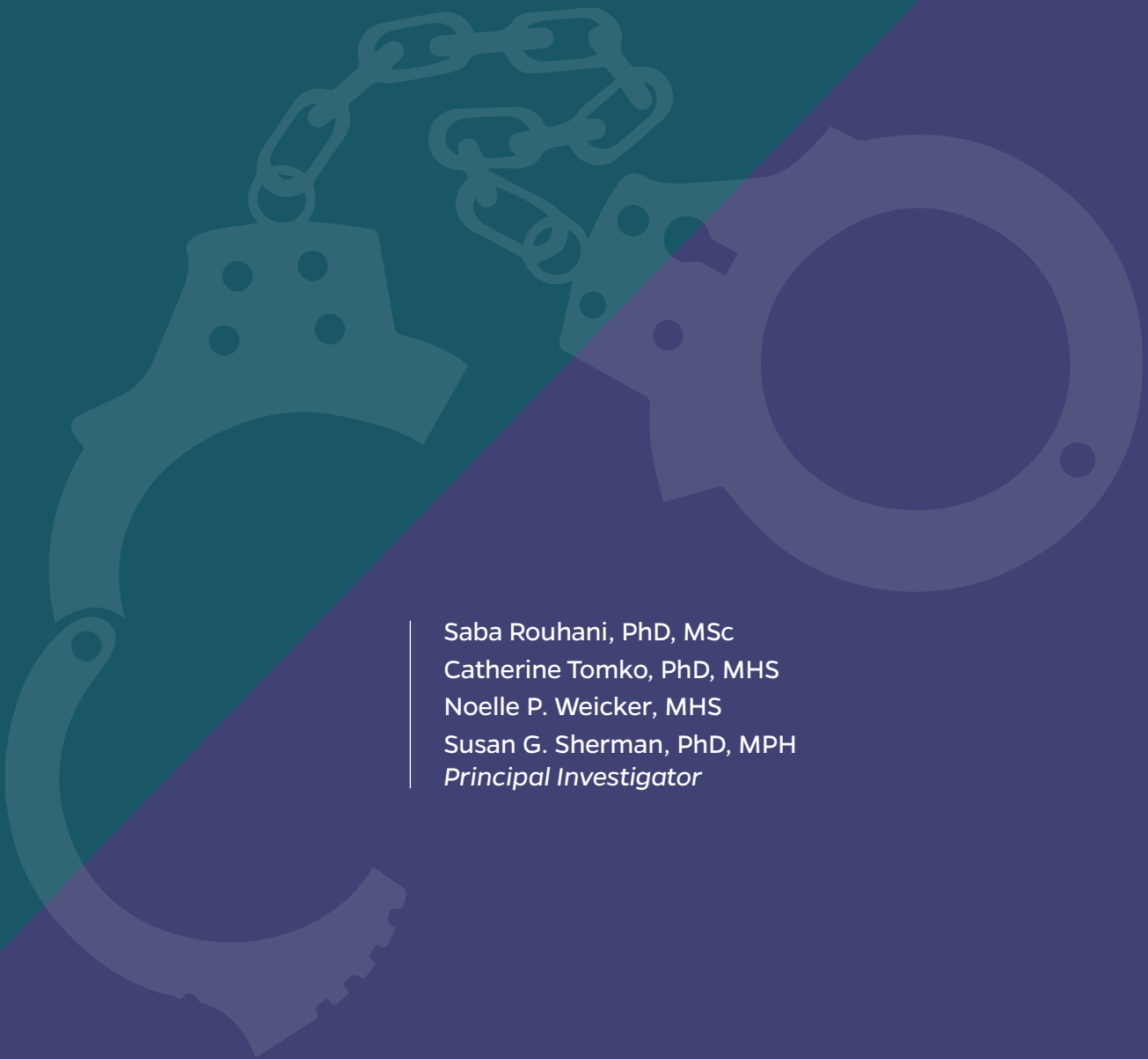
Evaluation of Prosecutorial Policy Reforms Eliminating Criminal Penalties for Drug Possession and Sex Work in Baltimore, Maryland



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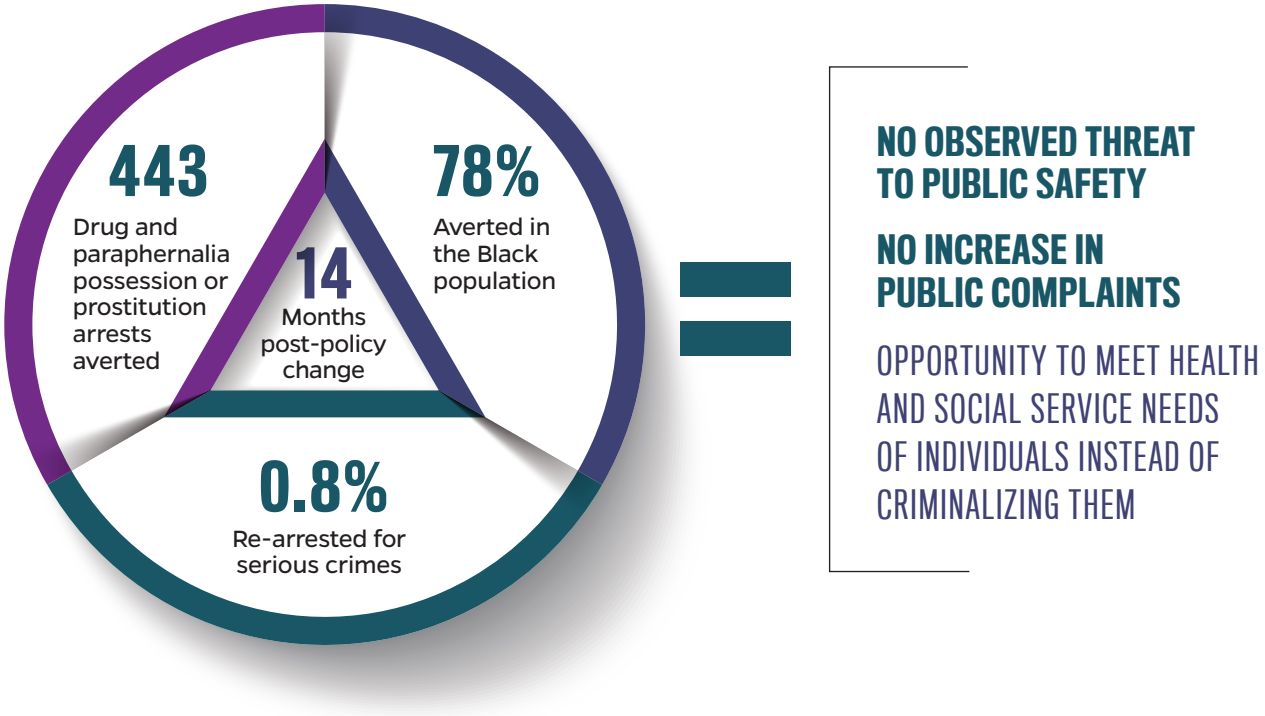
Highlights

- In March 2020, State's Attorney Marilyn Mosby announced that drug and paraphernalia possession as well as prostitution would no longer be prosecuted in Baltimore City.
- In the 14-month period following the policy change, we observed significant declines in arrests for drug and paraphernalia possession as well as prostitution, as reported by both the Baltimore Police Department and the State's Attorney's Office.
- Using Baltimore Police Department-reported arrest data, we estimated that 443 drug and paraphernalia possession arrests were averted in the 14-month period following the policy change, the majority (78%) of which were averted among Black individuals.
- Using Maryland Courts Judicial Information Systems arrest data, we found an extremely low prevalence of rearrests for serious crimes, such as robbery and assault, in the 14-month period following the policy change: 0.8 percent, or six of the 741 individuals whose drug and prostitution charges were dropped. This suggests that the vast majority of direct beneficiaries of the policy change did not go on to commit crimes threatening public safety.
- There was no evidence of an increase in public complaints pertaining to drugs or prostitution, measured by 911 calls made in Baltimore City, following the policy change.
- Though causality cannot be established, these preliminary findings suggest that declining to prosecute low level drug and prostitution offenses may avert arrests among individuals with intersecting vulnerabilities without posing a threat to public safety or resulting in increased public complaints. Ensuring that these individuals can access health and social service instead of criminal punishment is a public health priority.



I. EXECUTIVE SUMMARY

This report presents findings from an evaluation of criminal legal policy reforms impacting vulnerable populations in Baltimore City. At the request of State's Attorney Marilyn Mosby's Office, researchers from the Johns Hopkins Bloomberg School of Public Health examined the potential impacts of the decision to cease prosecutions of drug and paraphernalia possession and of prostitution. This policy was initially implemented in March 2020 as an emergency measure for infection control during COVID-19 and formalized as an indefinite policy in March 2021.

To measure the impact of this policy change, we compared three datasets in the periods preceding (January 2018-March 2020) and following (April 2020-May 2021) policy implementation, including: all arrests made in Baltimore City reported by the Baltimore Police Department (BPD) ("**BPD-reported arrests**"); arrests made in Baltimore City resulting in a court case, as reported to the State's Attorney's Office (SAO) through the Maryland Courts' Judicial Information System (JIS) ("**JIS-reported arrests**"); and complaints made by the public through the calls to 911 ("**911 Calls**"). Comparing trends in arrests and 911 calls before and after the policy change allowed us to examine:

1) *whether **BPD- or JIS-reported arrests** for drug and prostitution crimes decreased following the policy change;*

2) *whether there was evidence that individuals benefitting from the policy (i.e., whose drug and prostitution charges were dropped) went on to commit more serious offenses, measured by **JIS-reported arrests**, thereafter;*

3) *and whether public concern regarding drugs and prostitution, measured by **911 calls**, increased following the policy change.*

Results were compared with other categories of crime (i.e., robbery, assault, murder/manslaughter, weapons) to account for overall changes to street activity, policing, and prosecutorial factors during the unprecedented circumstances surrounding the COVID-19 pandemic and related closures. Sub-analyses were conducted to generate race-specific estimates where possible.

Findings illustrate significant reductions in all arrests, irrespective of data source, occurred immediately and were sustained in the post-policy period. Using BPD- and JIS-reported arrests, we estimated a range of 443-482 drug arrests and 60-71 prostitution arrests were averted in the 14 month period following the policy change. Race data were available in BPD-reported arrests, which showed greater reductions among Black individuals than among individuals of other races though racial disparities persisted in the post-policy period. We documented an extremely low rate of re-offense among 741 individuals whose drug and prostitution charges were dropped as a direct result of the policy. Only 0.8% were documented as having an arrest resulting in a court case (JIS-reported arrest) for crimes impacting public safety in the post-policy period. Finally, rather than increasing, public concern as measured by drug and prostitution-related 911 calls exhibited a significant downward trajectory in post-policy change Examination of BPD-reported arrests, JIS-reported arrests and 911 calls for other crimes suggested that these patterns could not be explained by broader secular trends alone.

Findings describe a changing landscape of arrest and prosecution among individuals engaged in substance use and sex work, groups that are well-understood to experience intersecting vulnerabilities and unmet health needs in Baltimore City and elsewhere. We observed reduced involvement with the criminal legal system among these groups, accompanied by no evidence of increases in public concern or elevated re-offense among policy beneficiaries. Given the well-documented negative health and social impacts of arrest and incarceration among vulnerable subgroups, these findings are encouraging and may provide an opportunity to adopt a public health approach to meeting the needs of this population. However, further research is needed to understand whether and how commensurate resources are being mobilized by the city to meet the health and social needs of these populations and their wider communities.

II. INTRODUCTION

The criminalization of behaviors such as drug use and sex work has consistently resulted in adverse health and social consequences in the United States. The War on Drugs, launched by President Nixon in 1971, has been characterized by harsh criminal penalties at disproportionate rates in Black and low-income communities, despite no evidence of higher levels of drug use in these populations compared to their white counterparts.[1] Over the past half century, this has fueled increased interaction with the criminal legal system for many individuals with unmet need for mental health and substance use treatment. Of the 1.5 million drug arrests made annually, over one million are

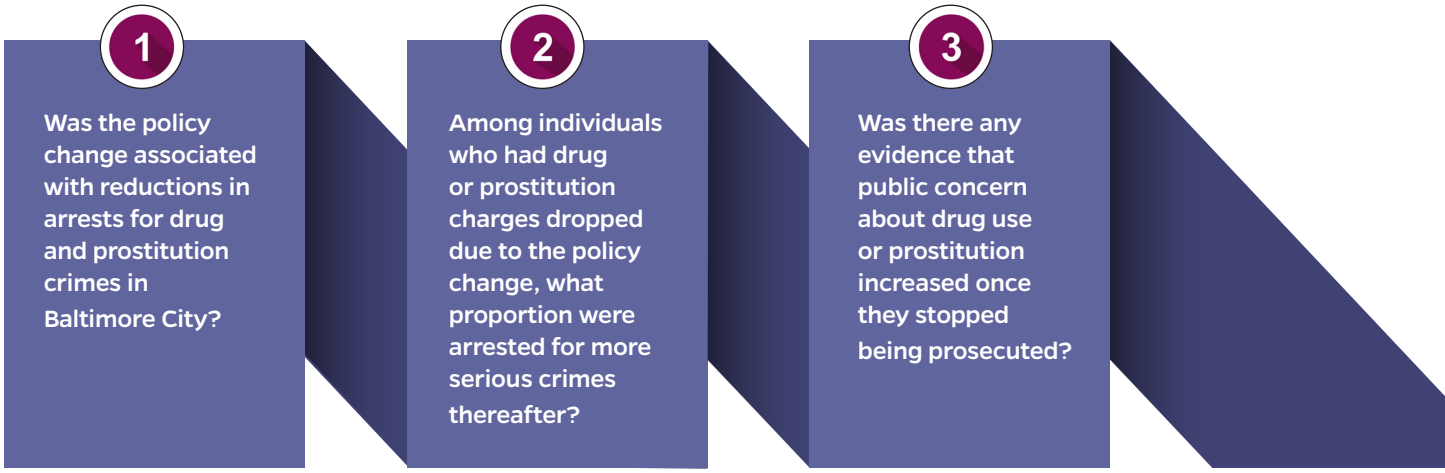
for personal drug possession alone.[2] As a result, nearly half a million people are incarcerated for non-violent drug offenses every day.[2] The cycle of arrest, booking, and possible convictions and long-term detention in jails and prisons results in interruptions to housing, employment, parenting duties, and other critical stabilizing forces in the lives of people who use drugs or are recovering from drug use.[3] Incarceration itself is associated with barriers to accessing substance use treatment, and significantly higher rates of overdose upon release.[4, 5] Similarly, the criminalization of sex work has resulted in extensive human rights violations against sex workers and undermined other public health endeavors, including HIV prevention.[6] Arrests and incarceration have not resulted in cessation of sex work [7] but instead burden sex workers with a criminal record that restricts their access to affordable housing, employment, and other basic needs.[8, 9] Routine and egregious policing of sex workers is associated with negative mental and physical health outcomes, such as increased client-perpetrated violence,[10] elevated HIV risk,[11] and reduced resilience.[12] Ultimately, this approach has amplified the social and physical risk environments of people who use drugs and/or sell sex by forcing individuals to engage with illicit and unregulated markets that increase the likelihood of adverse health and social outcomes[3, 13-20] and discourages help-seeking.[21, 22]

Given the robust domestic and international evidence demonstrating the downstream harms of criminalization, there has been increasing pressure to forego punitive criminal measures in favor of more public health centered approaches. Decriminalization of drug possession and sex work has been endorsed by public health experts and multi-lateral health and human rights organizations and has been implemented in several international settings to date.[23-25] In 2020, Oregon became the first state in the U.S. to decriminalize possession of any illicit substance through the passage of the Drug Decriminalization and Addiction Treatment Initiative.[26] Jurisdictions nationwide are also using prosecutorial discretion to enact reforms,[27] electing not to prosecute low level drug possession or sex work on behalf of the state. To date, there has been little research and evaluation conducted to understand the impacts of these policy reforms.

In response to urgent concerns regarding COVID-19 transmission among incarcerated populations, prosecutors around the country signed a joint statement in March 2020 encouraging local governments to avoid jailing individuals who do not pose a serious risk to public safety.[28] On March 18, 2020, Baltimore City State's Attorney Marilyn Mosby announced her office would decline to prosecute a suite of low level non-violent offenses, including prostitution and the possession or use of illicit drugs or paraphernalia.[29] The policy decision was endorsed by the Baltimore Police Department (BPD) as a response to the pandemic;[30] however, potential benefits of this policy reform reach beyond the interruption of COVID-19 transmission. Baltimore

City has acutely suffered the consequences of the substance use and mass incarceration crises alike, with persistently high rates of illicit drug use, HIV and other sexually transmitted infections, overdose, incarceration, and recidivism.[31] In 2018, 70% of Maryland's incarcerated population was Black, more than double the national average,[32] with arrests heavily concentrated in Baltimore City. Tensions between police and the community erupted after the death of Freddie Gray in 2015, leading to efforts to begin reforming policing practices.[33] Prosecutorial reforms in this setting may be a promising strategy to begin reversing the impacts of the War on Drugs and racialized policing in Baltimore City.

The following report details results of an evaluation of the first 14 months of Marilyn Mosby's policy of non-prosecution for the possession of drugs, drug paraphernalia, and prostitution crimes in Baltimore City. In this preliminary report, we used quantitative data from multiple sources to address the following questions:



Methods and findings are outlined below and are intended to inform policy addressing the needs of people who use drugs and sell sex in Baltimore City.

III. METHODS

Data Sources and Definitions

Criminal legal data. To explore trends in city-wide arrests before and after the policy change (Aim 1), two separate data sources were examined: BPD-reported arrests for which drug and paraphernalia possession or prostitution was the listed reason ("**BPD-reported arrests**"); and arrests resulting in a court case, as reported to the State's Attorney's Office (SAO) through the Maryland Courts' Judicial Information System (JIS) ("**JIS-reported arrests"**). Discrepancies between arrests reported by the police and the courts may be due to numerous reasons, including but not limited to reporting and entry errors, instances where the jail declines to accept an arrestee for medical reasons, and cases the individual is immediately released upon arrival at Central Booking, prior to being processed. We analyzed arrest trends using both sources to ensure that discrepancies between arrest estimates did not impact overall findings.

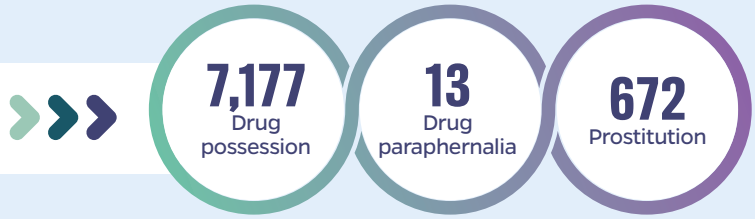
To examine rates of re-arrest among beneficiaries of the policy (Aim 2), an additional consolidated database with individual records of warrants and charges dropped due to the policy change was obtained from the SAO "**Dismissed charges"**.

Box 1 provides descriptions of these datasets in further detail.

BOX 1: TYPES OF CRIMINAL LEGAL DATA USED

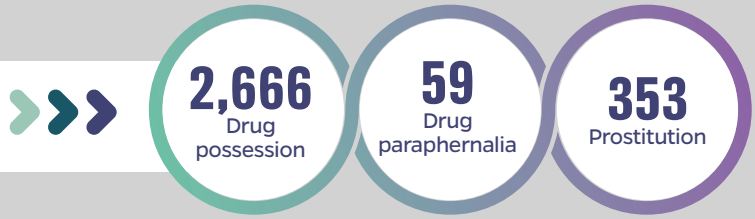
BPD-Reported Arrests: Individual-level de-identified arrest data was obtained from the publicly available Baltimore OPEN database populated by the BPD Data.* This dataset reflects all arrests reported by the BPD, regardless of whether they resulted in a court case or eventually prosecuted. Other variables included were lead charge and race designation (Black, White, Asian/Hispanic, American Indian, and Unknown).

BPD-reported arrests obtained from January 1, 2018-May 31, 2021



JIS-Reported Arrests: Individual-level de-identified arrest data was acquired directly from the SAO. This dataset was obtained by the SAO from the Maryland Courts JIS and reflects arrests that result in a court case and are therefore the most likely to end in prosecution, conviction, and/or sentencing. Other variables included were lead charge and a unique de-identified code used to track whether the same individual was arrested multiple times during the study period.

JIS-reported arrests obtained from January 1, 2018-May 31, 2021

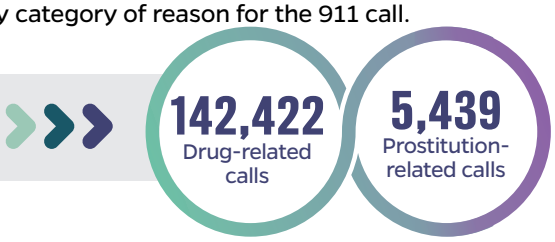


Dismissed Charges: Individual-level de-identified records of individuals whose outstanding warrants or pending charges that were dropped due to the decision not to prosecute drug and paraphernalia or prostitution charges was obtained directly from the Baltimore SAO. This dataset included lead charge for the original infraction and unique de-identified code used to track whether these individuals re-appeared in the JIS-reported arrest database after the policy change for other crimes.

Records obtained for drug/ paraphernalia possession or prostitution charges dismissed after policy change

Public complaint data. To examine trends in public complaints before and after the policy change (Aim 3), monthly 911 call data was obtained from the publicly available Baltimore OPEN database.† Data are presented as monthly counts of complaints, by category of reason for the 911 call.

Drug or prostitution related call records obtained from January 1, 2018-May 31, 2021



* Available at: https://data.baltimorecity.gov/datasets/arrests/explore
† Available at: https://data.baltimorecity.gov/search?q=911

Box 2 outlines the different lead charges and reasons for 911 calls analyzed in this report.

BOX 2: DESCRIPTION OF DATA AND SOURCES			
	BPD-Reported Arrests	**JIS-Reported Arrests**	**911 Calls (Source: OPEN)**
Primary outcomes of the analysis: directly addressed by policy change			
Possession of drugs, excl. marijuana	●	●	Collectively classified as 'Drug Mentions'
Possession of drug paraphernalia	●	●	
Prostitution	●	●	●
Other crimes: considered for comparative purposes (e.g., 'controls')			
Robbery (armed, attempted)	●	●	●
Assault (common, aggravated)	●	●	●
Murder/manslaughter	●	●	
Weapons	●	●	●

For the sake of brevity and relevance, not all crime categories were included in the present report; those included in our analyses are listed by source above. Definitions for each of the above arrest and 911 call categories can be found in Appendix A.

Analyses

Examining potential policy impacts on arrests and public complaints.

Interrupted time series models were used to compare monthly arrest and 911 call records between January 2018 - March 2020 (pre-policy change) to those from April 2020 – May 2021 (post-policy period). Additionally, models calculated the change in average number of arrests and 911 calls immediately after the policy change, i.e., the difference in level of arrests or calls between the last month pre-policy (March 2020) and the first month in the post-policy period (April 2020). A smoothing technique was used that averaged data from one month before and after each timepoint to account for daily fluctuations that do not reflect meaningful trends over time. To account for whether observed associations could be explained by broader changes to street activity and policing during the COVID-19 pandemic related closures, we compared findings for crimes directly implicated in the policy (drug and paraphernalia possession, prostitution) to patterns in arrest and public complaints for reasons unaffected by the policy (i.e., other "control" crimes) over time. Box 2 shows reasons for arrests or calls, whether they directly addressed by the policy change, and the dataset in which they appear. All models were run separately in Stata/SE v.15.1 for each reason and source of data. *P*-values below 0.05 were considered statistically significant.

We calculated the number of predicted drug possession and prostitution arrests by extending the pre-policy linear equation to the post-policy time period. We then subtracted the number of observed

arrests in the post-policy period from the predicted number of arrests to estimate the number of drug possession and prostitution arrests averted by the policy change. Arrests averted were also calculated separately for Black individuals and other races to arrive at race-specific estimates.

Enumerating re-arrests among policy beneficiaries.
Among all records that were dismissed due to COVID-19 related policy changes in March 2020, any with drug or paraphernalia mentions (N=581) or prostitution mentions (N=239) were retained for this analysis. Of the 820 unique records in the database, 79 (9.6%) were missing the unique identifier code and were therefore excluded from the analysis.

The final number of unique individuals included in the analysis was 741.

To measure the number of re-arrests for other crimes among these individuals after the policy change, we compared their unique numeric identifiers to all records of arrest resulting in court cases for crimes of interest[‡] in the post-policy period (April 2020 – May 2021). Among the 831 arrests resulting in a court case (JIS-reported arrests) occurring during this period, 4 (0.5%) were missing unique identifier codes and were excluded from the analysis.

‡ Robbery, Murder/Manslaughter, Guns, Assault, Sex Offense, Carjacking, Home Invasion, Kidnapping, Arson, Drug Distribution

IV. RESULTS

Associations between the policy change and arrests in Baltimore City (Aim 1)

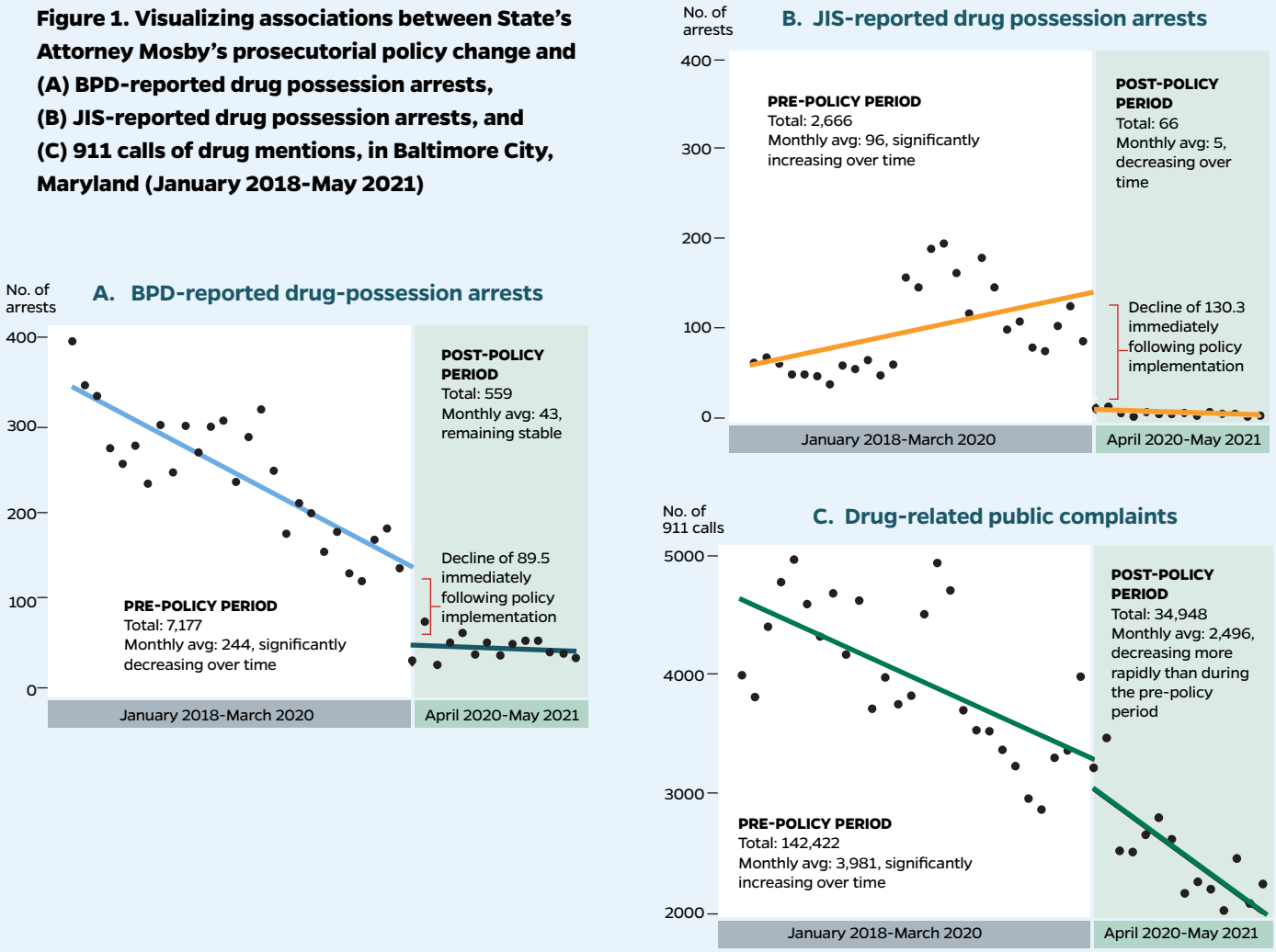
Drug possession

BPD-Reported Arrests. In the pre-policy period reported by the BPD, there were a total of 6,578 drug possession arrests, an average of 244 (standard deviation [s.d.]=73) drug possession arrests per month. During this time, average monthly arrests for drug possession were significantly decreasing by 7.70 arrests per month ($p<0.001$). Policy implementation was associated with an immediate significant reduction of 89.5 possession arrests ($p<0.001$) in April 2020. In the post-policy period, there were a total of 599 possession arrests, an average of 43 (s.d.=13) arrests per month. This remained stable over time, with no significant increase or decrease in arrests per month observed since the policy change (p=0.44). See Figure 1A.

> SIGNIFICANT REDUCTIONS WERE SEEN IN DRUG POSSESSION AND PROSTITUTION ARRESTS, BUT NOT CONTROL CRIMES, AFTER THE POLICY CHANGE

Differences in drug possession arrests pre- and post-policy were assessed between Black race and all other races. Prior to the policy change, there was a large difference in mean monthly levels of drug possession arrests between racial groups, with an average of 204 monthly possession arrests among Black individuals and 40 monthly possession arrests among individuals of other races. Arrests were significantly decreasing ($p<0.001$) at a rate of 6.6 arrests per month among Black individuals and significantly ($p<0.001$) decreasing, though at a slower rate, of 1.1 arrests among individuals of other races. For Black individuals and those of other races, arrest rates were stable in the post-policy period. However, average arrests levels remained 13 times higher for Black individuals than other races with an average of 39 arrests made per month among Black individuals for drug possession compared to only 3 per month for individuals of other races. See Figure 2.

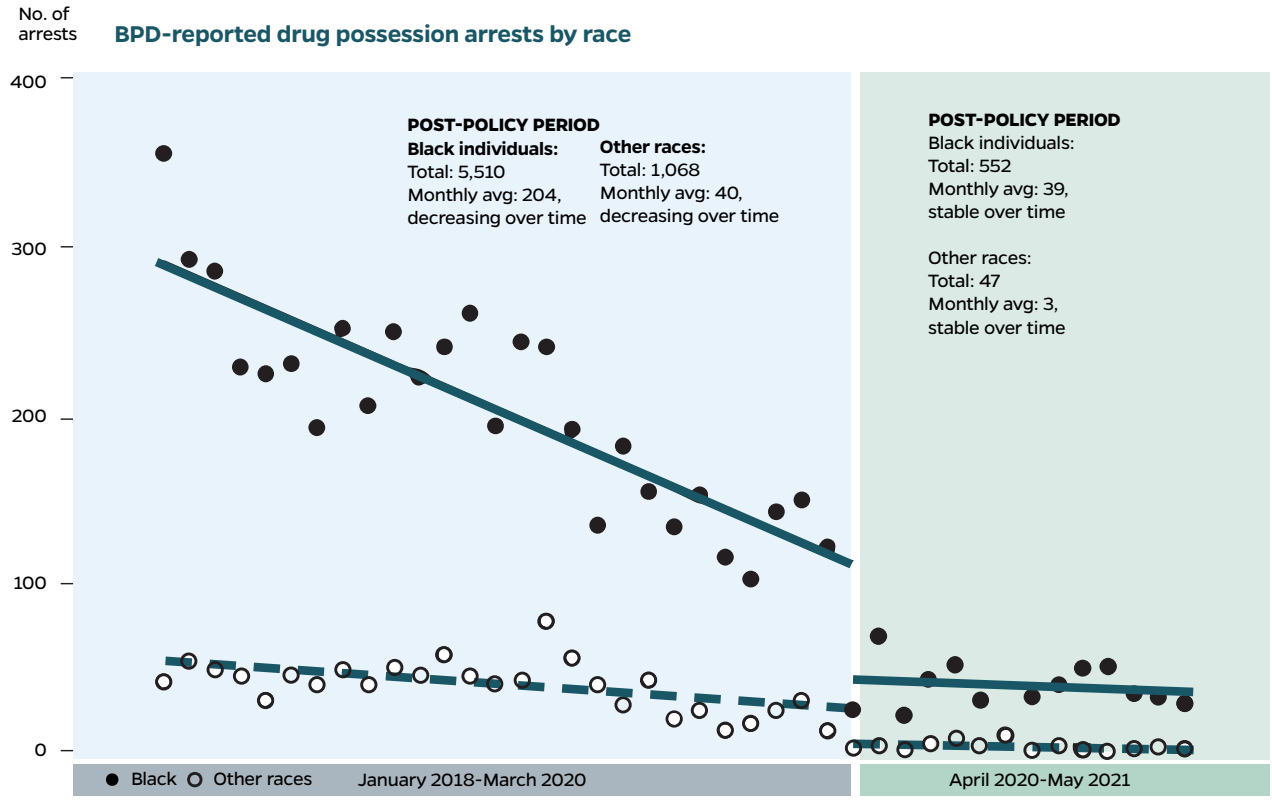
Figure 1. Visualizing associations between State's Attorney Mosby's prosecutorial policy change and (A) BPD-reported drug possession arrests, (B) JIS-reported drug possession arrests, and (C) 911 calls of drug mentions, in Baltimore City, Maryland (January 2018-May 2021)



JIS-Reported Arrests. In the pre-policy period, there were a total of 2,000 drug possession arrests resulting in a court case, an average of 96 (s.d.=49) per month. Unlike in the case of BPD-reported arrests, there was a significant *increase* of 3.0 drug possession arrests resulting in a court case per month during this time (p=0.004). Policy implementation was associated with an immediate and significant reduction of 130.3 possession arrests (p<0.001). There was a total of 66 arrests recorded in the post-policy period, an average of 5 (s.d.=3) per month. Monthly possession arrests have continued to decline by an average of 0.5 per month in the months since the policy was implemented. See Figure 1B.

THE MAJORITY OF REDUCTIONS IN DRUG-RELATED ARRESTS WERE IN THE BLACK POPULATION

Figure 2. Visualizing racial differences in BPD-reported data pertaining to drug and paraphernalia possession before and after prosecutorial policy change, comparing Black individuals to all of other races in Baltimore City, Maryland (January 2018-May 2021)



Drug paraphernalia

BPD-Reported Arrests. All 13 drug paraphernalia arrests occurred in the pre-policy period (mean=0.5 per month, s.d.=0.6). No arrests for possession or use of drug paraphernalia have been recorded since the policy was implemented.

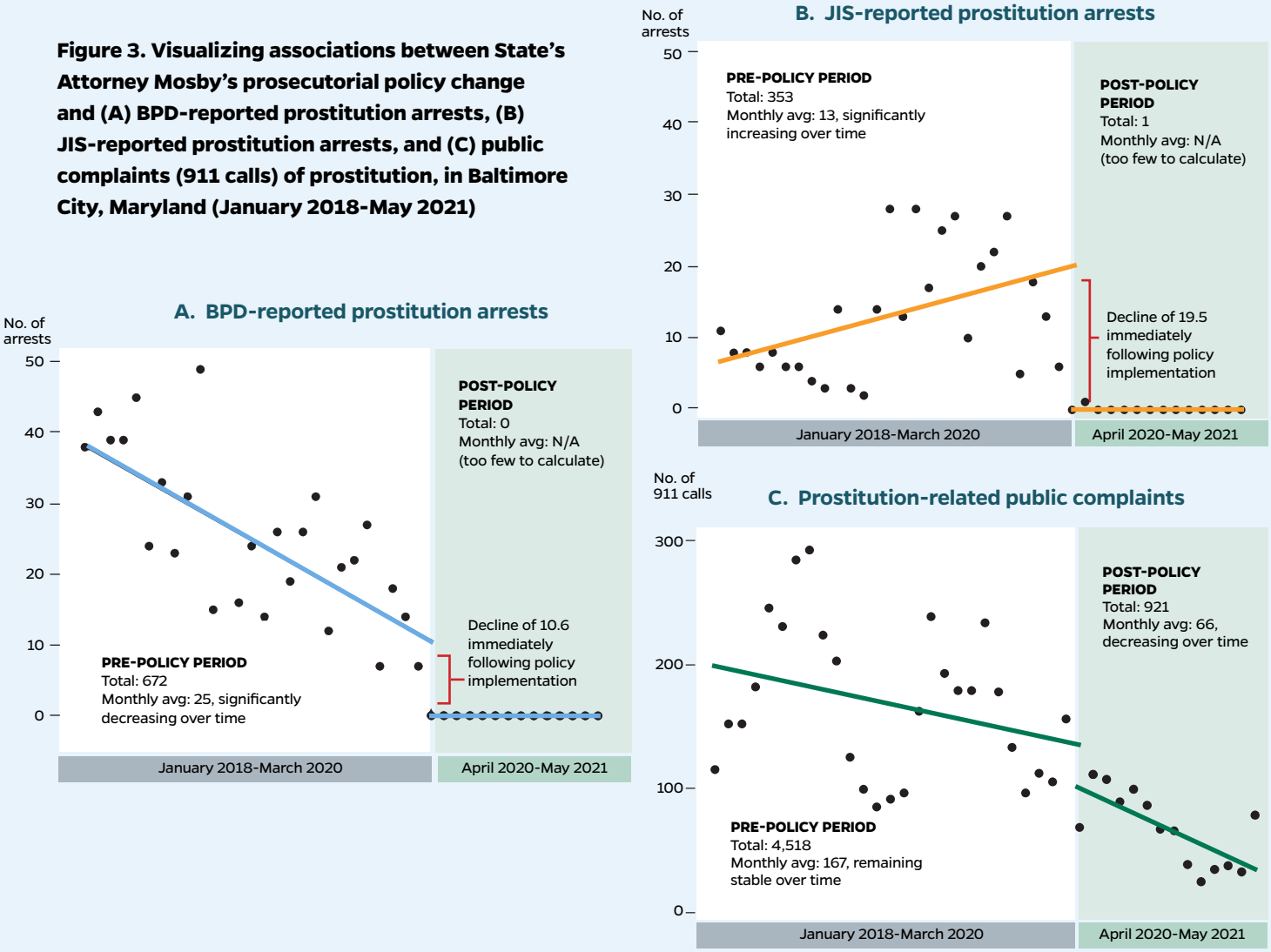
JIS-Reported Arrests. All 59 drug paraphernalia arrests resulting in a court case occurred in the pre-policy period (mean=2 per month; s.d.=3). None were recorded since the policy was implemented.

Prostitution

BPD-Reported Arrests. All 672 prostitution arrests occurred in the pre-policy period (mean= 25 per month; s.d.=12). These were significantly decreasing by an average of 1.0 arrest per month ($p<0.001$) prior to the policy change, and showed a further, significant decrease of 10.6 immediately after policy implementation ($p<0.001$). After the policy change occurred, there were no prostitution arrests reported. See Figure 3A.

JIS-Reported Arrests. In the pre-policy period, there were a total of 352 prostitution arrests resulting in a court case (mean=13 per month; s.d.=9). Prior to the policy change, there was a small but significant increase of 0.5 such prostitution arrests per month ($p=0.02$). In the month immediately following policy change, there was a significant average decrease of 19.5 prostitution arrests ($p<0.001$); post-policy change, only 1 arrest resulting in a court case was reported. See Figure 3B.

Figure 3. Visualizing associations between State's Attorney Mosby's prosecutorial policy change and (A) BPD-reported prostitution arrests, (B) JIS-reported prostitution arrests, and (C) public complaints (911 calls) of prostitution, in Baltimore City, Maryland (January 2018-May 2021)



Other (control) crimes

Results of the times series models estimating pre- and post-policy differences in arrests for drug and paraphernalia possession and prostitution are reported in Tables 2 and described below.

BPD-Reported Arrests. In the pre-policy period, arrests for robberies, murder/manslaughter, or first-degree assault remained stable over time, and arrests for gun and other weapons related crimes were decreasing over time by an average of 1.0 weapons arrest per month (p=0.01). After policy implementation, the average number of monthly arrests remained stable for robberies, murder/manslaughter, and guns and other weapons. Overall arrests for assaults showed a mean increase of 1.9 arrests per month (p=0.01).

JIS-Reported Arrests. In the pre-policy period, arrests for robberies, murder/manslaughter, and first-degree assault were also stable over time, while gun arrests were slightly decreasing (p<0.001). After the policy change, we did not observe any significant changes in arrests resulting in court cases for robbery, murder/manslaughter, first-degree assault, or weapons.

Results of the times series models estimating pre- and post-policy differences in arrests for drug and paraphernalia possession and prostitution are reported in Table 1 and described below.

Table 1. Associations between State's Attorney Mosby's prosecutorial policy change and BPD-reported arrests, JIS-reported arrests, and public complaints (911 calls) regarding drug possession, drug paraphernalia, and prostitution in Baltimore City, Maryland between January 2018-May 2021

	Pre-policy (Jan 2018 – March 2020)		Immediately following policy implementation (March – April 2020)		Post-policy (April 2020 – May 2021)	
	Estimate (95% CI)	p	Estimate (95% CI)	p	Estimate (95% CI)	p
DRUG POSSESSION						
BPD-reported arrests	-7.70 (-9.81, -5.60)	<0.001	-89.54 (-122.42, -56.67)	<0.001	-0.53 (-1.91, 0.85)	0.44
JIS-reported arrests	2.99 (1.02, 4.96)	0.004	-130.32 (-172.50, -88.15)	<0.001	-0.48 (-0.87, -0.09)	0.02
Public complaints	-49.62 (-80.02, -19.22)	0.002	-265.41 (-851.83, 321.02)	0.37	-80.64 (-120.88,-40.40)	<0.001
DRUG PARAPHERNALIA						
BPD-reported arrests	-0.02 (-0.05, 0.01)	0.25	-0.24 (-0.57, 0.09)	0.15	n/a	n/a
JIS-reported arrests	0.10 (-0.03, 0.23)	0.12	-3.62 (-6.43, -0.82)	0.01	n/a	n/a
PROSTITUTION						
BPD-reported arrests	-1.02 (-1.33, -0.72)	<0.001	-10.55 (-15.24, -5.85)	<0.001	n/a	n/a
JIS-reported arrests	0.48 (0.10, 0.86)	0.02	-19.52 (-26.99, -12.05)	<0.001	n/a	n/a
Public complaints	-2.20 (-5.54, 1.15)	0.19	-38.31 (-89.71, 13.09)	0.14	-5.00 (-8.53, -1.47)	0.01

Note: Estimates in the pre- and post-policy periods refer to the change in average number of monthly arrests in those periods (i.e., there was an average decrease of 7.7 drug possession arrests per month in the pre-policy period). Estimates in period immediately following the policy change refer to changes in level of arrest between March 2020 and April 2020 (i.e., there was a decrease of 89.5 drug possession arrests between March and April 2020 following policy implementation)

Predicting Arrests Averted

BPD-Reported Arrests. We calculated the estimated number of all drug possession and prostitution arrests averted by calculating the difference between predicted and observed arrests since the policy change (See Table 3). Based on prior data, there would have been an estimated 1,042 drug possession arrests in this time, compared to the observed number of 599 possession arrests, resulting in an estimated 443 narcotics arrests averted by the policy change. Among only Black individuals, it is estimated that 345 possession arrests were averted; among individuals of all other races, an estimated 98 possession arrests were averted.

Based on prior data, there would have been an estimated 60 prostitution arrestssince the policy change occurred; 25 of these were estimated to be among Black individuals. There were no prostitution arrests reported in after the policy change, therefore the same values represent the estimated arrests averted.

JIS-Reported Arrests. We calculated the estimated number of drug possession and prostitution arrests averted as above. Based on prior data, there would have been an estimated 548 drug possession arrests if pre-policy trends continued, compared to the observed 66 possession arrests. This results in an estimated 482 drug possession arrests averted since the policy change.

Based on pre-policy trends, there would have been an estimated 72 prostitution arrests compared to the 1 observed arrest, resulting in an estimated 71 averted prostitution arrests.

Together, these findings demonstrate that while overall arrests reported by BPD were already declining in the pre-policy period, there were significant declines that occurred immediately after the policy was instituted and low levels of arrests have been sustained in the post-policy change. Declines prior to the pre-policy period were concentrated in the Black population, though racial disparities in BPD-reported arrest rates persisted in the post-policy period. In contrast, drug and prostitution arrests resulting in court cases were increasing prior to March 2020, and this trend was sharply reversed after the policy was implemented. These reductions could not be explained by broader trends in policing that would have affected other crimes.

Table 2. Associations between State's Attorney Mosby's prosecutorial policy change and BPD-reported arrests, JIS-reported arrests, and 911 calls regarding other ("control") crimes in Baltimore City, Maryland between January 2018-May 2021

	Pre-policy (Jan. 2018 – Mar. 2020)		Post-policy (Apr. 2020 – May 2021)	
	Estimate (95% CI)	p	Estimate (95% CI)	p
ROBBERY				
BPD-reported arrests	-0.24 (-0.75, 0.27)	0.35	-0.23 (-1.12, 0.66)	0.61
JIS-reported arrests	-0.28 (-0.62, 0.05)	0.09	-0.23 (-0.80, 0.35)	0.43
Public complaints	-1.25 (-6.01, 3.52)	0.60	-1.29 (-6.52, 3.95)	0.62
MURDER/MANSLAUGHTER				
BPD-reported arrests	-0.16 (-0.34, 0.03)	0.09	0.41 (-0.38, 1.21)	0.30
JIS-reported arrests	-0.10 (-0.40, 0.20)	0.49	-0.19 (-1.18, 0.79)	0.69
Public complaints	N/A	N/A	N/A	N/A
ASSAULT				
BPD-reported arrests [a]	0.20 (-0.25, 0.65)	0.37	1.92 (0.59, 3.25)	0.01
JIS-reported arrests	-0.42 (-0.60, -0.24)	<0.001	-0.11 (-1.25, 1.03)	0.84
PUBLIC COMPLAINTS				
Assault (common)	-22.34 (-46.95, 2.28)	0.07	-31.12 (-82.99, 20.74)	0.23
Assault (aggravated)	-5.07 (-13.38, 3.25)	0.23	-11.05 (-27.70, 5.60)	0.19
GUNS/WEAPONS				
BPD-reported arrests [c]	-1.02 (-1.75, -0.29)	0.01	-0.43 (-2.60, 1.74)	0.69
JIS-reported arrests [b]	-0.40 (-0.59, -0.22)	<0.001	-0.07 (-0.33, 0.20)	0.61
Public complaints [d]	-1.82 (-6.75, 3.11)	0.46	-9.43 (-25.74, 6.88)	0.25

a Only included first degree assault to conform to SAO definition
b Guns only
c Any weapon
d "Armed individual", handgun violation, other weapons

Table 3. Estimating total and race-specific drug possession and prostitution arrests averted by State's Attorney Mosby's prosecutorial policy change in Baltimore City, Maryland between April 2020-May 2021

	JIS-reported arrests						BPD-reported arrests					
	Total			Total			Black only			Other races only		
	Observed	Predicted	Net Arrests Averted	Observed	Predicted	Net Arrests Averted	Observed	Predicted	Net Arrests Averted	Observed	Predicted	Net Arrests Averted
DRUG POSSESSION												
April 2020	10	49	39	28	103	75	26	89	63	2	15	13
May 2020	12	47	35	73	98	25	69	84	15	4	14	10
June 2020	5	45	40	23	93	70	22	80	58	1	13	12
July 2020	1	44	43	48	88	40	43	75	32	5	12	7
August 2020	6	42	36	60	83	23	52	71	19	8	12	4
September 2020	4	41	37	35	79	44	31	68	37	4	11	7
October 2020	4	39	35	47	75	28	37	64	27	10	10	0
November 2020	5	38	33	34	71	37	33	61	28	1	10	9
December 2020	2	37	35	44	67	23	40	58	18	4	9	5
January 2021	6	36	30	51	63	12	50	55	5	1	9	8
February 2021	4	34	30	51	60	9	51	52	1	0	8	8
March 2021	4	33	29	38	57	19	36	49	13	2	8	6
April 2021	1	32	31	36	54	18	33	47	14	3	7	4
May 2021	2	31	29	31	51	20	29	44	15	2	7	5
TOTAL	**66**	**548**	**482**	**599**	**1042**	**443**	**552**	**897**	**345**	**47**	**145**	**98**
PROSTITUTION												
April 2020	0	6	6	0	7	7	0	3	3	0	4	4
May 2020	1	6	5	0	6	6	0	3	3	0	4	4
June 2020	0	6	6	0	6	6	0	2	2	0	3	3
July 2020	0	6	6	0	5	5	0	2	2	0	3	3
August 2020	0	6	6	0	5	5	0	2	2	0	3	3
September 2020	0	5	5	0	5	5	0	2	2	0	3	3
October 2020	0	5	5	0	4	4	0	2	2	0	2	2
November 2020	0	5	5	0	4	4	0	2	2	0	2	2
December 2020	0	5	5	0	4	4	0	2	2	0	2	2
January 2021	0	5	5	0	3	3	0	1	1	0	2	2
February 2021	0	5	5	0	3	3	0	1	1	0	2	2
March 2021	0	4	4	0	3	3	0	1	1	0	2	2
April 2021	0	4	4	0	3	3	0	1	1	0	1	1
May 2021	0	4	4	0	2	2	0	1	1	0	1	1
TOTAL	**1**	**72**	**71**	**0**	**60**	**60**	**0**	**25**	**25**	**0**	**34**	**34**

All figures rounded to the nearest whole number

Re-arrests among policy beneficiaries (Aim 2)

We evaluated evidence of re-arrest in JIS-reported arrest data among individuals who had drug and paraphernalia possession or prostitution charges pending when the policy change was announced, and therefore had these charges dropped. These individuals were considered 'beneficiaries' of the policy change. We found that among 741 such policy beneficiaries with unique numeric identifiers, only 6, or 0.8%, had subsequent records for arrests resulting in court cases for crimes impacting public safety[§] in the post-policy period.

There was no evidence that beneficiaries of the policies went on to re-offend at a high rate in the 14-months following the policy change. Available data therefore do not suggest individuals who would be arrested for low level drug and prostitution crimes are the same individuals committing otherwise serious crimes.

Associations between the policy change and drug- or prostitution- related public complaints in Baltimore City

Drug-related complaints

In the pre-policy period, there were 107,474, an average of 3,981 (s.d.=615) drug-related calls per month to 911. There was a significant decrease in average monthly drug-related 911 calls of 49.7 calls per month (p=0.002). There was no immediate significant change to drug-related 911 calls immediately following the policy change. In the post-policy period, there were a total 34,948 drug-related 911 calls, an average of 2,496 (s.d.= 426) calls per month. During this time, average monthly calls continued to decline significantly at a faster rate per month than observed in the pre-policy period (80.6 calls per month; p<0.001). See Fig1C.

Prostitution-related complaints

Pre-policy change, there were 4,518 calls, or an average of 167 (s.d.=61) prostitution-related calls per month. There was no evidence of a significant change to the monthly number of calls in the pre-policy period, nor immediately after policy implementation. In the post-policy period, there were 921 total prostitution-related calls to 911 (mean= 66 per month ; s.d.=30), and these have continued to significantly decrease by 5.0 calls per month (p=0.01) since policy implementation. See Fig 2C.

Other (control) complaints

There were no significant trends in the pre-policy or post-policy period in terms of 911 calls related to robberies, assaults, or guns/weapons.

We found no evidence that public complaints regarding drugs or prostitution increased when the policy change occurred, or in the months that followed; on the contrary, we observed greater declines in mean monthly complaints in the post-policy period. The relative stability of public complaints regarding other crimes during this time suggests that these reductions could not be explained by overall trends in street activity or 911-calling behaviors in Baltimore City.

§ Robbery, Murder/Manslaughter, Guns, Assault, Sex Offense, Carjacking, Home Invasion, Kidnapping, Arson, Drug Distribution

V. LIMITATIONS

Results should be viewed considering the study's limitations. Quality assurance and checks could not be independently run by the team at Johns Hopkins Bloomberg School of Public Health on BPD or JIS data, limiting ability to comment on data quality and reliability. Race data was unavailable for the majority of JIS-reported arrests, and publicly available arrest data combined Hispanic populations into the Asian category, which restricted our ability to analyze disparities of interest in Baltimore.

More broadly, analyses were not adjusted for other factors and cannot be used to make any causal inferences about the policy's impacts. Though we compared different arrest categories to account for COVID-19 changes to crime and policing, we were unable to directly adjust for the pandemic's impacts on street activity and the criminal legal system. It is possible 911 calls for drug and prostitution crimes decreased due to public perception that they would not be attended to, rather than due to true reductions in community concern. Findings are not generalizable to other settings and should be interpreted with caution.

VI. CONCLUSIONS

Fourteen months after Baltimore State's Attorney Marilyn Mosby stopped prosecuting drug and paraphernalia possession as well as prostitution, we found that the policy was associated with meaningful declines in arrest and prosecution among a vulnerable sub-population of Baltimore's residents, and that there have not been commensurate increases in public concern or crime driven by these individuals.

Differences in pre-policy trends between BPD- and JIS-reported arrests were notable. While the former exhibited a decreasing trend, the number of arrests resulting in a court case—those most likely to end in trial, conviction and/or sentencing-- had been increasing. More research is needed to elucidate explanations for observed disparities between police and court arrest data. However, the declining trend in BPD-reported arrests may have reflected efforts to reduce the number of unnecessary arrests made following the Consent Decree entered into by the Department of Justice and the City of Baltimore to reform policing practices. Irrespective of pre-policy trends, the data exhibited significant reductions following the SAO's policy announcement in arrests reported by either source in our analysis.

Where race data were available, we found that 78% of the estimated arrests averted since the policy change occurred in the Black population. The magnitude of decline in overall drug possession arrests among Baltimore's Black community is encouraging given the historically disproportionate levels of drug law enforcement, arrest, prosecution, and conviction of this population—and the health and social consequences of these practices. However, that disparities persisted post-policy and declines leveled off (i.e., the post-policy trend now appears to be stable) provides ongoing impetus to address racial disparities in policing in this context.

Overall, findings describe a changing landscape of arrest and prosecution among individuals engaging in substance use and sex work, groups that are well-understood to experience intersecting vulnerabilities and unmet health needs in Baltimore City and elsewhere. These data suggest that significantly fewer of these individuals are entering the criminal legal system – a known barrier to receiving harm reduction, treatment, and broader social services– in Baltimore City than in prior years. Our evaluation suggests that decriminalizing their behaviors has not been associated with increases to public safety or public concern in this setting. However, further evidence is needed to understand whether and services such as behavioral health, harm reduction, drug treatment, and others are being mobilized to meet this population's needs in a post-policy change context where they are no longer being criminalized.

> AN UNDERSTANDING OF THE SUPPORT FOR AND IMPLEMENTATION OF NECESSARY EXPANSIONS OF THE HEALTH SOCIAL SAFETY NET IS NOW URGENTLY NEEDED.

APPENDIX A. JIS-reported data received by the SAO were already designated into the following crime categories. Data received by OPEN Baltimore (BPD-reported arrests and 911 calls) were not standardized and therefore had to be recategorized for analysis to include common crime codes, abbreviations, misspellings, and other variants. The table below outlines how data from each source was interpreted for inclusion in this report.

Dataset and source	Crime category	Interpretation of crime category	Examples of included descriptions
BPD-reported arrests **OPEN Baltimore Arrest Data**	Drug possession	Includes possession of drugs or CDS excluding marijuana. Note that possession or its root "poss" was also interpreted as drug possession. This excludes drug distribution.	· Unlawful possession · Poss · CD violation · Possession of CDS not marijuana · CDS obtained by altered prescription
	Paraphernalia possession	Includes mention of drug paraphernalia or drug administration equipment possession.	· Poss paraphernalia · CDS poss paraphernelia · CDS admin equip poss
	Prostitution	Any mention of prostitution or derivative of the root "prost." Note that solicitation was only interpreted as prostitution if prostitution was mentioned.	· Prostitution-general · Solicitation of prostitution · Prostitution · Prost
	Robbery (armed, attempted)	Includes attempted robbery and unarmed/armed robbery.	· Att robbery (armed) · Armes robbery · Armed robbbery · Attempt commercial armed robbe
	Assault (common, aggravated)	Excludes domestic violence/dispute unless assault is specified.	· Aslt · Assaut · Comm. assault · Aggg assault · Agr assault
	Murder/ manslaughter	Includes attempted murder, homicide, and manslaughter (vehicular, boat, etc.). Excludes child abuse that resulted in loss of life.	· Att murder · 1st degree murger · Con-murdr-first degree · Vehicular manslaughter
	Weapons	Includes possession or discharging of weapons (handguns, knives, tasers, mace, BB guns, pellet guns), handgun violations (HGV), and illegal possession of ammunition. This excludes paintball guns.	· HVG · Deadly weapon · Poss pellett gun · Poss ammo · Gun offender · Armed person · Discharge firearm

Dataset and source	Crime category	Interpretation of crime category	Examples of included descriptions
Arrest Data Maryland Court System **SAO**	Drug possession	Includes possession of controlled dangerous substances (CDS), excluding marijuana. This is excluding drug distribution.	· CDS: Possess – not marijuana · CDS: Possess-not marijuana
	Paraphernalia possession	Includes possession of CDS paraphernalia or drug administration equipment.	· CDS admin equip poss/dist · CDS possess packaging materials · CDS:possess paraphernalia [CR 5] (5 3550) · CDS paraphernalia use possession with intent to us
	Prostitution	Includes prostitution charges.	· Prostitution-general · Prostitution-general [CR 11] (1 1093)
	Robbery (armed, attempted)	Includes attempted robbery and armed/ unarmed robbery.	· Armed robbery · Att-Robbery [CR 3] (2A0700) · Con-armed robbery [CL] (2C0705) · Robbery
	Assault (common, aggravated)	Includes first degree assault and conspiracy to commit first degree assault.	· Assault-first degree [CR 3-202; CR 3-206] (1 1420) · Conspiracy, assault first degree
	Murder/man-slaughter	Includes attempted murder, conspiracy to commit murder, first and second degree murder, and accessory after the fact.	· Att 1st deg. Murder · Con-murder [CL] (1C0007) · Conspiracy to commit murder · First degree murder – solicit · Accessory after fact-murder 2nd degree
	Weapons	Includes guns.	· Rifle/shotgun possess-mental disorder/ violent behav · Rifle/shotgun-poss w/fel conv · Wear, carry and transport handgun upon their perso
Public Complaints **OPEN Baltimore 911 Call Record Data**	Drug mentions	Includes any mention of drugs (including marijuana), narcotics, or paraphernalia, as well as relevant crime codes (87).	· Poss/drugs · Marijuana civil · Narcotics outsid · Drug activity · Dumped needles · 870
	Prostitution	Includes prostitution and relevant crime codes (55A).	· Prostitution · 55A
	Robbery (armed, attempted)	Includes possible robbery, attempted robbery, robbery (armed/unarmed), and relevant crime codes (3P, 3N).	· Poss robbery arm · Att rbbey unrmd · Attmptrbbry armd · To robbery · Robbery info · 3N ollow up · 3P / 7-11
	Assault (common, aggravated)	Includes possible assault, attempted assault unspecified assault, common assault and aggravated assault, as well as relevant crime codes (4A, 4B, 4E, 4D). It also includes domestic assault when assault is specified.	· Poss commn assauk · Poss aggrv asslt · Attmpcmmn asslt · Attempt stabbing · 4E by threat & 4D · Susp in 4A
	Weapons	Includes any specific mention of possible or confirmed weapons (handguns, knives, tasers, mace, BB guns, pellet guns) and illegal possession of ammunition, as well as relevant crime codes (83). Also includes armed individuals and handgun violations. This excludes paintball guns.	· Knife poss · Hidden weapon · Machete collecti · Recover weapon · Bullet parts · Clip w/ bullets

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