Office of the Public Defender staff to inform estimates regarding time and resource allocation therein. We then validated these estimates by acquiring additional feedback and corroboration from four additional reviewers familiar with prosecutorial processes. All data were collected between January 2022 and July 2022. Study procedures were approved by the Johns Hopkins Bloomberg School of Public Health IRB.

Process mapping

We conducted five key informant interviews (KII) to understand: a) personnel involved and effort spent in each stage of the DCP; b) proportion of arrestees moving to each stage. Participants described the DCP starting with arrest and ending with post-conviction outcomes; interviewers clarified estimates of time spent on tasks at each stage (i.e., number of hours) to determine personnel effort, assuming a 40 hour work week. Respondents were also asked to estimate the proportion of arrestees who proceeded to the next stage (e.g., proportion whose charges were dropped, on home confinement between booking and first court appearance), basing estimates on individuals arrested only for simple drug possession. We then collated estimates across interviews to arrive at a list of personnel involved in each stage and ranges for personnel effort and proportion of arrestees moving to each stage. In cases where key informants described their estimates as "very few" individuals, we assumed percent effort of person-

[†]Robbery, murder/manslaughter, guns and other weapons, assault, sex offense, carjacking, home invasion, kidnapping, arson, drug distribution

nel to vary between 1-5%. Using historical data from the State's Attorney's Office, we compared the proportion of individuals progressing to each post-trial outcome to the proportions estimated by KII to triangulate findings. Final estimates were circulated to an additional four experts with experience in law enforcement, misdemeanor litigation and costing methods for feedback prior to memo finalization.

Costing methodology

We adopted a payer (i.e., government) perspective where costs were estimated to reflect the real cost of the resources needed to process individuals who enter the criminal legal system. We used an ingredients-based bottom-up micro-costing approach¹³ (i.e., capturing all resources needed to generate one output [i.e., prosecution of one individual for simple drug possession]) to estimate the lower and upper limit costs for each stage of the DCP. Capital costs, such as building space were not included as the premises are used for all offenses, not solely drug-related.

Costs primarily consisted of personnel effort and salaries obtained from publicly available sources. We used yearly salary ranges from the Maryland Department of Budget and Management (DBM) by worker class for the year 2022.¹⁴ In the few cases where salary information was not available from DBM, we used average salary ranges of positions at similar rank in Baltimore City from job search websites, such as Indeed and ZipRecruiter. We then divided yearly salary by 2,000 (i.e., assuming 50 weeks per year at 40 hours per week) to obtain an hourly wage, which was multiplied by effort, expressed in hours. All salaries included a 30% fringe benefit rate, based on average national estimates for public sector employees.¹⁵ Other non-personnel recurrent costs included chemical analysis of drug samples, conducted by the Forensic Laboratory of the Baltimore Police Department. This unit cost was inclusive of personnel and equipment and estimated by officials in the Forensic Laboratory. Additionally, we obtained the daily cost to feed and care for individuals who remained in pre-trial detention.¹⁶ The cost for providing meals and care for detained individuals was estimated from the annual cost of incarceration from a 2015 report on criminal legal spending in Maryland from the Justice Policy Institute and Prison Policy Initiative¹⁷ and adjusted for inflation per the Bureau of Labor Statistics. We calculated pre-trial feeding/caring costs based

on a 14-30 day average time frame between booking and first trial, as estimated by key informants. Pre-trial services encompassed feeding, caring and personnel time on advising detainees of upcoming steps in the process. **Box 1** summarizes examples of costs included and excluded from ultimate estimates.

Costing outcomes

Our outcome was estimating the per person cost of an individual progressing to each possible stage of criminal procedure. For example, nearly all participants are booked and progress to bail review, however after this step, only 33%-60% of individuals proceed to case preparation, resulting in varying unit costs. Secondary outcomes included estimating the total cost for 6,098 people arrested for drug possession in 2018 and 2019, representing time preceding the non-prosecution policy as well as COVID-19 related closures and changes to policing and the court system. Arrest data were accessed from the Baltimore Police Department's OPEN data dashboard and weighted by the upper and lower bounds of the proportion of participants progressing to the next stage.

RESULTS

Stages of criminal procedure

The DCP is shown in Figure 1 which includes estimates of the proportion of individuals advancing to different stages. Prior to 2020, estimates suggest that 95-99% of individuals were booked after arrest, with a small percentage referred to an existing pre-booking diversion program (e.g., Law Enforcement Assisted Diversion; LEAD). Additional opportunities for diversion are also displayed, including each time a case can be dismissed. While all appeared before a court commissioner, approximately 1-5% of cases were dismissed, with the remaining proceeding to pre-trial services. At the bail review hearing, approximately 70-85% were released (including on bond), approximately 10-15% were released to home confinement with the remaining held in custody. After a review of each case by the prosecutor's office, an additional 40-66% of simple possession cases were dismissed, the remaining proportion advanced to negotiations. While bench or jury trials for simple drug possession are extremely infrequent, negotiations between representatives of the individual (defense counsel) and state (prosecution) are timely and resource intensive, and when agreed upon, must still be listed and approved by a judge (e.g., withdrawal by

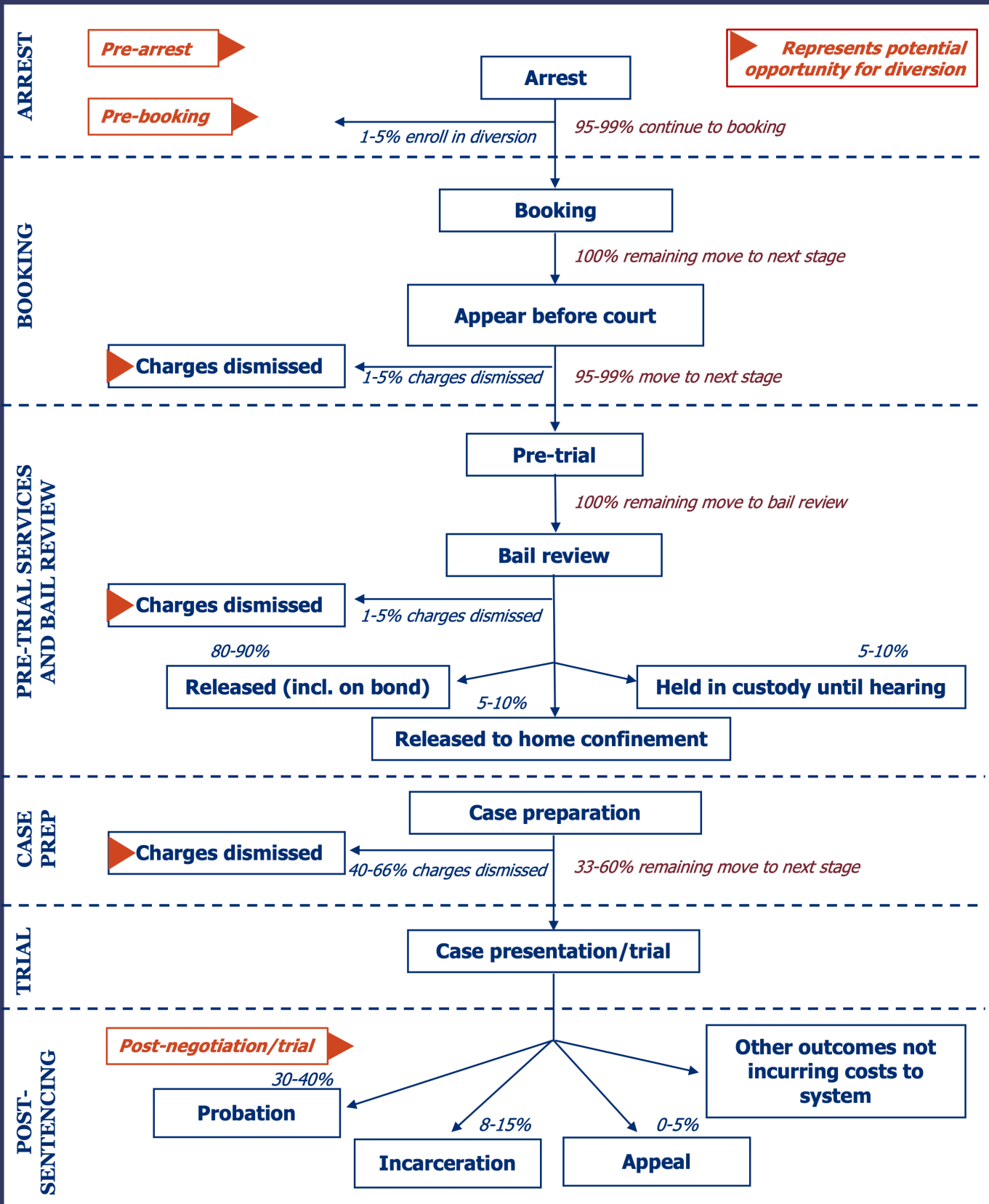


Figure 1: Illustration of simple drug possession criminal procedure (DCP) in Baltimore

prosecution), a process which can see court dates scheduled and rescheduled several times. Negotiation/trial outcomes were estimated as follows: 40% released on probation, 8-15% incarcerated, and 0-5% appealed their charges. The remaining proportion proceed to diverse outcomes that do not incur costs to the justice system, including drug treatment paid by Medicaid or private insurance and stet conviction[‡].

Personnel hours spent on activities in the drug possession criminal procedure

All stages in the cascade involved effort from multiple individuals. For example, arrest involved an officer and a wagon driver who would spend 0.5-1 hours and 1-2 hours per arrest, respectively. The stages of the cascade that required the most personnel involved booking (6.42 – 11.75 hours per offense) and case preparation (16-40 hours per offense). In total, we estimated the number of hours of personnel effort towards prosecuting simple drug possession to range from approximately 85,000 – 234,000 in 2018 and 61,500 – 169,500 in 2019.

Costs of activities in the drug possession criminal procedure[§]

Costs per individual arrested for simple drug possession were estimated at each stage of the cascade (**Table 1**). Overall, the cost per individual proceeding from arrest to case outcomes ranged from \$1,642 - \$5,596. If the individual was among the 5-15% held before trial, the cost per individual increased to \$3,489 - \$9,554.

The costliest stage involved case preparation, which ranged from \$1,117 - \$3,650. Key informants estimated between 8-20 hours of preparation per case, depending on whether they ultimately go to trial. Case preparation activities include, but are not limited to: reviewing case notes, arrest reports, and mitigating or aggravating circumstances; researching evidentiary issues; requesting and interpreting laboratory drug sample analysis; contacting, interviewing, and subpoenaing necessary witnesses; reviewing physical evidence and body camera footage and ensuring it is available for trial; preparing and responding to pre-trial motions; negotiations between prosecution and defense; and, if case progresses to trial, time spent preparing arguments, scheduling and rescheduling trial date, actual trial and post-trial case summary report preparation. Costs broadly reflecting prepa-

[‡]Postponement of criminal charges

[§]Estimates rounded to the nearest dollar value

ration time for the prosecution and public defense ranged from \$667 to \$3,200. Chemical analysis of drugs, performed in every case for which there is a drug possession charge, cost \$450. Post-sentencing, costs may be incurred to the government through probation, incarceration, or post-release parole. Each visit to a probation or parole officer costs between \$13-\$59 per individual (assuming a 30-60 minute visit) and incarceration costs approximately \$48,156 (\$38,000 in 2015, adjusted for inflation) per year per individual. Costs per individual for both outcomes depend on an individual's sentence and are therefore not included in the analysis.

Application of model to Baltimore City data from 2018-2019[§]

Estimates were applied to Baltimore City arrest data for 2018 and 2019 to estimate opportunity costs of prosecuting simple drug possession prior to COVID-19 and the State's Attorney's policy change. In 2018 and 2019, prior to enacting the "no prosecution" policy for low-level drug-related offenses, approximately 6,098 people were arrested in Baltimore City for this class of offenses (3,539 in 2018, 2,559 in 2019). This translated to an estimated 85,030 – 234,239 personnel hours spent prosecuting simple drug possession in 2018, of which 48,544 – 137,360 were spent on case preparation. As fewer simple drug possession arrests were documented in 2019, approximate personnel effort spent on these activities was lower (61,488 – 169,378 hours). Based on our estimates, prosecution of simple drug possession cost the city approximately \$4,749,596 – \$18,082,486 in 2018 and \$3,434,609 – \$13,075,223 in 2019.

Estimated investment by Baltimore City to prosecute drug possession:**

2018

85,000 - 234,200
personnel hours

\$4.8 - \$18.0 million
activities costs

2019

61,500 - 169,400
personnel hours

\$3.4 - \$13.1 million
activities costs

**Estimates rounded to nearest 100 hours and 100,000 dollars, respectively

POLICY IMPLICATIONS

This analysis is among the first in a major U.S. metropolitan center to provide a detailed micro-costing of all the resources needed to process an individual for simple drug possession, from arrest to post-sentencing. Overall, drug possession arrests incur substantial costs to the criminal legal system, ranging from approximately \$1,642 - \$9,554 per person. The most significant measured cost was attributed to case preparation, primarily due to tasks involving personnel, such as the Assistant State's Attorney and public defenders.¹⁸ Resource investment spent prosecuting drug possession specifically was reported to be greater than other misdemeanors due to laboratory drug checking requirements and subsequent report interpretation.

This work is an important contribution to the ongoing discussion about non-prosecution policies for nonviolent drug offenses in Baltimore and nationally. Previous analyses have found minimal overlap between individuals arrested for low-level drug possession and those implicated in violent crime^{11,19}, suggesting that non-prosecution policies can reduce exposure to the criminal legal system without posing a broader threat to public safety. Here we additionally provide a conservative estimate of the opportunity cost (the value or benefit given up by conducting this task, relative to conducting an alternative task) of prosecuting these crimes. Given that personnel effort and funds spent on prosecuting drug possession are still available in a non-prosecution scenario, they may be rerouted to other activities such as supporting investigation and improving clearance of violent crime. This is particularly salient as jurisdictions across the country grapple with post-pandemic backlogs and personnel retention issues leading to record caseloads in prosecutors' offices.^{20,21} Additional research characterizing costs saved or rerouted during the implementation of non-prosecution policies for drug possession is needed.

This analysis has several limitations. We relied on key informant interviews rather than direct observations, due to the pandemic, and could not obtain detailed administrative records to serve as inputs for the flow of individuals in the DCP. The study therefore assumes that ranges provided by the key informants were plausible and having more objective data would likely only marginally improve precision of the estimates. Most im-

portantly, we omitted data (detailed in **Box 1**) which result in an underestimation of the costs reported here. A nontrivial omission was that of diversion and drug courts. Available data²² and expert testimony suggested that few individuals whose top charge was a low-level drug possession charge were referred to drug courts (rather, those with more serious charges related to drug use are more frequently referred). Nonetheless, drug courts incur financial costs to the government and individual and may carry the additional health costs arising from inappropriate treatment regimens characteristic of drug courts which are disproportionately borne by people with opioid use disorder.⁵ Diversion programs may also be costly, particularly if they are enacted at later stages of the procedure (i.e., post-booking) and require case review and extensive negotiations. Estimating costs *and* effectiveness of diversion in Baltimore is an important next step given the new administration's stated intention to prosecute and divert low-level drug offenses.¹² Further, we do not estimate costs incurred to the government due to negative health consequences of detention, which remain a concern in scenarios where drug court or post-booking diversion are implemented. For example, forced withdrawal among people with opioid use disorder during detention results in extraordinarily high overdose risk, which could incur further healthcare-related costs (e.g., through emergency department utilization) or death. Lastly, we did not account for the societal and individual costs imposed on detainees and their wider communities, which can have intergenerational consequences entrenching historically marginalized populations deeper into poverty. Due to these limitations, our findings have wide ranges but still likely represent conservative estimates capturing some but not all the costs of prosecuting drug possession.

Nonetheless, this analysis is an important addition to literature guiding prosecutorial policies locally and beyond. Existing evidence demonstrates that criminal prosecution of drug possession fails to decrease substance use or supply and carries negative short- and long-term health consequences for individuals arrested and prosecuted, including increased overdose risk; this analysis adds that the opportunity cost of continuing this practice is also substantial. Given the limited financial and human resources of the criminal legal system, foregoing prosecution of drug possession may translate to a more effective public health re-

sponse to substance use and a more efficient use of prosecutorial resources. As the Baltimore City State’s Attorney’s Office undergoes a change in leadership and strategy amid high caseloads and persistent violent crime, these data may be valuable in helping to guide priority-setting.

Findings suggest that resuming prosecution of simple drug possession will have substantial time and budgetary implications, more so than for other misdemeanor crimes. Adverse health outcomes among people with substance use disorder and escalating costs of advancing through the criminal legal system could be mitigated by foregoing prosecution of simple drug possession and ensuring diversion opportunities for substance use-related offenses occur as early in the criminal procedure as possible (e.g., at the pre-booking stage).

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Stage	Cost per individual		Cumulative total
	<i>Lower limit</i>	<i>Upper limit</i>	<i>Range</i>
Arrest	\$54	\$186	\$54 -186
Booking	\$226	\$684	\$279-870
Pre-trial services and bail review hearing	\$76	\$197	\$355-1,066
Feeding/caring for people held for trial ^b	\$1,847	\$3,958	†
Case preparation	\$1,117	\$3,651	\$1,472- 4,717
Case outcome	\$170	\$879	\$1,642-5,596
Post-sentencing			
Probation/parole (per single supervisory visit)	\$13	\$59	†
Feeding and caring for inmate in Maryland (per year)	\$48,156		†

Table 1. Personnel effort and costs associated at each stage in the criminal procedure

Note: All costs in USD, rounded to nearest dollar. Time expressed in hours. Personnel costs include a 30% fringe benefit rate.

^a Personnel costs converted yearly salary to hourly rate assuming 40 hours per week X 50 weeks (2 weeks of time off)

^b Estimated by key informants at 14-30 days held

^c 5-15% of 857-970 individuals

† These costs only incurred in specific circumstances and are, therefore, not reflected in the cumulative total. These costs should be added to the cumulative total, if applicable.

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Included	Excluded
<p><u>Personnel Effort:</u></p> <ul style="list-style-type: none"> • Officers (e.g., arresting, correctional) • Medical professional at booking • Assistant State’s Attorneys • Paralegals • Pre-trial services • Court commissioner • Public defenders • Private attorneys (retained for booking) • Judge • Court clerks, bailiff, reporter, secretary <p><u>Procedures:</u></p> <ul style="list-style-type: none"> • Arrest <ul style="list-style-type: none"> • Initial stop, search and arrest • Transportation to district station and CBIF • Preparation & submission of arrest documentation • Booking & pre-trial detention <ul style="list-style-type: none"> • Meals and care • Preliminary hearing • Chemical Analysis of drug samples • Case prep <ul style="list-style-type: none"> • Reviewing case notes, arrest reports, body camera footage, physical evidence, aggravating/mitigating circumstances • Requesting and interpreting laboratory drug sample analysis • Contacting, interviewing, and subpoenaing witnesses • Determination of charges and negotiation with defense council • Scheduling for trial • Bench trial <ul style="list-style-type: none"> • Preparing arguments • Calling case • Case summary report • Post-sentencing <ul style="list-style-type: none"> • Incarceration 	<p><u>Personnel Effort (corresponding activity):</u></p> <ul style="list-style-type: none"> • Attorney Unit Chiefs (oversight of charge determination and sentencing recommendations) • Supervisorial Police Officers (review arrest reports) • BPD Evidence Control Unit Staff (filing and storage of evidence) <p><u>Procedures:</u></p> <ul style="list-style-type: none"> • Transportation of arrestee from CBIF to hospital due to medical rejection • Transportation of evidence to and from evidence control unit • Trial postponements & reappearances • Compensation for additional trial witnesses • Meals and care during post-conviction incarceration • Payer costs associated with violation of probation or parole, or reoffending (police, corrections, attorney, and court personnel) <p><u>Alternatives to incarceration (diversion, drug courts, probation):</u></p> <ul style="list-style-type: none"> • Payer (personnel time for court proceedings, urinalysis for adherence screening) <p><u>Health and social consequences:</u></p> <ul style="list-style-type: none"> • Payer (increased utilization of emergency medical services, public assistance programs) <p><u>Capital Costs:</u></p> <ul style="list-style-type: none"> • Buildings/infrastructure, utilities, maintenance

Box 1. Examples of included and excluded payer-level costs of prosecuting simple drug possession from micro-costing exercise