THE ROLE OF BODY-WORN CAMERA FOOTAGE IN THE DECISION TO FILE

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Front Matter

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Acknowledgements

Contents

Every decision maker in the American criminal justice system has a significant amount of unchecked discretionary power, but the one who stands apart from the rest is the prosecutor. The prosecutor decides who will be charged, what charge will be filed, who will be offered a plea bargain, and the type of bargain that will be offered (Spohn, 2018, p. 2).

Introduction

Spurred by support from a presidential commission (The President's Task Force on 21st Century Policing ("Task Force"), 2015) and over 53 million dollars in funding from the U.S. Justice Department in 2015 and 2016 (Department of Justice, 2015, 2016), the use of Body Worn Cameras (BWCs) by law enforcement agencies has grown rapidly in the U.S. as well as across the world (Cubitt, Lesic, Myers, & Corry, 2016). Evaluations of officer perceptions of BWCs and the impact of BWCs on officer behavior is also increasing rapidly.

Since law enforcement agencies are the gateway to the criminal justice system, changes in how they do their jobs have significant down-stream implications for prosecution, courts, prison and probation (Goldkamp, 2011). After police make an arrest, prosecutors must decide whether to file charges. Thus, prosecutors are the next component of the criminal justice system to feel the effects from the adoption of BWCs by police (Katz et al., 2014). However, there has been very little empirical research on how BWC video affects prosecutorial decision-making or case outcomes (Lum, Koper, Merola, Sherer, & Reioux, 2015; Merola, Lum, Koper, & Scherer, 2016).

This report details an in-depth examination of the challenges prosecutorial agencies face during the filing decision when law enforcement adopts BWCs. The myriad ways that the presence of BWC evidence might make the filing decision more or less straightforward are of

particular interest, as are the particular types of crimes[1] for which BWC footage is more
relevant. The filing decision is the focus of the research because it is the entry point to the court
component of the criminal justice system. The study was conducted in the Los Angeles City
Attorney's office.

Background

There has been comparatively little empirical research on the impact of BWC footage on
the courts and in particular, on prosecutorial functions. In fact, we could find no empirical
studies that only examined the impact of BWC footage on prosecution. However, some studies
examining law enforcement outcomes have also examined whether the presence of BWC video
affects charging rates, guilty pleas and guilty verdicts. In addition, there have been two surveys
of prosecutor's offices conducted (Baker, 2004; Merola et al., 2016), and these are discussed
next.

BWC evidence and prosecution

Footage from BWC video could have several important implications for prosecution.
Together, the studies reviewed next suggest that there might be several advantages to
prosecutors reviewing BWC footage related to a case (Grossmith et al., 2015). Most are related
to the quality of evidence gathered by police officers on the scene which might be improved in
several ways. First, police officers on the scene might follow protocol more closely and collect
more and better evidence. Second, victim and witness statements can be collected and made

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[1] The Los Angeles City Attorney's Office prosecutes misdemeanor crimes only. Thus, the use of word *crimes* in this
report refers to misdemeanor crimes.

available to prosecutors. Third, offenders may be more likely to admit guilt in the face of BWC evidence.

Most studies have focused on domestic abuse and intimate partner violence and found that the presence of BWC video significantly increased the proportion of arrests for domestic abuse that resulted in a criminal charge (Grossmith et al., 2015). In the case of intimate partner violence calls for service (Morrow, Katz, & Choate, 2016) and domestic violence cases (Katz et al., 2014), the presence of BWC footage was more likely to result in arrest, charges filed, and a guilty plea or guilty verdict. In the UK, officers wearing BWCs had higher charging rates for domestic violence (Owens, Mann, & Mckenna, 2014). Officers in the study attributed this result to the video's ability to capture the demeanor of victims and suspects as well as physical damage at the scene (Goodall, 2007; Owens et al., 2014). In Renfrewshire, Scotland, cases with BWC footage had a higher rate of guilty pleas earlier in the process than cases without it (ODS Consulting, 2011). An early study in London also found an increase in guilty pleas (Goodall, 2007). But a recent study in Washington, DC found no significant change in court outcomes after BWC videos were adopted by police (Yokum, Ravishankar, & Coppock, 2017). Results from several other studies consistently find police officers believe BWC evidence improves quality of evidence collection (Gaub, Choate, Todak, Katz, & White, 2016; Jennings, Lynch, & Fridell, 2015; Pelfrey & Keener, 2016; Sousa, Miethe, & Sakiyama, 2015).

A survey done by International Association of Chiefs of Police (IACP) in 2004 examined the views of prosecutors related to video evidence. While BWC did not exist in 2004, experiences with dashboard camera footage seem most related to video evidence from BWCs. Ninety-one percent of prosecutors stated they had used video evidence from a dashboard camera in court.

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Prosecutors indicated increases in preparation time (41 percent) but decreases in time spent in court (58 percent) when video evidence was involved (Baker, 2004).

A more recent national survey that targeted prosecutors and asked about video evidence from BWCs found that prosecutors experienced increases in preparation time (54 percent) (Merola et al., 2016). That is consistent with the finding of increased preparation time reported in other empirical research (Morrow et al., 2016). Merola and colleagues (2016) also reported that the majority of prosecutors felt they needed technology upgrades to view videos (65 percent) and additional technical personnel (46 percent) in order to use BWCs effectively. Just over a third (37 percent) of respondents thought they needed more support personnel and only 22 percent said they would need more prosecutors. As far as impacts, the majority of prosecutors expected BWC evidence to increase conviction rates (58 percent) and plea bargains (62 percent).

The prosecutorial filing decision

Kerstetter (1990, p. 268) identified two decisions that form the "gateway to the criminal justice system"; the police officer's decision to found the case and the prosecutor's decision to file a charge. When a crime comes to the attention of the police, the responding police officer investigates and determines whether the alleged incident constitutes a crime. If it does, the incident is founded, if it does not, it is unfounded. Thus, to varying extents, police officer discretion plays a role in whether an incident is designated a crime. The police also use discretion when they decide whether to refer someone arrested for a crime for prosecution. If

the police decide to refer the case, they present the case to the prosecutor for filing

consideration.

As Spohn (2018) notes in the quote on page 1 of this report, prosecutors also have a great

deal of discretion when deciding whether to file charges against someone who has been

arrested for a crime. This decision, especially in busy offices, is made under considerable time

pressure (President's Commission on Law Enforcement Administration of Justice, 1967).

Prosecutors must evaluate the evidence that generated the arrest quickly while also ensuring

they do so consistently and fairly. Prosecutors have wide latitude in the filing decision and

typically file a charge only when there is a reasonable expectation of conviction (Miller, 1970).

Research on prosecutorial discretion in the charging decision is scarce and typically requires

scientists to form relationships with individual prosecutors and scour paper records to develop

data to analyze (Spohn, 2018).

Body worn camera video has entered the charge filing arena with little fanfare and no

additional resources. Thus, it is not surprising that little research exists on changes to

prosecutorial charging patterns when BWC evidence is available (Lum et al., 2015). To begin to

address this gap and despite no additional resources, the Los Angeles City Attorney's office

(LACAO) partnered with researchers from Temple University to obtain funding from the John

and Laura Arnold Foundation to investigate the impacts of video evidence on their

prosecutors.[2]

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[2] The research detailed in this report began when there was no additional staffing. LACA asked for, received and allocated some additional staffing over the period from August 2017 to July 2018 to comply with constitutional, statutory and ethical obligations of discovery and disclosure to defendants.

Research Questions

To shed light on the issues raised above, this research examines the following research questions:

RQ1: Does the presence of BWC evidence change the filing rates for misdemeanor crimes?

RQ2: What are the factors that influence whether filing attorneys evaluate BWC evidence when making filing decisions?

RQ3: Does the decision to evaluate BWC evidence during evaluation for filing vary by misdemeanor type?

Methodology

The study was a multi-method research design where the qualitative data from focus groups informed the questions used in a primary data collection instrument. Findings from those examinations of individual-level filing behavior are compared to a broader examination of the impacts of BWC evidence on the filing decision.

Study Site

The Los Angeles City Attorney (LACA) handles all misdemeanor prosecutions for the City of Los Angeles (LA). LACA's cases come primarily from the Los Angeles Police Department (LAPD) but also from other law enforcement agencies in LA. Body worn camera (BWC) adoption by LAPD began in the Mission Division on October 1, 2015. Two more divisions were added in November 2015. The research team conducted a site visit March 15 to 17, 2017. They held three focus groups with Deputy City Attorneys (DCAs). In a separate meeting, one of the most

experienced DCAs gave them an in-depth overview of the filing process. In March 2017, there were ten LAPD divisions that had implemented BWC.[3] As of July 2018, LAPD deployment of BWCs to patrol was complete.

The filing process at the Los Angeles City Attorney's Office

This section provides context for the research undertaken by describing the filing process in the Los Angeles City Attorney's Office. Most cases arrive directly from policing agencies but others take an indirect route via the Los Angeles District Attorney's Office (i.e., after they are rejected as felonies and referred for misdemeanor consideration). The decision to file or reject cases in which the arrestees are in custody at the time of presentation is prioritized because they must be released within two court days of the arrest if charges are not filed. Arrestees who are in custody when charged will be arraigned while in custody. If defendants are charged after their release from custody, there is risk of their failure to appear for arraignment that is not present if charged while still in custody. Those defendants not in custody (bail or own recognizance) as well as those that are presented for a warrant or voluntary appearance letter are a lower priority because there is a less immediate time constraint. Each branch has one to four attorneys, depending on the branch volume, who are primarily responsible for filing. The amount of time each DCA spends on filing varies widely depending on the caseload and type of case.

The filing process is primarily paper-based and very complex. Each day the filing process begins with custody cases because they require the shortest turn-around time. This was further

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[3] LAPD had previously adopted digital in-car video (DICV, also known as dashboard cameras or dash cams). BWC video has been available to filing attorneys since that time.

complicated because different Branches (Courts) have different (earlier) filing deadlines. The time available for the filing review is especially short on Mondays and Tuesdays (for arrests that took place over the weekend) and for cases that are referred by the District Attorney.

Because of the time sensitive nature of custodies, an LAPD liaison hand-delivers many of those cases to filing attorneys.[4] The case file includes three copies of arrest reports, rap sheets (county, state and DMV), photos, and other court-required paperwork. The assigned DCA uses a folder of paper records to examine the facts of the case. Evidence that is not paper-based follows a different process that varies by the type of information. Requests for 911 call or police communication audio, dash cam video and BWC video all follow a different process than the paper ones. Filing deadlines for non-custody cases have longer temporal frames.

The arrival of BWC evidence brought new challenges. The primary goals of this research were to: 1) identify the challenges and potential benefits of using BWC evidence faced by prosecutors; 2) examine the barriers to using BWC evidence; 3) quantify the effects of BWC evidence on the filing decision.

Analytic Plan

To achieve the goals of the research and answer the research questions posed, we used a multi-method analysis plan. It consisted of three main components: 1) focus groups; 2) primary data collection; and, 3) a quasi-experimental methodology that compared cases where BWC evidence had been shared by LAPD with LACA via Evidence.com to cases where BWC evidence was not available. The focus groups were completed first, and the information gained from

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[4] Division detectives bring in the felony referral matters, custody or PC 17b4 bypass cases.

them informed the development of the data collection form used in the second component. Analysis of the primary data provided insights that were used to contextualize findings from the quasi-experiment using official data.

Focus group component

The research team spoke with 15 Deputy City Attorneys (DCAs) over 3 sessions held on March 16 and 17, 2017. It is important to note that the LACA had not received any additional staffing at this point in time and was trying to deal with the increased workload posed by video evidence with existing resources. The DCAs came from Central, Van Nuys, North Valley, Harbor and Metro Branches and Family Violence and Gangs Units. All of the DCAs file cases as a primary component of their professional duties, but there was a range of experience and types of cases/crimes represented. Both the Chief and the Deputy Chief of the Criminal Branch attended the first and second focus groups. Three research staff members facilitated each group using a set of focus group questions (Appendix A).

Primary data collection component

This component explored how the presence of BWC video was changing the information available to filing attorneys, the extent to which BWC evidence was being used and whether usage varied by type of charge or other facts of the case. In particular, we were interested in comparing cases in which BWC video is available and viewed with those cases where BWC video is available and not viewed. Since the City Attorney only prosecutes misdemeanors, all charges considered were misdemeanors.

One of the challenges of studying the filing decision was that a filing deputy examines paper, not digital, records. This made discovering the barriers and facilitators to using BWC video in the filing process extremely difficult to identify without special effort. In this study, a primary data collection instrument was used to gather information from filing deputies regarding their decision-making as they evaluate cases. In particular, what led them to view the BWC evidence and then how the video evidence influenced their decisions whether to file. It also illuminated logistical challenges for deputies to using BWC information prior to the decision to file.

RQ1: What are the factors that influence whether filing attorneys evaluate body worn camera video in making filing decisions?

RQ2: Does the decision to evaluate BWC video vary by crime type?

A sample of 19 attorneys representing 5 branches and 2 units filled out a form for every case they reviewed between June 1, 2017 and July 31, 2017 (Appendix B). These attorneys were chosen because they evaluate the highest number of cases in their respective branches or specialized units. Data collection produced 4,883 cases that were successfully linked to the LACA's official data to provide the type of charge and the filing status.[5]

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[5] The primary data collection produced 5,625 cases. A total of 4,833 cases (86.8%) remained after joining the information in LACA official data. Difficulties with matching cases primarily stemmed from the fact that many cases were not entered into CCMS prior to evaluation for filing so there was not a single number to identify the case that the attorney used when filling out the research survey. Errors in transcribing the number that was used to match may also have occurred.

Official data component

The official data used to examine BWC's effects on LACA prosecutors' decisions to file were obtained from two sources: (1) BWC evidence files from Evidence.com and (2) case and charge information from the Criminal Case Management System (CCMS). The first data source is a repository of BWC evidence files shared with LACA by LAPD and contains key information including the date of the offense and whether the video was viewed. The second data source is LACA's file management system and contains information including the charges, filing decision, offender demographics, type of case, and other administrative information.

Each individual case may have one or more charges associated with it. The current analysis focuses on the first or primary charge. In addition, each individual case has the potential to have one or more BWC evidence files associated with it. Multiple BWC files can be the result of different original videos from officer(s) and/or one or more copies of original videos. For instance, if a video requires processing for discovery or preparation at trial (e.g., redacting, masking), the original record is left unaltered and a new record is added to Evidence.com. The present analysis counts any video(s) viewed which are linked to a case as indicative of BWC evidence having been reviewed for that case. The study period runs from October 2015 through April 2018. After excluding non-BWC evidence (e.g., photographs), training videos, and records that lay outside the study period, there were 60,742 BWC video records that were shared by LAPD with LACA, which were associated with 9,944 incidents. Over the entire study period, there were 206,288 cases with filing decisions during the study period. The cases with BWC evidence (i.e., those cases where BWC was shared with LACA) constitute

4.82% of cases (see Appendix C). For incidents in which BWC evidence was shared with LACA, there were an average of 5.93 BWC video records associated with each incident.

Unfortunately, not until March 2018—one month before the close of the official data collection period—did LAPD enact a BWC evidence policy for including the full incident number (and only the incident number) on BWC video records. Prior to this date, BWC evidence records had some missing identifiers and identifiers that did not link to CCMS (e.g., charge description, branch codes) precluding their merging with CCMS. Related, a large number of incident numbers that appeared viable (i.e., they were the correct number of digits) in the BWC evidence records did not appear in CCMS. While the incident number served as the primary identifier used by LAPD (and is now the official identifier), it was certainly not the only one officers used prior to March 2018. The case number serves as the primary identifier for the LACA, but the incident numbers are frequently missing in CCMS (i.e., they are present less than 10% of the time overall, and approximately 31% of the time for cases included in analysis).

To maximize linking of the data, the researchers parsed out two different free-form text fields in the BWC video records that appeared to contain relevant incident identifying information and utilized an iterative matching procedure with available fields in CCMS (i.e., incident number, department record number, case number, booking number). An identifier was selected and a parsed text field was selected and matching of BWC video records to CCMS was performed. Residual cases (i.e., cases not successfully matched) were collected and matched again with a different identifier and/or parsed text field, and so on. We completed 52 separate iterations. Given that there was no explicit identifier required by LAPD for use with BWC evidence until March 2018, and thus it is possible that inexact data entry could have led to inadvertent

matches, we took a conservative approach and restricted our analysis to those cases that matched following the above procedure and that also had identical incident date fields across the two data sources. In total, 5,935 cases with BWC evidence during the period between October 2015 and April 2018 were successfully matched to CCMS with this approach, which represents a majority of cases with BWC video records during this period (59.7%) (see Appendix C). LACA personnel performed an independent match query and their analysis yielded similar, albeit slightly lower, rates (56%).

Measures

Outcome

Filing. LACA records the filing outcomes alongside added information (e.g., whether the individual is in custody, released on bail, or the reason for the case being rejected; see Table 17). These were grouped into four main categories: 0=misdemeanor reject, 1=misdemeanor file, 2=hearing, and 3=other (see Table 17). Misdemeanor reject serves as the reference group.

Time to file. In consultation with LACA, we approximate the time to file as the number of days between arrest date and the case entry date, the latter of which refers to the date when the case was entered into the system.[6] LACA does not explicitly track the date they receive the case from the policing agency nor the date a filing decision is made, but the entry date is often the same date that a filing decision is made and serves as the best available proxy.

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[6] Cases where the arrest date was blank were not included in the analysis.

Treatment

We utilize several treatment variables as noted below. These variables represent how BWC evidence might have affected the filing decision. Importantly, BWC videos first viewed after the filing decision are excluded to prevent upward bias of the filing rates for these videos; filing a case that has BWC video leads to opportunities for later viewing of the video for discovery, plea bargaining, and/or trial preparation.[7]

Video viewed. The first is a binary indicator of whether BWC video was watched or not prior to the filing decision (0=Video not viewed, 1=Video viewed before filing decision).

Video available. The second is a binary indicator of whether BWC video was available or not (0=No video, 1=Video not viewed or viewed before filing decision).

Multivalued treatment. The final indicator is a multivalued treatment variable that separates cases based on whether there is BWC evidence and whether it was viewed prior to the filing decision (0 = No video, 1 = Video not viewed, 2 = Video viewed before filing decision).

Covariate

Several covariates are included to control for demographics of the individual who was arrested and agency characteristics that could impact filing decisions. *Age* is measured in years. *Gender* is a dichotomous indicator (0=female, 1=male). *Race* is represented by a series of dummy variables including Black, Hispanic, and Other, with White serving as the reference group.

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[7] Indeed, well over 95% of cases where BWCs were first viewed after the filing decision was made were cases that were "misdemeanor filed," as distinguished from "misdemeanor reject," "hearing," or "other" (see Table 19). When LACA received additional positions they were allocated to meet post-filing, statutory and ethical discovery and disclosure obligations *related to cases that were "misdemeanor filed"*.

Agency indicates who originated the case and is controlled by a series of dummy variables (1=LAPD Misdemeanor, 2=Police Felony Referral, 3=DA Felony Referral, 4=Other), with LAPD Misdemeanor serving as the reference category (see Table 1).

Table 1. *Agency Frequencies of Cases with BWC Video*

	%	f
LAPD Misdemeanor	62.7	3716
DA Felony Ref	21.3	1265
Police Felony Ref	15.8	934
Other	0.2	14
N		5929

Branch indicates where the cases are handled and is represented by a series of dummy variables (1=SF, 2=CE, 3=HS, 4=VN, 5=FV, 6=SP, 7=PA, 8=GD, 9=SO/MM/TT), with SF serving as the reference category (see Table 2).

Table 2. *Branch Frequencies of Cases with BWC Video*

	%	f
North Valley Branch (SF)	23.2	1379
Central Branch (CE)	19.2	1139
Metropolitan Branch (HS)	18.5	1097
Van Nuys Branch (VN)	17.7	1050
Family Violence Unit (FV)	11.5	684
Harbor Branch (SP)	4.2	249
Pacific Branch (PA)	2.8	167
Gang & Gun Prosecution Section (GD)	2.3	137
SO/MM/CT[1]	0.6	33
N		5935

Note: [1]Special Trials (SO) / Marijuana Enforcement Unit (MM) / City Attorney Hearings (CT)

Crime type is indicated by a series of dummy variables (1=Assault and Battery, 2=Domestic Violence, 3=Assault with a Deadly Weapon/Firearm, 4=Weapons, 5=Battery on a peace/other officer, 6=Resisting arrest, 7=False report to officer, 8=Fraud and Forgery, 9=Burglary/Shoplifting/Theft, 10=Vehicle Theft/Tampering, 11=Trespassing, 12=Vandalism, 13=Disorderly conduct, 14=Disturbing the peace, 15=Lewd conduct and related,

16=Prostitution, 17=Hit and Run, 18=DUI, 19=DUI-refusal, 20=Drug possession/sale, 21=Under

influence of drugs, 22=Minor in possession of alcohol, 23=Public intoxication, 24=Violation of

court order, 25=Vehicle violations, 26=Other), with Assault and Battery serving as the reference

category.

We also control any temporal or seasonal patterns by including *Year* (1=2015, 2=2016,

3=2017, 4=2018) and *Month (*1=January, 2=February … 11=November, 12=December) as a

series of dummy variables, with 2015 and January serving as the reference groups, respectively.

Analytic Plan

The analysis proceeded in several steps. First, we began by summarizing the trends in

the number and file sizes of BWC video records, the number of records being viewed, and the

number of distinct incidents that have BWC video footage from October 2015 to April 2018.

Second, we describe only those cases with BWC footage to indicate what types of crimes and

charges are most common, what branches and units deal with the most video, the extent video

is viewed, and what the most common filing decisions are. Third, we use bivariate statistics to

examine BWC viewing patterns across crime types and crime categories.

The next stage of the analysis examined the impact of BWC video availability and

viewing on prosecutors' decisions to file misdemeanor charges. Estimating causal effects with

observational data is complicated by potential confounding.[8] For instance, certain crime types

may be more likely to have BWC evidence and be more likely to be filed. There are a wide

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[8] The low viewing rates of BWC video combined with the relatively low number of cases with BWC video in individual branches precluded conducting integrated time-series with propensity score weighting analyses (Linden & Adams, 2011).

number of options for addressing confounding in observational studies. For the two binary

treatments, we conduct 1-to-1 nearest neighbor propensity score matching (Guo & Fraser,

2010; Rosenbaum & Rubin, 1983). Specifically, we estimated the propensity score using logistic

regression and assess common support and overlap in the propensity scores and covariate

balance. We utilized standardized bias statistics to assess mean differences in covariate before

and after matching, with covariate imbalance less than 20 percent of standard deviation

considered to have adequate balance (Haviland, Nagin, Rosenbaum, & Tremblay, 2008).

Excellent covariate balance is achieved when standardized bias statistics are below 10,

suggesting that covariate means differ by no more than 10 percent of a standard deviation.

After establishing covariate balance, we created propensity score matched groups and

conducted a multinomial logistic regression with the matched sample, using robust clustered

standard errors.

In addition to the propensity score matching results, we also estimated a multinomial

logistic regression analysis weighted with entropy balancing weights (EBW) to address

confounding (Hainmueller, 2012). Using EBW permits reweighting the moments (i.e., mean,

variance) of covariates for a control group to match their counterparts in the treatment group.

In this way, "covariate balance is directly built into the weight function that is used to adjust the

control units" (Hainmueller & Xu, 2013, p. 2). This approach is computationally simple, does not

discard cases like nearest neighbor matching, and always makes (at least some) improvement in

covariate balance (Hainmuller & Xu, 2013).

For the multivalued treatment analysis, we utilize recently developed marginal mean

weights through stratification (MMWS) (Hong, 2012; Linden, 2014). MMWS use propensity

scores estimated from a multinomial logistic regression predicting treatment condition to create weights that balance covariates across more than two treatment conditions. That is, when there are more than two conditions, individuals receive a probability of being in each condition based upon the multinomial logistic regression model that uses covariates to predict treatment assignment.

Finally, to determine whether the effects of video availability and viewing vary across the three categories, we estimated multinomial logistic and ordinary least squares regression models predicting filing outcome and time to file, respectively. In particular, we interacted treatment with the crime category variable and included the propensity score to account for covariates through propensity score regression adjustment (Guo & Fraser, 2010).

Findings

Focus group component

This section summarizes both the current challenges and the benefits (both realized and potential) as articulated in the focus groups. It is important to remember that LACA had received no additional staff at this point. Preliminary discussion revealed that filing attorneys are not routinely using BWC video to make decisions related to case filing. Discussions across the three groups revealed: 1) challenges to using BWC footage; 2) benefits to using BWC footage in the filing decision; 3) logistical barriers to accessing and using BWC footage; and, 4) potential policy implications in the form of suggested changes to the existing process that would enable DCAs to use BWC video more frequently and consistently.

Challenges to using body worn camera video

Heavy DCA filing workload and the time sensitivity of some cases underpinned the discussion. Specific, actionable challenges to using videos in the filing decision also emerged. A summary of these appears next.

DCA workload coupled with time sensitive nature of cases

Time pressures were a common theme across the focus group sessions. Although the challenges vary based on the time sensitivity of different types of cases (primarily custody versus non-custody), the fundamental issue is that staffing levels are too low to keep up with the current number of cases that need to be evaluated for filing. As one attorney remarked "each day is a triage" (DCA1) with the goal of considering all the cases that are due before noon. This situation is exacerbated by the addition of BWC evidence. "Every time we choose to stop and watch a video all these other cases have to go to my colleagues or have to get pushed to the side." (DCA1). After that deadline passes, filing attorneys consider the non-time critical cases. However, the sheer number of cases that need processing leaves DCAs feeling they cannot often spare the time to consider BWC evidence for filing purposes.

Considering BWC video slows down filing process

DCAs cannot automatically access the BWC video related to a case, they must request access. This decreases the likelihood a DCA will take the time to consider video evidence. One DCA noted, "sometimes it is linked to CCMS, sometimes it is not" (DCA8). No one seemed to know why that would be the case. Another DCA noted "there is the potential that there is

footage and we are not aware of it" (DCA15). Some detectives have made it a practice to "share" the video in advance of presenting their cases, but that is an exception, not the rule.

Time necessary to gain access to the BWC video varies. One DCA mentioned a very short time to gain access (5 -10 minutes) but others cite a very lengthy process to get BWC video (can take several days). The time seems to vary by branch and whether there is a detective assigned to the case. The vast majority of LACA cases are not assigned to detective, but instead are presented generically by LAPD's liaisons. In some branches LAPD's liaisons are instrumental in triggering the video shares for cases that are not assigned to specific detectives. For custody cases, even a short delay is a disincentive to reviewing BWC video. In cases that have more time for filing, DCAs can wait for footage but waiting times raise the perceived "cost" of using BWC video. There was general agreement that if BWC video were readily and routinely available, they would use it more often.

Looking at video is a time-consuming proposition. As more and more officers receive cameras, the number of cases where there are multiple cameras present increases. More cameras translates directly into more time spent identifying the relevant videos and watching them. The sheer number of videos and associated time to watch each of them makes the prospect of considering BWC evidence very daunting. For many cases, there are multiple officers and each has a video that needs watching because it may provide a different vantage point. One attorney remarked that the thought of "hours of video can be overwhelming" (DCA12).

Specific logistical challenges related to using BWC video in the filing decision

DCAs provided several suggestions on how to increase DCA efficiency when they do watch videos. They also raised technical issues related to accessing Evidence.com, viewing video files and editing (blurring or redacting) video files.

Identify video in the same way/provide a consistent ID tag for videos. At the time of the focus groups, officers did not consistently identify videos associated with the case within the Evidence.com database.[9] Officers may identify video using the officer number, incident number, or ID number, or no number or even nothing at all. Additionally, DCAs need to know which BWC video files belong to which officers. They also need to quickly find the primary officers. Accuracy of data entry is very important. When the identifier is wrong on the case paperwork, the DCA requests and watches the wrong video. The process to obtain correct video has to start over again, and more time is lost.

Mark (also referred to as tagging, bookmarking and flagging) the important segments of a video before turning it in as part of a case. Identifying the portion of each video that has important/revealing information is a major hurdle. The current practice of transferring large amounts of information, with minimal information regarding context, to prosecutors is a disincentive to viewing the video.

Filing DCAs experience the following challenges when using BWC video: 1) locating where important information exists within the video; 2) determining the correct sequence when there are multiple videos collected for a case; and 3) understanding how the officer interpreted actions that took place in the video and why they were important to the case. By way of an

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[9] This has since changed as noted above. As of March 2018, LAPD is supposed to only use the full incident number.

example, it would be helpful if the report or a log stated "look at minute 18 on x video where the defendant confesses" (DCA13). Related to sequencing, it is essential that the date/time stamp on video is accurate.

There was general agreement that the police are in the best position to bookmark important videos, sequence videos and provide information about what happened in the video. Further, having this information would make it much less time consuming to use BWC video.

Logistical issues to accessing Evidence.com. Several logistical issues were reported by DCAs that made them less likely to review BWC video. Frequent password changes coupled with infrequent usage make it difficult to keep up with the current password on Evidence.com.[10] Technical issues arose for example being "kicked off the system" or receiving a "system error" message when using the site. Using a different browser, such as "Internet Explorer" versus "Chrome" seems to alleviate some problems. Presently DCAs can access BWC footage via Evidence.com. If the case already exists in CCMS, they can access it through CCMS also but only if there is a match in the identifiers in the BWC evidence and in the Incident Number, Division of Records (DR) Number, or CCMS Case Number in CCMS. LAPD now is requiring their personnel to identify their recordings by Incident Number in Evidence.com, which makes sharing recordings with LACA by Incident Number more efficient and effective. However, it is a slow process to achieve change or full compliance in such a large department. Cases are also shared using (DR) numbers, which is the official file number of LAPD.

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[10] Since March 2017, Evidence.com has extended the time for mandatory password changes to 365 days. LACA has adopted that 365 day password change requirement.

On a related note, DCAs reported that some defense attorneys have also run into access problems with viewing the footage. Slow Internet speeds at some branch offices also make viewing video time-consuming for DCAs.[11]

Logistical issues with handling video clips and transferring them to defense and court. DCAs are not trained video editors. It takes a great deal of time to: 1) share certain clips, 2) create folders to share with defense counsel; and 3) redact information (verbal and visual) about witnesses and victims.

Differential quality of the BWC video footage. Sometimes the videos have technical problems that are frustrating because they waste time. For example, on one call every time the officer spoke to the subject you could hear the officer talking but not the suspect's response. A delay at the start of video means that officers often miss recording the beginning of what they observe (especially important in cases where probable cause is an issue such as narcotics possession).[12] The quality of BWC video varies by officer. When officers do not capture the images they think they are capturing, the camera footage does not support the facts of the case. Some examples are: 1) when an officer turns away from the subject (due to a distraction or other reason) and it does not show on video; 2) when an officer films above what they are aiming as in the case of traffic officers that administer a field sobriety test (FST) but the video does not capture the line or the legs of the person taking the test; and 3) when officers

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[11] Initial problems with internet speed at those branch offices have been resolved.

[12] This was a problem when the buffer was 30 seconds. LAPD changed the buffer to 2 minutes in late 2017. Once powered on, LAPD's BWCs are constantly recording passively and overwriting that recording until an officer actively initiates a recording, which stops and saves any preceding buffer at the start of the initiated recording. The term buffer refers to the length of time of the recording before overwriting begins. Buffers are typically 30 seconds to 2 minutes.

inadvertently obscure the video by leaning over to write the report when they hold what they are writing on in front of them and block the camera.

   A video shows both important evidence and other information that might be embarrassing. One example of this type of situation occurs when officers complete an interview or an investigation but continue discussing the case as they begin subsequent activities that are not relevant to the case (i.e., eating or going to the bathroom). Since they were still discussing the case, the attorney has to turn the video over as part of discovery and it can be embarrassing for the police officer(s). This is an issue that could be easily resolved through training. Another example is when officers and other first responders use language that would be shocking to jury members but the video is capturing something important to the case.

   Negative outcomes related to BWC cameras. Some officers have begun using the BWC videos instead of taking and submitting still pictures with the hard copy report. This is important because if officers do not review the video before they submit the case, they would not realize they may not have captured what they intended to capture on the video. Also, BWC video often does not capture evidence as well as still photos and DCAs have to request access to the video which represents a time delay. DCAs also may need this physical evidence available up front, at arraignment, for motions to dismiss, and bail/ own recognizance arguments.

   Relating to driving under the influence arrests, BWC may not show evidence of impairment even when the driver is impaired. "Some people could have low BAC .07 and look drunk and others could be at .18 and look fine." (DCA11)

Finally, inconsistencies in camera activation or when video is missing raise questions as to why some video does not exist (when it should).

Existing and potential benefits to using body worn camera video

In addition to outlining substantial challenges to using BWC video in the filing decision, the DCAs also identified a number of potential benefits. DCAs consult BWC video when the filing decision is uncertain and the DCA is looking for additional evidence.

BWC video can substantiate officer testimony.

Officers use their knowledge of cultural cues to determine whether to stop and talk with someone. These cues are cumulative and can include visual gang clues – discrete flashing of gang signs; locations of the individuals (on which street, in which area); who they are with, etc. Lay people would not pick up these signals. Having the officers explain and substantiate them strengthens the case. In non-gang stops, video may capture actions that look suspicious such as furtive motions at the person's waistband that might indicate the presence of a gun. The visual evidence helps support the officer's contention that the stop was reasonable.

BWC video offers DCAs an opportunity to see what happened.

Viewing the videos offers a number of advantages over reading a textual description of events. Prosecutors can use BWC video to identify additional witnesses and charges or opportunities for enhanced charges. Attorneys are uniquely qualified to make these types of judgments because they understand the case law and are able to recognize situations that qualify for additional/enhanced charges when legally warranted.

DCAs can see the demeanor of witnesses, suspects and victims as well as hearing what
they say and how they say it. This can be important during interviews of victims and witnesses.
It also allows attorneys to identify cases where witnesses appear on a video but are not listed in
the case file. This is a very important discovery and typically sparks additional investigation by
detectives to find the witness. Or in a situation where the parties know one another, the video
might reveal a credibility issue. If the victim has a credibility issue, the DCA is able to see each
side of the story.

DCAs can examine video for additional/enhanced charges. For example, an officer
responded to a domestic violence call and there is property destruction visible with the camera
footage and in the conversation but it did not appear in the report, the DCA may add a
vandalism charge. Or a DCA might identify enhanced charges based on seeing or hearing
something that the officer did not note in the report. This information would be lost without
the video record.

DCAs can intervene when police officers use inaccurate terms or are missing relevant
information in the reports. For example, the officer says they 'detained' a suspect but when the
video is watched it was actually a 'consensual encounter'. This is important in cases where the
facts of the case would not have warranted a detention but a consensual encounter was fine.
Or in reports describing chaotic situations, officers may not realize what happened outside their
line of sight but clarifying information may appear in another officer's video.

One aspect that was raised related to the use of video after the filing decision. In the case
of suspects, BWC video is very important when the suspect has an admission. When there is a
1538.5 (motion to suppress), they can check the video and see whether it substantiates

reasonable suspicion. To support probable cause, "those sorts of visuals they really do help support our cases" (DCA12).

There are several crime types for which BWC video is especially illuminating

Traffic offenses, especially impaired driving. In cases involving impaired drivers generally but especially the cases where the suspect refuses the FST, the videos are important to the filing decision. Often one can clearly see the guy is impaired. "I've found videos are critical"…"downtown juries don't always believe our officers" (DCA7). In cases where a lay person might look at video but the officers see something in that pattern that normal people do not, the video provides evidence that illustrates what the officer saw.

Family violence cases. Demeanor of the victim is very important. More than one DCA noted an example of where they originally thought the case might be a reject but after viewing the video they filed the case. BWC video is also important when the victim makes an "excited utterance," and may also be instrumental for proving a charge where the victim is otherwise recanting or minimizing.

Narcotics –A BWC video can illustrate a suspect making suspicious movements such as looking in cars that sparked the initial contact. An officer can initiate a consensual encounter legally, but for detention they need to have reasonable suspicion. The BWC video shows what they saw that led to the stop and the content of the interaction they had with the subject.

Crimes related to officers such as resisting, delaying or obstructing an officer (PC 148), battery on officer (PC 243b), and obstructing/resisting/threatening/using force or violence on an officer (PC 69). Another type of case that BWC video can be important is for 422 allegations (criminal threats) because the sole basis is the officer's word which makes them harder to

prove. Lastly, videos can be key for crimes where an officer is the only witness such as narcotics, weapon possession, etc.

Policy related to BWC videos

The DCAs thought it was important to develop a uniform policy for the use of BWC video across all the branches. At the same time, some thought it important that attorneys retain discretion as to whether they review available BWC video before making the filing decision.

Prosecutors are legally obligated to comply with discovery and disclosure laws. If prosecutors turn over a BWC video, satisfying their discovery and/or disclosure obligation, but have not watched/ listened to that video, they do not know whether that video indicates the existence of additional evidence and what that evidence may be. Depending on what is contained in the video, the prosecutors may end up unintentionally and unwittingly violating discovery or Brady disclosure rules.

Conclusions from the focus groups

The major challenge to using BWC video is understaffing. Filing DCAs, especially on custody cases, do not have the time to consider any other evidence than what arrives within the "four corners" of the report. If they do want to consider it, they will have to ask for help from other filing attorneys to complete their assigned caseload in the allotted time.

Beyond this main challenge, there are a wide variety of challenges that exist including: 1) the need for automatic access to BWC video; 2) the amount of time required to watch it to find the critical parts, 3) the differential quality of video; as well as 4) a variety of technical issues. But the DCAs also recognize a large number of potential benefits from having BWC video to

inform the filing decision including the potential to: 1) substantiate officer testimony; 2) hear witness, suspect and victim interviews and observed demeanor; and 3) identify enhanced or additional charges.

The findings from the focus groups support future funding for staffing to review BWC videos at the filing stage, and also are consistent with the decision by the LACA to request and the LA City Council to fund initial staffing resources to comply with constitutional, statutory and ethical discovery and disclosure obligations. That initial funding explains why Prosecution Technology Unit staff were trained and instructed that those obligations were the first and foremost priorities in its operation, thus resulting in its post-filing focus since its creation during the period of this study.

Findings from primary data collection component

During June and July of 2017, the sample of filing attorneys filled out surveys on the cases they filed. A total of 4,833 surveys were successfully matched to the official database. Overall, filing attorneys reported viewing the BWC video prior to filing/rejecting the case in 1.6% (n = 77) of sampled cases (n = 4,833). During the data collection period, LACA had been allocated no additional resources for the Office to deal with BWC evidence.

Influence of custody status on use of BWC video during filing decision

The rate of usage was more than twice as high for custody vs. non-custody cases.[13] BWC was viewed prior to filing/rejecting in 2.5% (n= 38 out of 1514) of the custody cases but only

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[13] We found a significant association between watching BWC evidence and whether the individual was in custody or not (X2(1)> = 11.816, p < .001).

1.1% (n= 39 out of 3,319) of the non-custody cases. This difference in usage rates may have

reflected the greater seriousness of the charges against someone who is still being held in

custody versus someone who has been released. It is especially surprising given the greater

time pressures associated with custody cases.

Cases where BWC video was not used during filing decision

The survey asked attorneys for their reasoning in deciding not to use BWC video to inform

their filing decisions (n=4,756). This section describes those 4,756 cases. The first question

asked which statement best described their knowledge about the presence of BWC for the case

(Table 3). Slightly more knew that the video was available (46%) than knew for sure it was not

available (40%). Technical reasons were not a factor preventing access although uncertainty

about whether video was available was still a factor in 14% of cases.

Table 3: Did you know if BWC video was available on this case

	Percentag	Freq.
Knew video was available	45.7	2174
Knew video was available but was not able to access it due to technical reasons	<0.1	4
Knew video was not available	39.9	1900
Did not know if video was available or not	14.2	676
No answer	<0.1	2
Total	**100.0**	**4833**

The survey also asked the reasons why attorneys did not view video for a case (see Table

4). For this question, attorneys could pick more than one response. The filing attorney felt the

case was clearly a reject or clearly should be filed without needing to review video evidence in

84% of responses. Another 7% felt like the BWC video would not have added information useful

to their decision. For only about 9% of cases would the attorney have liked to see the video but

was prevented by lack of access (< 1%) or lack of time (8%).

Table 4: What were the reasons (select all that apply) that you did not watch the video(s)?

Reason	Percentage	Freq.
Felt case was a reject / hearing without needing to see video(s)	41.7	1545
Felt case was clearly a filing without need to review the video(s)	42.6	1578
Felt BWC video(s) would not contain useful information	7.3	270
Would have liked to watch the BWC video(s), but did not have access to	0.5	18
Would have liked to watch the BWC video(s), but did not have the time to	8.0	297
Total	**100.0**	**3708**

Details for cases where BWC video was used during filing decision

We asked attorneys who decided to review the BWC evidence a series of questions about

their experiences with using it. Attorneys who decided to view video (n=77) reported an

average of 4.5 videos attached to each case (min = 1, max = 18) (see Table 5 for range). The

majority of cases (59%) had three or fewer videos.

Table 5: Frequency of videos associated with the case

Number of videos	Percentage	Freq.
1	11.7	9
2	29.9	23
3	16.9	13
4	10.4	8
5	11.7	9
6	2.6	2
7	1.3	1
8	3.9	3
11	2.6	2
13	1.3	1
14	2.6	2
15	1.3	1
17	1.3	1
18	2.6	2
Total	**100.0**	**77**

The survey also asked whether the attorney watched more than one video related to the case and how they watched the videos. In a slight majority of cases, attorneys watched more than one video (57.1%). In the rest of the cases, attorneys watched only one (42.9%) (Table 6). When asked for the best description of how attorneys watched the videos, most frequently they watched a few parts of more than one video (48.1%) followed by watching a few parts of one video (31.2%). In just under 20% of the cases, the prosecutor watched one or more videos in its entirety.

Table 6: Best description of how the attorney watched the video(s)

	Percentage	Freq.
Watched a few parts of one video	31.2	24
Watched a few parts of more than one video	48.1	37
Watched one video in its entirety	11.7	9
Watched more than one video, with at least one watched in its entirety	3.9	3
Watched more than one video in their entireties	2.6	2
Other: watched officer's personal BWC	1.3	1
No answer	1.3	1
Total	**100.0**	**77**

The survey asked how much time attorneys were spending watching videos. Almost half (48%) spent 15 minutes or less watching video (Table 7). Only 14% reported spending more than 30 minutes. Reported times ranged from 2 minutes to 75 minutes. The most frequently occurring times were 15, 20 and 30 minutes. The average time spent watching video was 20.6 minutes. Standard deviation was 13.3 minutes.

Table 7: Time spent watching video for the case

Time	Percentage	Freq.
<=15 minutes	48.1	37
16 - 30 minutes	37.7	29
> 30 minutes	14.3	11
Total	**100.0**	**77**

The overwhelming majority of respondents who looked at the available BWC video felt that it assisted in the filing decision (91%) (n = 70) (Table 8). The survey also asked how the BWC video assisted with the decision. Identifying demeanor was the most frequently

mentioned way in which BWC video assisted with the filing decision. The majority of

respondents found value in seeing the demeanor of the victims/witnesses (58.6%) and the

statements of the victims/witnesses (48.6%). A large proportion (40%) mentioned that seeing

the demeanor of the defendant was helpful. Importantly, just over 17% said the BWC video

showed some element of the offense not apparent in the report. Of those that did not think the

BWC video added value (n = 6), the biggest reason was that the video did not capture the

incident (Table 10) or did not capture the victim statement (part of the 'other' responses).

Three of the five 'other' responses mentioned that the victim statement either was not

captured or could not be heard as the reason BWC video was not helpful.

Table 8: Did BWC video assist in the filing decision

	Percentage	Freq.
Yes	90.9	70
No	7.8	6
No answer	1.3	1
Total	**100.0**	**77**

Note: The no answer respondent is excluded from Tables 9 and 10

Table 9: Ways in which BWC video(s) assisted in making the filing decision

	Of the 70 who said yes	
	Percentage	Freq.
BWC video showed some element of the offense not apparent in report	17.1	12
BWC video recorded victim/witness statements	48.6	34
BWC video showed demeanor of the defendant	40.0	28
BWC video showed demeanor of the victims/witnesses	58.6	41
BWC video showed evidence critical to the case	30.0	21
Other	17.1	12

Note: Respondents could mark more than one response.

Table 10: Reasons why BWC video(s) did not assist in making the filing decision

	Of the 6 who said no	
	%	Freq.
Poor image quality	0.0	0
Did not capture the incident	33.3	2
Did not add anything to the case	33.3	2
Other	66.7	4

Note: Respondents could mark more than one response.

Use of BWC video during filing decision and ultimate filing status

BWC video was viewed by the filing attorney 1.6% (n = 77) of the time and not viewed

98.4% (n = 4756) of the sampled cases matched to CCMS (n =4833) (Table 11). Cases where

video was viewed had a lower filing percentage (45.5% versus 51.9%) and a higher rejection

rate (45.5% versus 39.0%). If the same proportions occurred in a larger sample, it would suggest

that the use of BWC evidence by attorneys reviewing cases reduces the proportion of cases

being filed.[14]

Table 11: Issue status by whether or not the video was viewed

	Filed		Rejected		Hearing		Other		Grand total	
	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.
Not viewed	51.9	2467	39.0	1853	7.7	366	1.2	59	100.0	4756
Viewed	45.5	35	45.5	35	7.8	6	0.0	0	100.0	77
Grand Total	51.8	2502	39.1%	1888	7.7	372	1.2	59	100.0	4833

Use of BWC video during filing decision by type of offense

The charge types were grouped into 28 different offenses (Table 10). The decision to look

at video evidence varied by type of charge.[15] Filing attorneys decided to look at the BWC

evidence for the following charges with much greater frequency:

- Domestic violence
- Battery on a police officer
- Resisting arrest
- Assault with a deadly weapon (ADW)/firearm
- Driving under the influence (DUI)-refusal
- Weapons

These crime types were largely consistent with the ones indicated in the focus groups as

being likely to benefit from BWC evidence. In an attempt to provide guidance to prosecutors,

the offense types were grouped into three broad categories based on the likelihood that BWC

evidence could be relevant to the filing decision. Category A included all offenses likely to be

captured on BWCs, in whole or in part (Table 12). In other words, the entire offense is likely to

be captured on BWC or at least one element of the offense is likely to be captured on BWC.

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[14] No tests of significance were performed since more than 20% of cells have less than 5 observations.
[15] No tests of significance were performed since more than 20% of cells have less than 5 observations.

Category B offenses included all offenses not in Category A in which stronger circumstantial evidence is likely to be captured on BWCs, such as the effect of the offense (e.g., injury, damage, etc.), statements regarding the offense by the defendant, victim, and/or witness, and the demeanor of the defendant, victim and/or witness. Category C offenses included offenses not in Categories A or B in which weaker circumstantial evidence is likely to be captured on BWCs, if at all.

The results were not consistent with the hypothesized grouping of offenses by how likely it was that BWC evidence would provide relevant information. Category A offenses, those likely to have all or part of the offense captured by BWC video, accounted for a slightly smaller proportion of watched cases than non-watched cases. But Category B cases, those for which BWC video was likely to capture stronger circumstantial evidence such as the effect of the crime or statements and/or demeanor of the defendants, victims and/or witnesses accounted for a much higher proportion of watched cases than non-watched ones. Category C offenses, those for which BWC evidence was least likely to be helpful, were watched the least.

Table 12: Offenses by video viewed or not viewed

Category & crime types	Category	No		Yes		Total	
		%	Freq.	%	Freq.	%	Freq.
Category A		**98.52**	**1595**	**1.48**	**24**	**100**	**1619**
Battery on a peace/other	A	79.6	39	20.4	10	100	49
Drug Possession/Sale	A	99.4	480	0.6	3	100	483
DUI	A	99.4	338	0.6	2	100	340
DUI-refusal	A	94.9	37	5.1	2	100	39
False report to officer	A	100	10	0	0	100	10
Minor in possession of alcohol	A	100	3	0	0	100	3
Prostitution	A	100	331	0	0	100	331
Public Intoxication	A	100	11	0	0	100	11
Resisting Arrest	A	88.2	30	11.8	4	100	34
Under the Influence of Drugs	A	100	26	0	0	100	26
Vehicle Violations	A	99.2	262	0.8	2	100	264
Weapons	A	96.6	28	3.4	1	100	29
Category B		**97.87**	**2300**	**2.13**	**50**	**100**	**2350**
ADW/firearm	B	93.1	54	6.9	4	100	58
Assault and Battery	B	99.3	600	0.7	4	100	604
Disorderly Conduct	B	100	29	0	0	100	29
Disturbing the Peace	B	100	71	0	0	100	71
Domestic Violence	B	95.9	892	4.1	38	100	930
Fraud and Forgery	B	100	12	0	0	100	12
Lewd Conduct and Related	B	98.4	60	1.6	1	100	61
Trespassing	B	99.4	153	0.6	1	100	154
Vandalism	B	99.4	175	0.6	1	100	176
Violation of Court Order	B	99.6	254	0.4	1	100	255
Category C		**99.71**	**683**	**0.29**	**2**	**100**	**685**
Burglary/Shoplifting/Theft	C	99.8	487	0.2	1	100	488
Hit and Run	C	100	47	0	0	100	47
Other	C	99	97	1	1	100	98
Theft	C	100	7	0	0	100	7
Vehicle Theft/Tampering	C	100	45	0	0	100	45
Unknown Crime/Category		99.4	178	0.6	1	100.0	179
Grand Total		**98.4**	**4756**	**1.6**	**77**	**100.0**	**4833**

We found a significant association between watching BWC evidence and the category of crime represented by the primary charge ($X^2_{(3)}$ = 13.028, p < .01) (Table 13). This association was driven by higher than expected viewing of BWC evidence in Category B cases and lower than expected use to evaluate Category A and Category C crimes. This finding requires more in-depth investigation to determine why filing attorneys are deciding to view BWC video at a higher rate when statements and evidence is likely to be captured but not when the crime itself is likely to be on the video.

Table 13: Categories of offenses by viewed or not

| Crime Category | Viewed Video | | Total cases |
| | No | Yes | |
	Percent (Freq.)	Percent (Freq.)	Percent (Freq.)
Category A	98.5% (1595)	1.5% (24)	100.0% (1619)
Category B	97.9% (2300)	2.1% (50)	100.0% (2350)
Category C	0.3% (683)	0.3% (2)	100.0% (685)
Unknown category	0.6 % (178)	0.6% (1)	100.0% (179)
Grand Total	**98.4% (4756)**	**1.6% (77)**	**100.0% (4833)**

Summary of findings from primary data collection

The collection of primary data revealed new information about how prosecutors use BWC evidence in making the filing decision. In over 90% of the cases where video was reviewed, prosecutors felt it helped in making the filing decision. The most common way it was deemed helpful was in showing the demeanor of the victims or witnesses. The fact that an individual was in custody at the time of review was significant to whether BWC was viewed. In a large majority of cases (84%), the DCA already made the decision to file or reject without needing to review the video. Somewhat surprisingly, of the cases where BWC was viewed, there was a higher rejection rate than if it was not viewed. Similar to the outcomes from the focus groups,

the most common crime types where BWC was viewed were domestic violence, battery on an officer, resisting arrest, assault with a deadly weapon, driving under the influence-refusal and weapons-related offenses.

Findings from official data component

Descriptive and Bivariate Statistics

Growth of BWC Video Records

To describe the trends in BWC video records and viewing more completely, we include all available records between October 2015 and April 2018, including those that matched to CCMS (and thus used in subsequent analysis) and those that did not. Overall, there were a total 60,742 BWC video records during this period, of which 16,970 (27.9%) had been marked as viewed. Of the nearly 17,000 records that were viewed, 52.0% were viewed just once, 23.7% were viewed twice, 10.4% were viewed three times, 5.6% were viewed four times, and approximately 5.0% were viewed five or more times. In short, approximately one-quarter of the BWC video records had been viewed and most of these were viewed only once. Recall, multiple BWC video records often exist for a given incident because 1) multiple officers provide evidence or 2) records get duplicated whenever masking/redaction occurs. The original BWC video record is never altered, instead a copy of the video is edited when necessary resulting in the masking/redaction product. Of the 9,944 incidents with BWC video, slightly less than half (49.6%) of these incidents were marked as having had one or more of the BWC video records viewed.

To visualize how BWC may place increased demands on personnel and technology

resources, Figure 1 documents the number of BWC videos, gigabytes, and hours of video added

each month. BWC evidence was being added at a rate of roughly 1,000 new records per month

with only a slight upward trend during 2015 and 2016. Around January 2017, however, the

monthly number of BWC video records added each month began to surge and, as expected, so

did the gigabytes and hours of video. By April 2018, BWC video records were being added at a

rate of more than 4,000 per month. Figure 2 provides a window into BWC video viewing trends.

Less than 200 of the BWC videos added in October 2015 had been viewed. In April 2018, well

over 1,100 of the video records added that month had been viewed. Figure 3 demonstrates a

surge in the number of incidents with BWC video also beginning around January 2017. By April

2018, there were around 600 incidents added each month that had one or more BWC video

records associated with it (each incident had one or more videos as seen in Figure 1). Both

figures 1 and 3 demonstrate that LACA has been inundated with BWC video and that the issue

is worsening.

Figure 1. New BWC Video Records Added Each Month, October 2015 to April 2018

New BWC Video

Number of Videos Added   Gigabytes of Video Added   Hours of Video Added
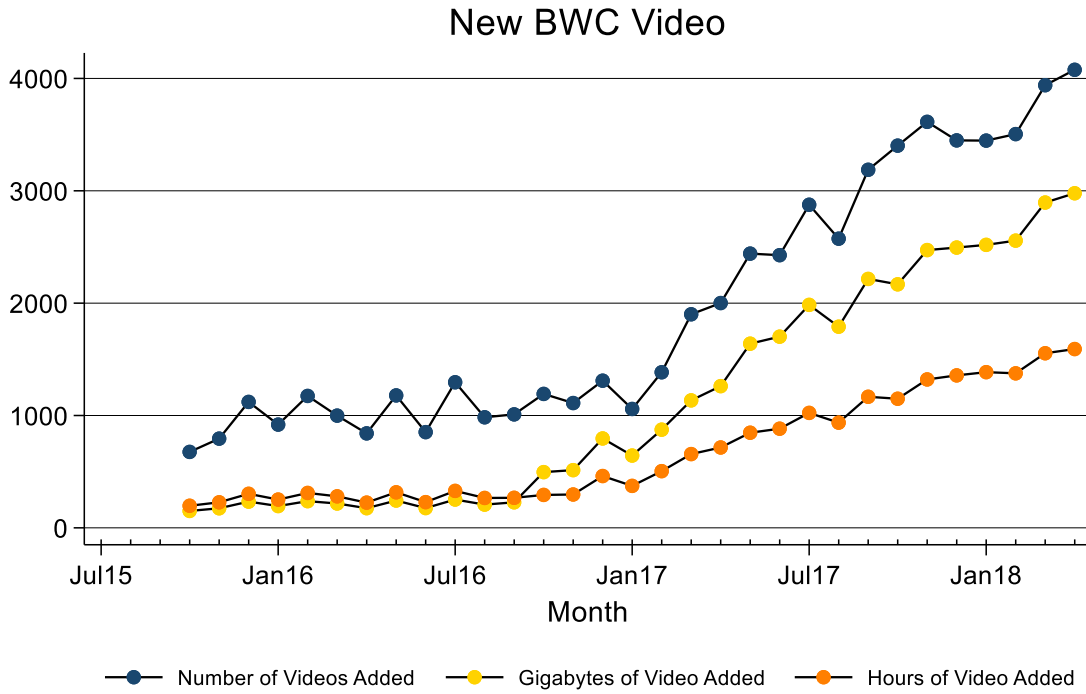
Figure 2. New BWC Video Viewed Each Month, October 2015 to April 2018

New BWC Videos and Views

New Videos Added   Videos Viewed
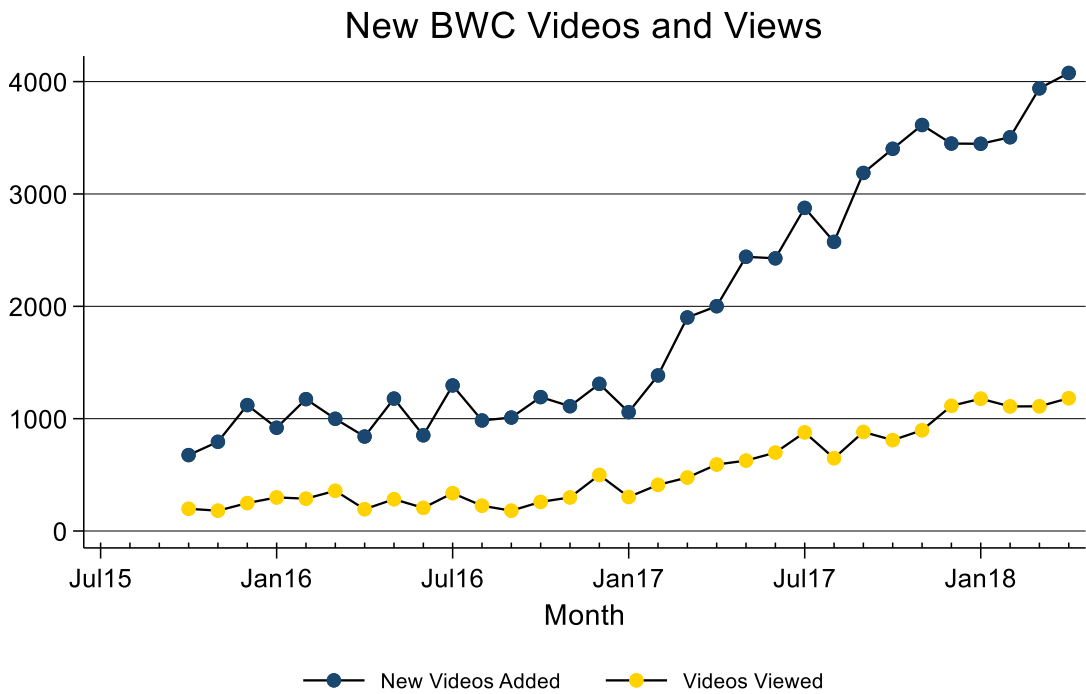
Figure 3. New Incidents with BWC Videos Added Each Month, October 2015 to April 2018
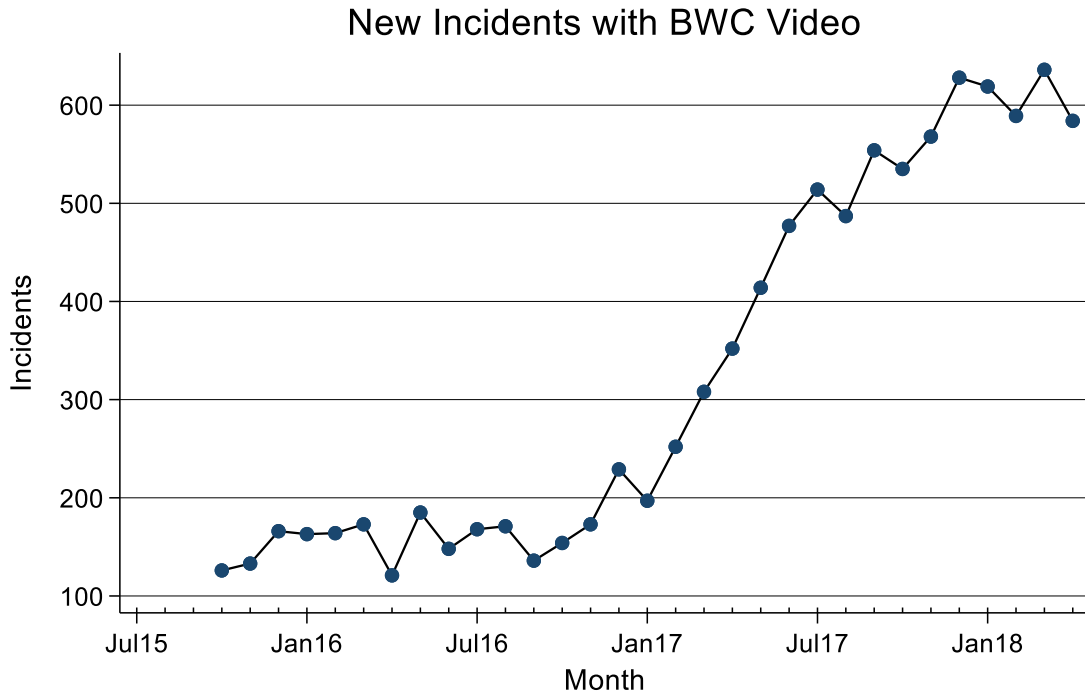
BWC Video Caseload

We now turn attention to cases with BWC evidence that were successfully matched to CCMS. Table 1 shows that over 60 percent of the cases with BWC video originated as LAPD misdemeanors and approximately 40 percent originated as felony referrals either from police or the District Attorney. Table 2 illustrates an uneven distribution of cases with BWC video across branches during the study period. Specifically, five branches/units, including North Valley, Central, Metropolitan, Van Nuys, Family Violence, have approximately 90 percent of the cases with BWC videos, whereas the other six branches/units combined have approximately 10 percent. Some of this variation is due to volume of caseload whereas some is due to temporal variation in BWC deployment within LAPD.

Crime Types and Crime Categories of BWC Videos

There were a total of 225 distinct charges among the cases with BWC evidence. Beginning first by examining individual charge codes, Table 14 lists the top 20 most frequent charges and two findings are particularly noteworthy. First, 'spousal battery' and 'domestic battery involving a dating relationship' are both among the top five charge codes. Spousal battery, by itself, constitutes nearly one-fifth of all cases with BWC evidence. Second, seven of the top twenty charges are related to driving under the influence (DUI). While understanding the particular charge codes that result in BWC evidence being made available to prosecutors is informative, it is useful to synthesize this information by viewing frequencies by charge type. The 225 charges were classified into 26 crime types (see Appendix D). Table 15 shows crime type frequencies for cases with BWC evidence. The top three crime types include: domestic violence (26%), DUI (17.8%), and assault and battery (11.5%).

Table 14. *Charge Frequencies of Cases with BWC Video*

Charge Code	Description	%	Freq.
PC273.5(a)	Spousal battery	19.2	1035
VC23152a	Driving under the influence of alcohol	7.9	424
PC242	Battery	5.8	314
PC242/PC243(e)(1)	Domestic battery involving dating relationship	5.6	300
VC23152a/77	DUI refusal	3.8	207
PC594a	Vandalism	3.7	197
VC23152b	Driving with unlawful blood alcohol	3.4	184
PC484a/PC490.2(a)	Petty Theft	3.2	170
PC422(a)	Criminal threats	2.9	157
VC23152a/no prior	Driving under the influence/no prior	2.5	136
PC245(a)(1)	ADW- weapon or instrument other than firearm	2.1	115
VC14601.2a	Driving on a suspended license/DUI	1.9	103
HS11377(a)	Possession of a controlled substance	1.8	99
PC273.6(a)	Violation of protective/restraining order	1.8	99
VC10851(a)	Driving or taking a vehicle without consent	1.5	81
VC23152f	Driving under the influence of a drug	1.5	80
PC166(c)(1)	Contempt of court - protective order	1.5	79
VC20002(a)	Hit and run driving resulting in property damage	1.4	74
PC148(a)(1)	Resisting a public/peace officer or EMT	1.4	73
VC23152a/pr	Driving under the influence w/prior	1.3	70
…		…	…
N			5378

Note: Only the top 20 charge codes are listed out of 225 total.

Table 15. *Crime Type Frequencies of Cases with BWC Video*

	%	Freq.
Domestic Violence	26.0	1399
DUI	17.8	959
Assault and Battery	11.5	619
Vehicle Violations	6.2	332
Burglary/Shoplifting/Theft	5.2	277
DUI-Refusal	4.5	242
Vandalism	4.3	233
Violation of Court Order	3.6	194
Drug Possession/Sale	3.1	167
ADW/Firearm	2.9	155
Weapons	2.7	146
Trespassing	2.2	117
Vehicle Theft/Tampering	2.1	111
Resisting Arrest	1.5	82
Hit and Run	1.5	82
Battery on a peace/other officer	1.1	61
Disturbing the Peace	1.0	56
Other	1.0	56
Lewd Conduct and Related	0.8	41
Fraud and Forgery	0.3	14
Prostitution	0.2	11
False Report to Officer	0.2	9
Disorderly Conduct	0.1	5
Under Influence of Drugs	0.1	5
Public Intoxication	0.1	5
N		5378

Table 16 shows that approximately 38% of cases with BWC video fall into *category A*, which are offenses that are likely to be captured on BWC, in whole or in part. Nearly 50% fall into *category B*, which involve offenses likely to contain strong circumstantial evidence (e.g., demeanor, statements, injury, or damage). Finally, a little more than 12% of cases fall into *category C*, where only predictably weaker circumstantial evidence, if any, is likely to be captured on BWC.

Table 16. *Crime Category Frequencies BWC Video by Crime Type*

	%	Freq.
Category B	49.8	2678
Category A	37.5	2019
Category C	12.7	681
N		5378

BWC Video Viewing and Outcomes

Figure 4 illustrates the prevalence and timing of viewing of BWC evidence. Nearly 47.7% of cases with BWC evidence were not viewed at all. Another 44.7% of cases with BWC evidence were viewed *after* the filing decision was already made, likely viewed in preparation for discovery and/or trial. Prosecutors viewed only 7.6% of cases with BWC video prior to making a filing decision. Thus, the official data suggest that prosecutors view BWC evidence to potentially aid their filing decision in, at most, only 8 out of every 100 cases where BWC evidence is available.[16] This finding indicates a higher level of BWC viewing prior to the filing decision in the official data (October 2015 - April 2018) as compared to the evidence both from the focus groups (March 2017) and from the primary data collection (June 2017 - July 2017) analyses— the latter of which found BWC was viewed in 1.6% of cases, suggesting that BWC viewing prior to the filing decision may have increased since and as a result of the focus groups and primary data collection. Additionally and contextually, during most of the entire period of this study, it is important to note that the LACA had been given no additional resources to deal with BWC

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[16] Based on 755 (i.e., a 7.6% viewing rate for all the 9,944 cases with BWC video evidence) out of 206,288 cases during the study period.

evidence, and when resources were allocated, those resources were devoted to post-filing

discovery and disclosure obligations.

Figure 4. Prevalence and Timing of BWC Video Viewing

Cases with BWC Video(s) Matched to CCMS (n=5,935)
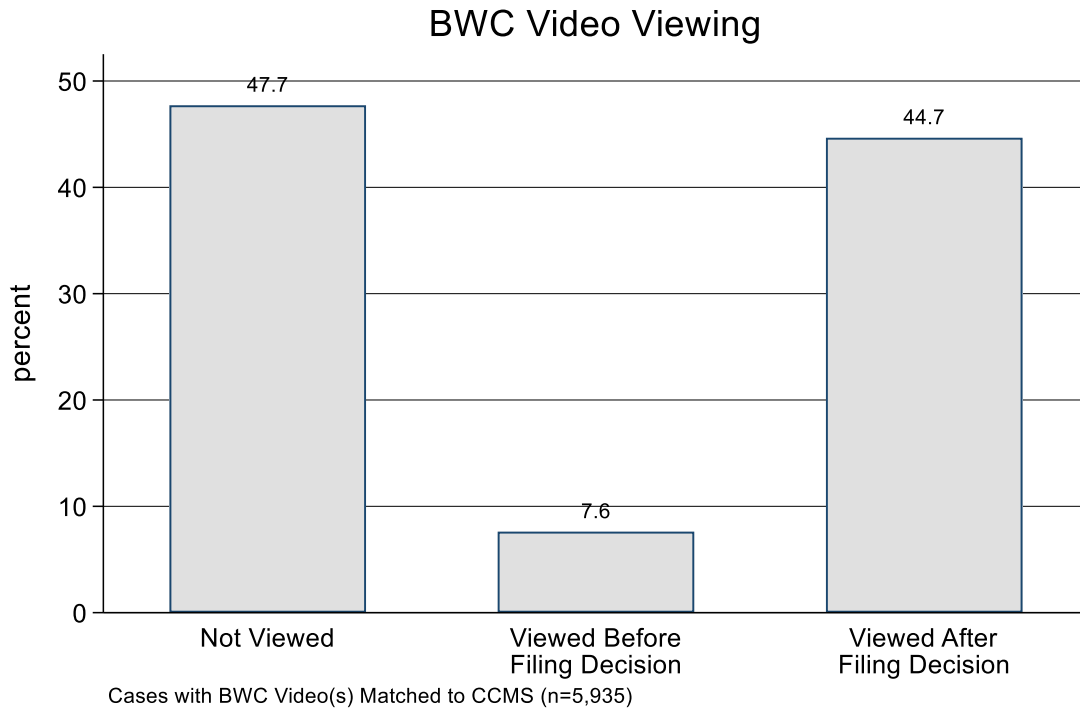
Tables 17 and 18 illustrate filing decisions for the cases with BWC evidence between

October 2015 and April 2018. Overall, more than 80% of cases with BWC evidence resulted in

misdemeanor filing outcomes (see Table 17). Table 19 shows that filing outcomes and BWC

viewing are significantly associated at the bivariate level ($p < 0.05$). Nearly 96% of cases with

BWC evidence that were viewed for the first time after the filing decision date were filed cases.

BWC videos in these cases are likely being viewed as part of discovery processes, plea

negotiations and/or trial preparation which creates a causal order problem with the official

data. As such, these cases will be excluded from the later analyses. Interestingly, 72.5% of cases

with BWC video that were *not* viewed were filed, whereas 64.1% of cases that were viewed

before the filing decision date were filed. Though not an especially large difference, this raises

the possibility that the knowledge of BWC availability increases likelihood of filing a case, but

less so than actual video viewing. The overall filing rate for all cases during the study period was

considerably lower—52.4% for all offenses. The filing rates were 63.7% for all offenses during

the study period that had the same charge codes as the subset of charges with BWC video.

Table 17. *Filing Outcome Frequencies of Cases with BWC Video*

	%	Freq.
Misdemeanor Filed-Custody	35.5	2090
Misdemeanor Filed-OR	22.2	1307
Misdemeanor Filed-Bail	13.4	787
Misdemeanor Reject-Lack of Sufficient Evidence	9.7	573
Misdemeanor Filed-VA	9.5	561
Hearing	5.9	350
Misdemeanor Filed-Warrant	1.0	56
Misdemeanor Filed-Writ	0.8	49
Case Filing Under Investigation	0.5	32
Misdemeanor Reject-Interest of Justice	0.3	20
Misdemeanor Reject-Other-Ind. Reason in MEMO	0.3	15
Misdemeanor Reject-Combined w Other Cases	0.2	14
Misdemeanor Reject-Victim Unavailable	0.2	13
Misdemeanor Reject-Inadmissible S & S	0.1	7
Misdemeanor Reject-Further Investigation	0.1	6
Misdemeanor Reject-Defer Parole Revocation	0.1	4
Misdemeanor Reject-Any Dismiss Other Than A-L	0.1	3
Other	0.0	2
Misdemeanor Reject-Lack of Corpus	0.0	1
Misdemeanor Reject-Refer Non-Cal Jurisdiction	0.0	1
PV in Lieu	0.0	1
N		5892

Table 18. *Filing Outcome Frequencies of Cases with BWC Video*

	%	Freq.
Misdemeanor File	82.3	4850
Misdemeanor Reject	11.2	657
Hearing	5.9	350
Other	0.6	35
N		5892

Table 19. *Filing Decisions across BWC Viewing*

	Misdemeanor Reject		Misdemeanor File		Hearing		Other		Total	
	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.
Not Viewed	16.6	467	72.5	2036	10.2	286	0.6	18	100	2807
Viewed Before Filing Decision	28.1	126	64.1	287	7.1	32	0.7	3	100	448
Viewed After Filing Decision	2.4	64	95.8	2527	1.2	32	0.5	14	100	2637
N									5892	

X^2=666.6, p<0.01

BWC Video Viewing across Crime Types and Categories

Table 20 illustrates the relationship between BWC video viewing and crime type

(X^2=493.9, p<0.01). For most crime types, less than 10 percent of the cases with BWC evidence

are viewed prior to the filing decision. For all but five of the crime types, analyses of adjusted

residuals reveals that viewing of BWC evidence prior to the filing decision occurs at rates no

different or even lower than expected based on chance alone. However, viewing of domestic

violence (9.4%), battery on a peace/other officer (21.3%), resisting arrest (29.3%), disorderly

conduct (40.0%), and DUI-refusals (25.2%) occurred at rates greater than expected by chance

(p<0.01). Similar to the focus group and primary data collection findings, BWC evidence is likely

seen as more useful for filing decisions for these types of crimes.

Table 20. *BWC Viewing by Crime Type*

	Cat.	Not Viewed		Viewed Before Filing Decision		Viewed After Filing Decision		Total	
		%	Freq.	%	Freq.	%	Freq.	%	Freq.
Category A		**38.6**	**779**	**8.4**	**170**	**53.0**	**1070**	**100**	**2019**
Battery on a peace/other officer	A	31.1	19	21.3	13	47.5	29	100	61
Drug Possession/Sale	A	44.3	74	9.6	16	46.1	77	100	167
DUI	A	42.5	408	4.2	40	53.3	511	100	959
DUI-Refusal	A	26.0	63	25.2	61	48.8	118	100	242
False Report to Officer	A	88.9	8	0.0	0	11.1	1	100	9
Prostitution	A	27.3	3	0.0	0	72.7	8	100	11
Public Intoxication	A	40.0	2	0.0	0	60.0	3	100	5
Resisting Arrest	A	30.5	25	29.3	24	40.2	33	100	82
Under Influence of Drugs	A	40.0	2	0.0	0	60.0	3	100	5
Vehicle Violations	A	38.9	129	2.7	9	58.4	194	100	332
Weapons	A	31.5	46	4.8	7	63.7	93	100	146
Category B		**52.7**	**1492**	**7.5**	**211**	**39.9**	**1130**	**100**	**2833**
ADW/Firearm	B	52.3	81	9.0	14	38.7	60	100	155
Assault and Battery	B	45.4	281	6.6	41	48.0	297	100	619
Disorderly Conduct	B	0.0	0	40.0	2	60.0	3	100	5
Disturbing the Peace	B	39.3	22	0.0	0	60.7	34	100	56
Domestic Violence	B	58.8	822	9.4	132	31.8	445	100	1399
Fraud and Forgery	B	14.3	2	7.1	1	78.6	11	100	14
Lewd Conduct and Related	B	19.5	8	9.8	4	70.7	29	100	41
Trespassing	B	46.2	54	2.6	3	51.3	60	100	117
Vandalism	B	51.1	119	4.3	10	44.6	104	100	233
Violation of Court Order	B	53.1	103	2.1	4	44.8	87	100	194
Category C		**54.7**	**288**	**4.0**	**21**	**41.3**	**217**	**100**	**526**
Burglary/Shoplifting/Theft	C	62.1	172	1.1	3	36.8	102	100	277
Hit and Run	C	39.0	32	11.0	9	50.0	41	100	82
Other	C	44.6	25	5.4	3	50.0	28	100	56
Vehicle Theft/Tampering	C	53.2	59	5.4	6	41.4	46	100	111
Total			*2559*		*402*		*2417*		*5378*

X^2=493.9, p<0.01

Table 21 reports the relationship between BWC video viewing and the crime category variable (X^2=109.4, p<0.01). Though there are not especially large differences in the percentage of cases with BWC videos that are viewed prior to the filing decision across the categories, analyses of adjusted residuals provides statistical evidence that category A offenses are being viewed prior to the filing decision at higher rates, and category C offenses at lower rates, than expected by chance (p<0.05). Moreover, it is important to point out that for both category B and category C cases with BWC video available, not viewing the video at all (either before or after the filing decision) occurs more frequently than for category A offenses. Taken together, this suggests that BWC evidence for category A offenses is being used more frequently by prosecutors, both pre- and post-filing decisions, relative to category B and C offenses.

Table 21. *BWC Viewing by Crime Category*

	Not Viewed		Viewed Before Filing Decision		Viewed After Filing Decision		Total	
	%	Freq.	%	Freq.	%	Freq.	%	Freq.
Category A	38.6	779	8.4	170	53.0	1070	100	2019
Category B	52.7	1492	7.5	211	39.9	1130	100	2833
Category C	54.7	288	4.0	21	41.3	217	100	526
Total	*47.6*	*2559*	*7.5*	*402*	*44.9*	*2417*	*100*	*5378*

X^2=109.4, p<0.01

BWC Video Viewing: Offender and Video Characteristics

Table 22 reports mean differences in offender demographics and video characteristics for videos not viewed and those viewed prior to the filing decision. While there were no differences in video viewing with respect to age or race, gender is significantly associated with video viewing prior to the filing decision (p<0.05). Male offenders constitute 78 percent of individuals in cases with BWC video that was not viewed, but 82 percent of individuals in cases

in which BWC video was viewed prior to the filing decision. Compared to cases with videos that were not viewed, cases with videos that were viewed prior to the filing decision get to a filing decision about two months earlier on average (i.e., 673-614 = 59 days). This is not surprising and consistent with personnel additions hired by LACA to manage and handle BWC videos.

Table 22: *BWC Viewing: Offender and Video Characteristics*

	Not Viewed	Viewed Before Filing Decision	
	Mean	Mean	p
Age	34.27	34.28	
Male*	0.78	0.82	<0.05
Nonwhite*	0.85	0.85	
Total number of videos	5.99	6.51	
Total duration of videos (sec.)	7791.51	7787.20	
Filing decision date (days from October 2015)	614.45	673.50	<0.01

Note: Results of t-tests were similar to results from chi-square test for independence. Means (i.e., the proportion who are male or nonwhite respectively) are reported for simplicity.

Treatment Effect Estimates

Propensity Score Estimation and Covariate Balance

This section turns attention to estimating the impact of BWC video availability and viewing on filing rates and time to file. As aforementioned, the treatment effects analysis removes the cases with BWC video that were viewed after the filing decision to prevent upward bias in the estimates.[17] The details of the propensity score estimation and covariate balance appear in Appendix E. Briefly, treatment and control groups were successfully balanced across age, sex, race, agency, branch and, importantly, crime type. More specifically, 1-to-1 nearest neighborhood propensity score matching brought all covariate mean differences into balance

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[17] These cases were the focus of the additional staffing resources LACA received between August, 2017 and July, 2018 to comply with their post-filing constitutional, statutory, and ethical discovery and disclosure obligations to defendants.

within 10 percent of a standard deviation, indicating excellent balance. Similarly, the entropy

weights resulted in excellent covariate balance. The effects of BWC video availability (and

viewing) on filing rates (and time to file) can be estimated as casual effects (i.e., treatment

effects) under the assumption that there is no unmeasured confounding.

Treatment Effect Estimates: Filing Outcome

Table 23 contains the results of three alternative multinomial logistic regression models

predicting filing outcome, with coefficients exponentiated to represent relative risk ratios.

Relative risk ratios greater than 1 indicate positive effects, whereas those less than 1 indicate

negative effects. Model 1 is the unadjusted model that does not control for covariates, Model 2

is the entropy weighted model, and Model 3 uses the 1-to-1 propensity score matched sample.

Recall, outcomes include misdemeanor file, hearing, other, with misdemeanor reject serving as

the reference group.

Table 23. *Effects of BWC Video Availability on Filing Outcomes*

Outcome	Model 1 Unadjusted	Model 2 Entropy	Model 3 PSM
Misdemeanor File			
Video Available	1.86***	2.42***	2.49***
	(0.09)	(0.13)	(0.15)
Hearing			
Video Available	2.54***	1.26**	1.22*
	(0.21)	(0.11)	(0.12)
Other			
Video Available	0.64	0.65	0.59
	(0.16)	(0.16)	(0.16)
vs. Misdemeanor Reject			
Loglikelihood	-98141.50	-5050.82	-5096.32
X^2	201.27***	357.62***	274.32***

Treatment: Video Available.
Control: Video Not Available.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Exponentiated coefficients (i.e., Relative Risk Ratios) are reported. Standard errors are reported in parentheses.
Entropy=Entropy Weighted Control; PSM=Propensity Score Matched Sample

Across all three models, the relative likelihood of a case being filed, as compared to rejected, is significantly greater when BWC video is available as compared to when it is unavailable (p<0.001). Once accounting for covariates, the entropy weighted and PSM models reveal similar treatment effect estimates. Model 3, for example, suggests that the relative likelihood of a case being filed as compared to rejected is 2.49 times higher, or in other words 149 percent greater, when a case has BWC video as compared to when it does not (p<0.001). It should also be noted that the relative likelihood of sending a case to a hearing, as opposed to the case being rejected, is 22 percent greater when a video is viewed (p<0.05).

Table 24 contains the results of three alternative models estimating the effects of video viewing on filing outcomes. The unadjusted model suggests that the relative likelihood of a misdemeanor filing outcome is 43 percent lower when a video is viewed before the filing decision as compared to cases where available video was not viewed prior to the filing decision. However, once accounting for demographics, crime type, and other covariates, both the entropy weighted and propensity score matched models do not find that video viewing significantly reduces the likelihood that a case is filed. Compared to misdemeanor case rejection, the relative likelihood for a misdemeanor filing, case hearing, or other outcome are all lower but not significantly so.

Table 24. *Treatment Effects Estimates of BWC Video Viewing on Filing Outcomes*

	Model 1	Model 2	Model 3
Outcome	Unadjusted	Entropy	PSM
Misdemeanor File			
Viewed Before Filing Decision	0.57***	0.75	0.79
	(0.07)	(0.12)	(0.14)
Hearing			
Viewed Before Filing Decision	0.42***	0.72	0.69
	(0.11)	(0.20)	(0.22)
Other			
Viewed Before Filing Decision	0.53	0.22	0.20
	(0.41)	(0.17)	(0.23)
vs. Misdemeanor Reject			
Loglikelihood	-2142.25	-618.49	-545.37
X^2	21.60***	6.48	3.76

Treatment: Video Viewed Before Filing Decision.
Control: Video Not Viewed.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Exponentiated coefficients (i.e., Relative Risk Ratios) are reported. Standard errors are reported in parentheses.
Entropy=Entropy Weighted Control; PSM=Propensity Score Matched Sample

Table 25 contains the results of two alternative multinomial logistic regression models, an unadjusted model and a MMWS weighted model that estimate the effect of the multivalued treatment on filing outcomes. Turning attention to the MMWS model that accounts for covariates, results indicate that having a video available but not viewed is associated with a 178 percent greater likelihood of filing a case (p<0.001), whereas viewing an available video increases the likelihood a case will be filed, as compared to rejected, by 101 percent (p<0.01). That is, the relative likelihoods are 2.78 and 2.01 times greater. This finding is not surprising as the relative likelihood for video availability generally (i.e., when these categories were combined) was 2.49 (see Table 23). Post-hoc tests found the coefficients of 'viewed before filing decision' and 'not viewed' to not significantly differ (p=0.20), which confirms findings reported in Table 24.

Table 25. *Treatment Effects Estimates of BWC Video Availability and Viewing on Filing Outcomes*

Outcome	Model 1 Unadjusted	Model 2 MMWS
Misdemeanor File		
Not Viewed	2.03[***]	2.78[***]
	(0.11)	(0.22)
Viewed Before Filing Decision	1.16	2.01[**]
	(0.14)	(0.48)
Hearing		
Not Viewed	2.87[***]	1.50[***]
	(0.25)	(0.17)
Viewed Before Filing Decision	1.21	1.79
	(0.29)	(0.77)
Other		
Not Viewed	0.70	0.85
	(0.19)	(0.26)
Viewed Before Filing Decisions	0.38	0.13[**]
	(0.27)	(0.10)
vs. Misdemeanor Reject		
Loglikelihood	-98131.21	-67743.26
X^2	215.92[***]	213.25[***]

Multivalued treatment: 1) Video Not Viewed, 2) Video Viewed Before Filing Decision.
Control: Video Not Available.
[*] $p < 0.05$, [**] $p < 0.01$, [***] $p < 0.001$
Exponentiated coefficients (i.e., Relative Risk Ratios) are reported. Standard errors are reported in parentheses.
MMWS=Marginal Mean Weighting through Stratification

In sum, when BWC evidence is associated with a case, the likelihood that the case is filed increases. However, there is no discernable difference in case filing between videos that are not viewed and those that are viewed before the filing decision date.

Treatment Effect Estimates: Time to File

Table 26 contains the results of three alternative regression models predicting the effects of video availability on the filing time. Coefficients are unstandardized and, thus, represent the difference in filing time between cases with video availability and cases with no video in the metric of days from arrest to decision. Model 1 is the unadjusted model, Model 2 is the entropy weighted model, and Model 3 uses the 1-to-1 propensity score matched sample. All three models yield similar estimates for the effect of video availability on the time to file. Cases with BWC video available are filed approximately 17 days quicker as compared to cases without BWC video (p<0.001). However, results reveal that the filing time does not significantly differ by viewing for the cases with BWC video (see Table 27). Although the unadjusted models did suggest that filing times were about six days shorter when video was viewed before the filing decision as compared to when it was not viewed, both the entropy weighted and PSM models do not reveal significant differences in time to file across the video viewing treatment variable.

Table 26. *Effects of BWC Video Availability on Time to File*

	Model 1 Unadjusted	Model 2 Entropy	Model 3 PSM
Video Available	-17.73***	-16.59***	-17.95***
	(0.63)	(0.70)	(1.21)
F	791.15***	557.79***	221.38***

Treatment: Video Available.
Control: Video Not Available.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Standard errors are reported in parentheses.
Entropy=Entropy Weighted Control; PSM=Propensity Score Matched Sample

Table 27. *Effects of BWC Video Viewing on Time to File*

	Model 1 Unadjusted	Model 2 Entropy	Model 3 PSM
Viewed Before Filing Decision	-5.75***	-3.59	-3.95
	(1.53)	(1.85)	(2.60)
F	14.15***	3.76	2.30

Treatment: Video Available.
Control: Video Not Available.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Standard errors are reported in parentheses.
Entropy=Entropy Weighted Control; PSM=Propensity Score Matched Sample

Table 28 contains the results of two alternative multinomial logistic regression models, an unadjusted model and a MMWS weighted model, that estimate the effect of the multivalued treatment on filing outcomes. Consistent with findings from the video available treatment (see Table 17), results indicate that video available but not viewed results in a filing outcome 16 days quicker (p<0.001), and that video viewed before the filing decision results in an outcome 14 days quicker (p<0.001), as compared to similar cases that do not have BWC video.

Table 28. *Effects of BWC Video Availability and Viewing on Time to File*

	Model 1 Unadjusted	Model 2 MMWS
Not Viewed	-16.96***	-15.90***
	(1.12)	(0.88)
Viewed Before Filing Decision	-22.71***	-14.43***
	(2.79)	(3.09)
F	147.43***	173.20***

Multivalued treatment: 1) Video Not Viewed, 2) Video Viewed Before Filing Decision.
Control: Video Not Available. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Standard errors are reported in parentheses.
MMWS=Marginal Mean Weighting through Stratification

In sum, cases with BWC evidence, regardless of whether the evidence is viewed or not, are decided upon roughly two weeks quicker on average. It is important to reiterate here that the filing decision date is not directly tracked by LACA and, thus, this finding is under the assumption that the case entry date is a reasonable proxy for the case decision date.

Treatment Effect Estimates across Crime Categories

Figure 9 illustrates the conditional marginal effects of BWC video availability, irrespective of whether it is viewed or not, on filing outcome. If BWC evidence for a case is available, the case is more likely to be filed and less likely to be rejected across all three crime categories. Interestingly, this effect appears to be the weakest for Category A offenses, or cases in which BWC evidence is likely to contain the incident, at least in part, directly on camera. The effect is strongest for Category B offenses, or those offenses that likely contain strong circumstantial evidence (e.g., demeanor, victim statements, injury), and similar to the effect size for Category C offenses. Importantly, in addition to the confidence intervals for the misdemeanor file not overlapping with zero, Category A offenses do not overlap with Category

B or C offenses (see yellow in Figure 9). Thus, the effect of BWC video availability on filing

outcome does appear to significantly vary across crime category.
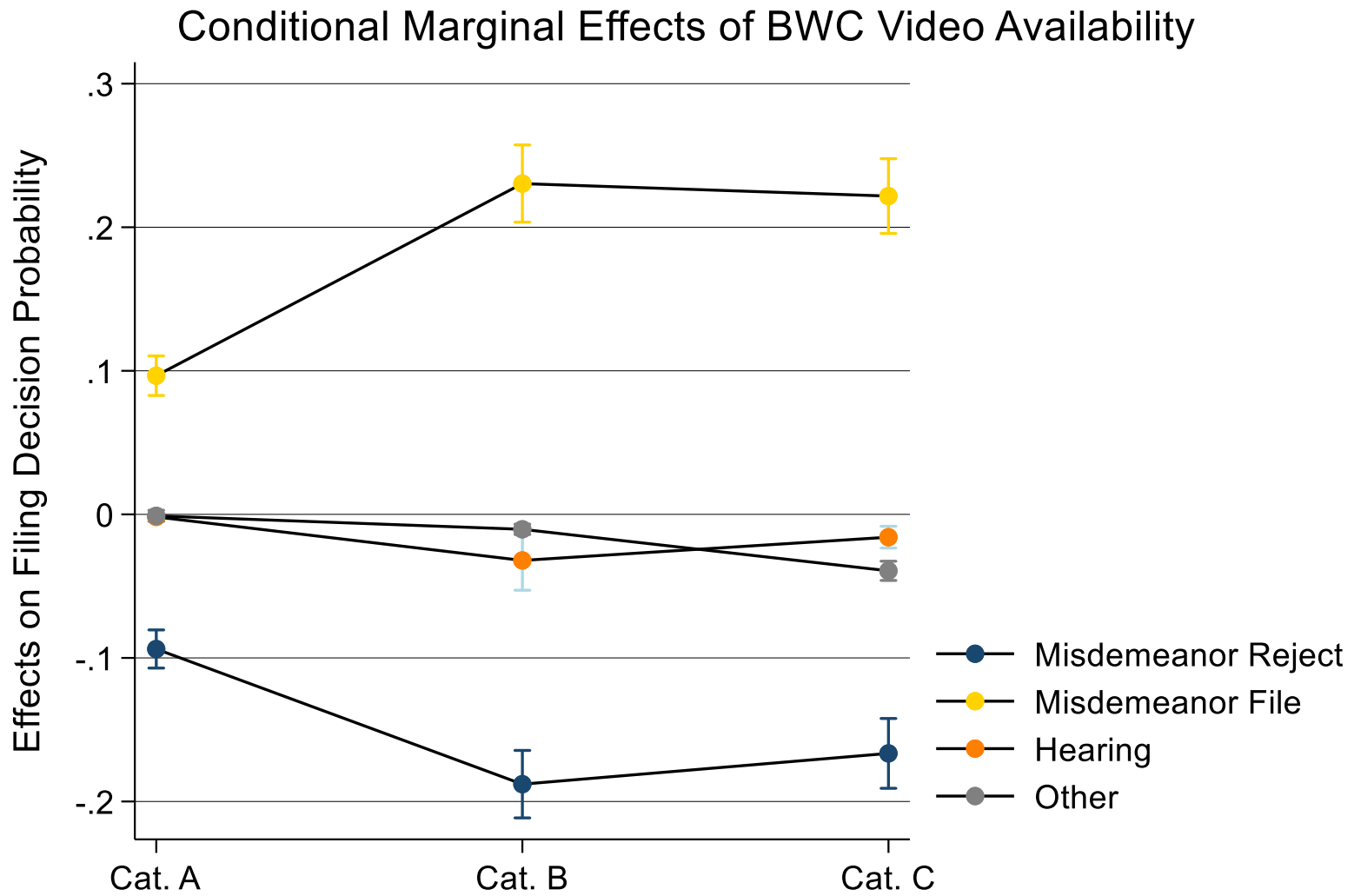
Figure 9. Conditional Marginal Effects of Video Availability on **Filing Outcome**

Figure 10 shows the conditional marginal effects of BWC video viewing, for cases where BWC video is available, on filing outcome. For Category A offenses, cases are less likely to be filed and more likely to be rejected if available BWC video is viewed prior to the filing decision. The confidence interval does not overlap with zero, suggesting this is a significant finding. For Category B offenses, however, there is no significant change in the probability of filing a case when video is viewed as opposed to not viewed. Though the estimate of the effect is largest for Category C offenses, the confidence interval overlaps with zero. Thus, as was the case for Category B offenses, viewing BWC video does not appear to change the filing outcome of the case. Overall, confidence intervals for the misdemeanor filing outcome overlap with one another across the three crime categories, which suggests there is insufficient evidence to support the conclusion that the effect of BWC video viewing differs across crime categories.
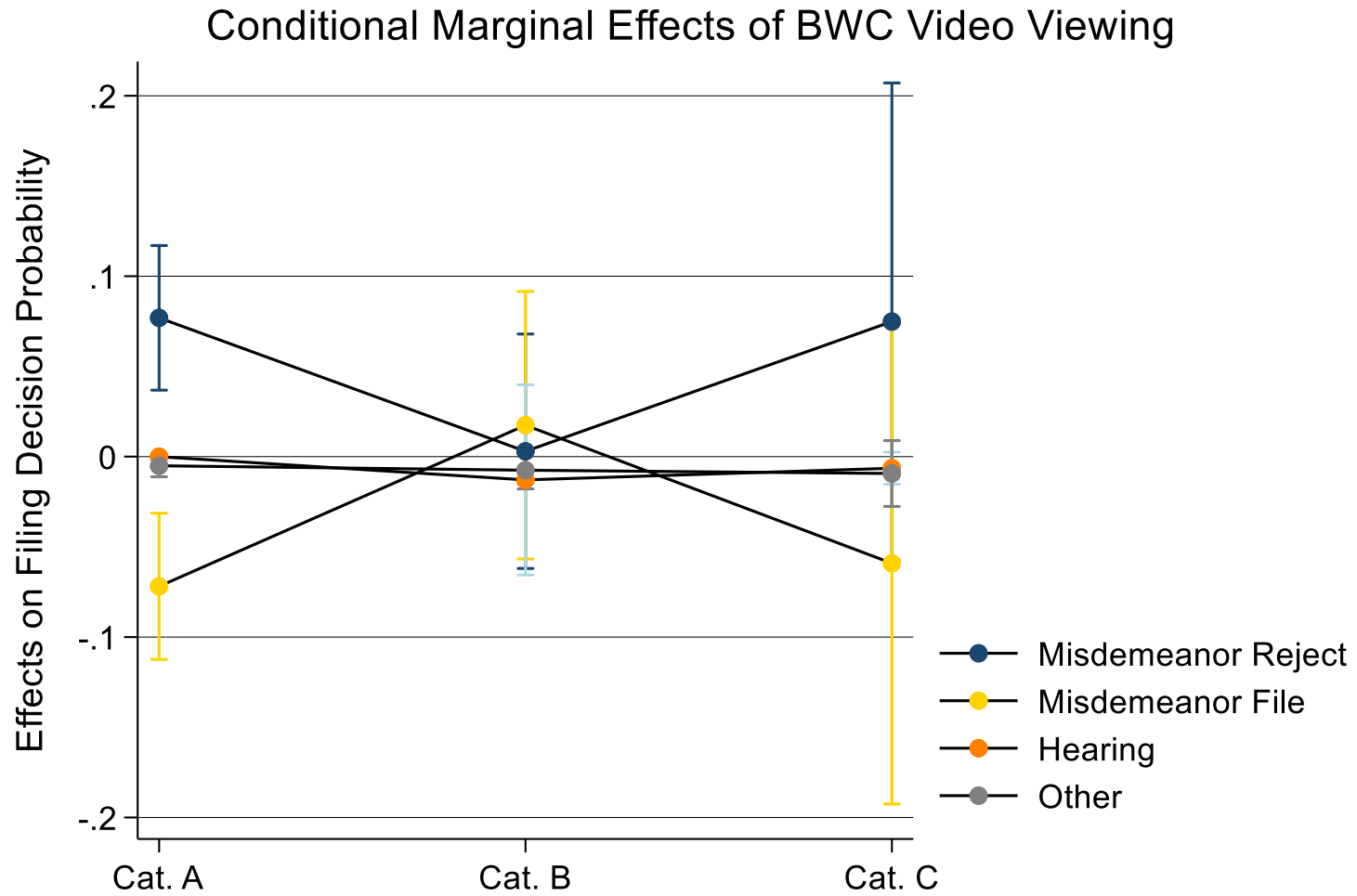
Figure 10. Conditional Marginal Effects of Video Viewing on **Filing Outcome**

Figure 11 illustrates the conditional marginal effects of BWC video availability on time to file. Recall, estimates suggested that cases with BWC video had a filing decision made about 17 days shorter on average (see Table 17). Across all crime categories, BWC video availability is associated with significantly quicker filing decisions net of covariates. While Category C offenses are estimated to result in a decision over 20 days quicker, as opposed to approximately 16 days for Category A and B offenses, the confidence intervals overlap, and these differences are not statistically significant.
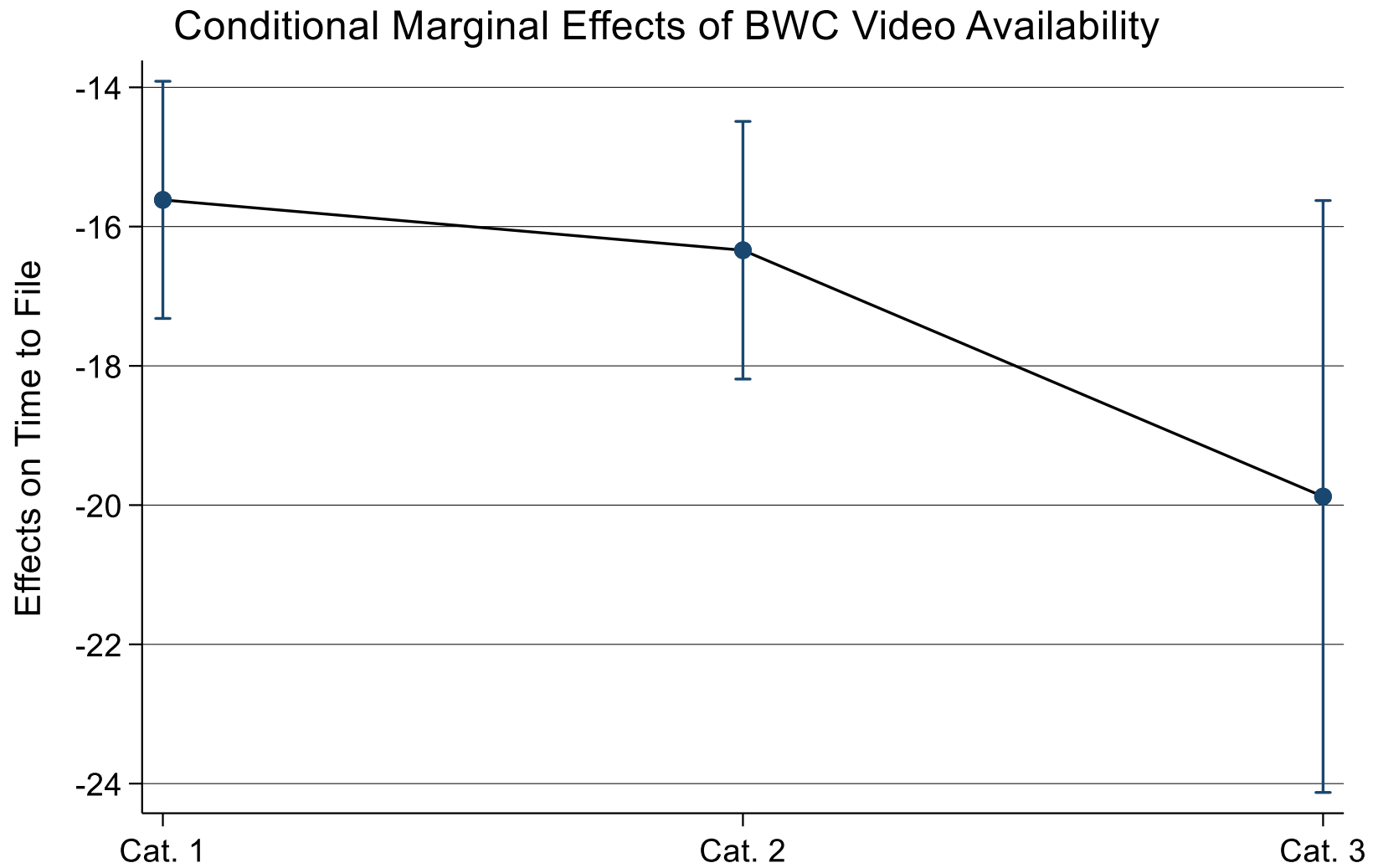
Figure 11. Conditional Marginal Effects of Video Availability on **Time to File**

Finally, Figure 12 illustrates the conditional marginal effects of BWC video viewing on time to file. For Category A and Category C offenses, BWC video viewing does not significantly impact the time to file as the confidence intervals contain zero. For Category B offenses, viewing a BWC video before the filing decision significantly reduces filing time by approximately one week, as compared to similar cases with BWC evidence but when that evidence is not viewed. However, the confidence intervals for the effect across the categories overlap and thus the effects are statistically indistinguishable across crime categories.
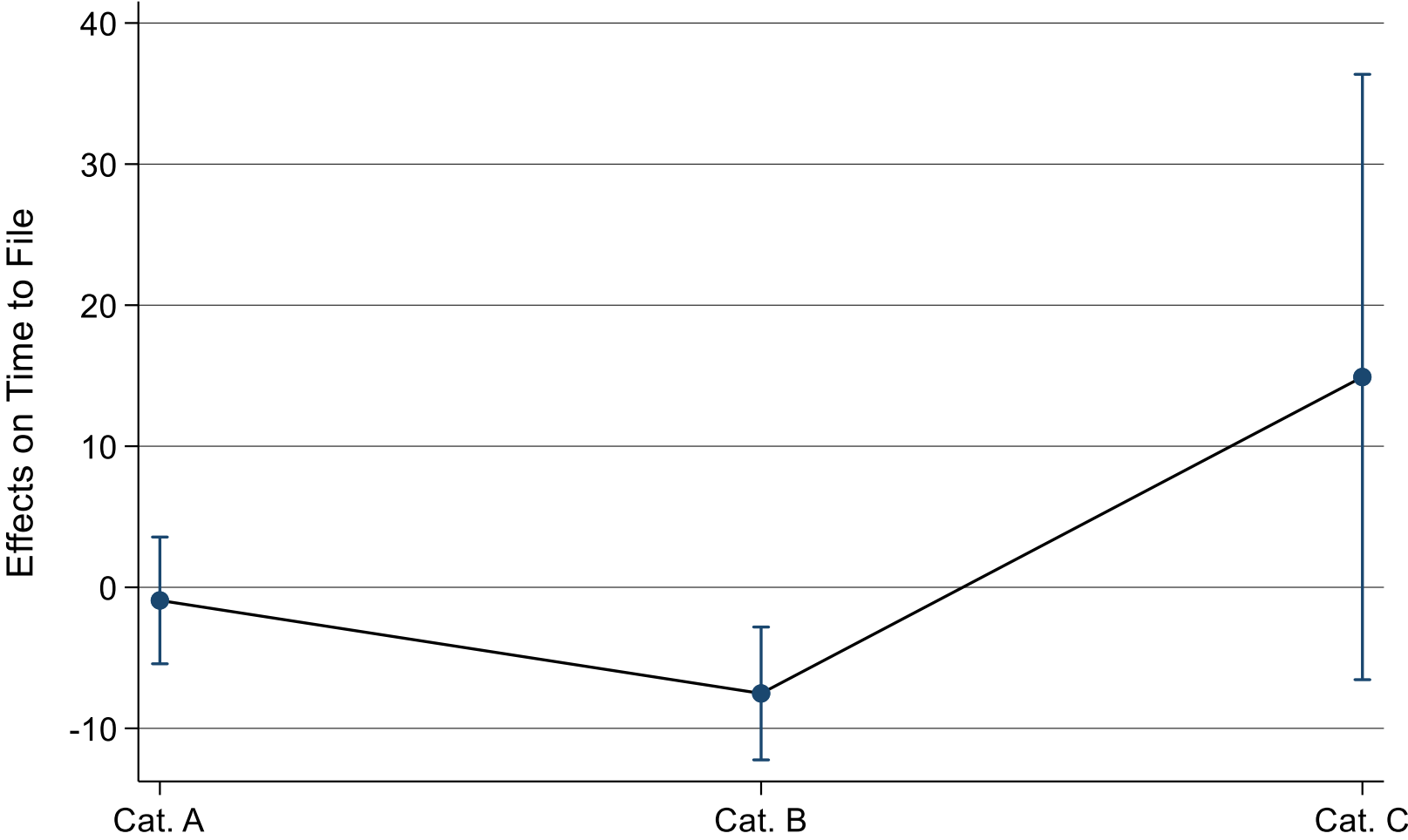
Figure 12. Conditional Marginal Effects of Video Viewing on **Time to File**

Discussion

This study provides early evidence revealing the scope of the challenges faced by the LACA (and prosecution agencies more generally) as they begin to integrate BWC video into their filing decisions. This section integrates the major findings from our multi-method examination which draw from focus groups of filing attorneys to uncover the benefits and challenges of using BWC video, primary data collection to identify current practice, and secondary data analysis to uncover relationships that persist even while taking into account related factors. Findings related to the research questions are presented first, followed by additional major findings. Implications for policy, practice and future research directions are also addressed.

Main research questions

Does the mere presence of BWC evidence change filing rates?

Across the entire study period, cases where BWC evidence had been shared by LAPD with LACA via Evidence.com represented a very small fraction of all cases. But, LACA's access to BWC video for cases is rapidly accelerating (see Figure 3). Primary data revealed that attorneys frequently know whether BWC video is available as they are making the filing decision. Analyses of official data found that cases were significantly more likely to be filed when BWC video evidence was available as compared to when it was unavailable, net of offender demographics, the month and year of the filing decision (i.e., case entry date), branch, agency, and crime type. Although there is an overall relationship, adjusted residuals do not suggest these specific cells have observed values different than would be expected by chance. A trend in the same general

direction was observed in the primary data too (see Appendix F), but there was little

substantive difference in the filing rates in this case. As BWC video becomes increasingly

available, more research is needed to determine whether the mere availability of BWC video, as

a single piece of unique evidence, impacts the filing decision—even when the video itself is not

viewed.

What are the factors that influence whether filing attorneys evaluate BWC evidence when making filing decisions?

The primary data collection suggests that custody status is one important factor. The

workload of the average DCA is extremely high. There are additional time pressures when the

accused is in-custody which require a quick filing decision. Somewhat counter-intuitively, the

BWC evidence was viewed over twice as frequently as in non-custody cases. This may be

because cases in which the person is still in custody involve more serious charges but more

investigation of this finding is needed.

Another important factor is whether the attorney felt the case was a clear candidate for

filing or for rejection. DCAs reported that in over two-thirds of cases (84.3%) in our sample,

they did not use the BWC video because they knew the case was a file or reject without it. Thus,

it seems that DCAs were reviewing the hard-copy case file first and only turned to BWC

evidence when the evidence in the paper case file was less certain. Of course it might also be

because of the type of crime which is discussed below.

Does the decision to evaluate BWC evidence during evaluation for filing vary by crime type?

One question of interest is whether there are certain crime types for which BWC video might be more relevant. Consistent with empirical findings (Grossmith et al., 2015; Katz et al., 2014; Morrow et al., 2016; Owens et al., 2014), DCAs suggested that BWC video would be pertinent to domestic violence cases. DCAs also identified the following types of offenses as likely to benefit from having a BWC at the scene: driving under the influence (DUI) especially when the driver refused a field sobriety test; assaults on officers and resisting arrest; and narcotics. The data showed that domestic violence cases were viewed at a higher rate (primary data 4.1% and official data 29.4% versus 1.6% overall). This was also true for DUI cases (primary 5.7% and official 9.4%). Other crime types for which usage was much higher than expected were battery on a police officer (primary 20.4% and official 21.3%) and resisting arrest (primary 11.8% and official 29.3%). Narcotics offenses were not viewed more frequently. These findings are used to support a policy recommendation below.

Additional Major Findings

Low BWC Usage Rates in the Filing Decision

All three data sources —focus groups, primary data, and official data— suggest low BWC usage rates over the study period. Quantitative data revealed viewing rates prior to filing decisions were under 8% of cases reviewed. Low usage rates were suggested by the focus group participants and then confirmed by the two-month primary data collection effort, which provided a window into prosecutors' thinking as they are making decisions on cases, and found

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BWC video was used in the filing decision only 1.6% of the time. Official data revealed only 7.6% of cases with BWC video evidence were flagged as viewed before the filing decision. Prosecutors offered a number of reasons including: time sensitive nature of cases, time-consuming nature of video viewing, differences in ease of access to video and video quality, and limited bookmarking and inconsistent video identification used by LAPD. When viewed with these insights from prosecutors, coupled with the aforementioned fact that LACA was operating without added personnel for much of the study period, the low BWC viewing rates may not be especially surprising. However, it does not change the fact that, even when available, the filing decision is typically made without viewing BWC video. Adding personnel for the purpose of making the filing decision should change that.

BWC Video Reveals Demeanor and Other Visual Aspects of the Crime

DCAs see many potential benefits of having BWC video to assist with the charging decision. This view was reinforced when an overwhelming majority of DCAs (91%) who looked at the video felt that it assisted in the filing decision. This was mainly due to video which showed the demeanor of victims and witnesses generally and during their official statements. Greater ability to factor the demeanor of the defendants into the charging decision was also mentioned as was seeing some element of the crime that was not in the report. When BWC was not helpful, it was most often because the video did not capture the incident (42.9%) or add anything to the case (28.6%).

Consequences of BWC Adoption by LEAs for Prosecution Agencies

The adoption of BWC cameras by LAPD over the past few years has led to critical downstream impacts on LACA. Those impacts have been exacerbated by the scale and speed of the increase in video evidence availability. Overall, LACA was provided 60,000 BWC video records between October 2015 and April 2018. Beginning in January 2017, there was a sustained climb in the number of BWC video records and, by April 2018, well over 4,000 BWC video records were being added per month. On a case-by-case basis, this translated in to an average of 4.5 videos per case in our summer 2017 sample and 5.6 videos per case (for cases with BWC video) in the official data collected between October 2015 and April 2018. The number of BWC videos shared with LACA each month has been accelerating since January 2017. The average length of video is 135 minutes per case. To quantify the increased workload this represents, we extrapolated 135 minutes per case across 79,853 cases per year that passed through the LACA's Office during the study period. That would mean filing attorneys would spend an additional 4,492 weeks viewing video each year and translates to 89.8 Full Time Equivalents (FTEs).[18] Current data (October 2018) indicates an average of 139 minutes of video per case, which would suggest this number would be even higher. [19]

There are numerous logistical and technical challenges associated with incorporating BWC video into the filing decision. As the number of incidents with BWC video shared with LACA continues to grow, the fact that multiple video records often exist (e.g., video from different

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[18] We assume that all cases during the study period have BWC video that is shared and all available video for each case is unique. Calculations for study data used 135 minutes of BWC video * 79,853 cases / 60 minutes in an hour = 179,669 hours of BWC video. The 179,669 hours divided by 40 hours = 4,491 weeks of BWC Video. Assuming an employee works 50 weeks a year (i.e., she/he gets two weeks of vacation), this translates to 89.8 full time employees.

officers) complicates matters. Prosecutors noted that the specific location where key evidence can be found within a single video was infrequently bookmarked by LAPD. Moreover, when multiple videos are available, the order of events or the importance of particular videos is infrequently made clear. Many of those challenges are logistical and technical issues that are rapidly being resolved.

Viewing BWC Evidence May Result in Lower Filing Probability

While video was generally viewed prior to the filing decision infrequently, results from both primary and official data analyses are in a direction consistent with lower filing of cases when BWC video is viewed (as compared to not viewed). For example, in the primary data sample, cases where video was viewed had a lower filing percentage (45.5% versus 51.9%). However, in the official data analyses, when controlling for charge type, offender demographics, agency and branch, as well as month and year of the offense with propensity score methods, a statistically significant difference was not found. If the trends in the descriptive findings reflect that BWC video helps DCAs better identify prosecutable cases, then it could be viewed as an important source of information for reducing costs by allowing filing attorneys to identify weak cases earlier in the process.

Policy Implications

Critical need for police—prosecutor coordination

Interagency cooperation between law enforcement and prosecution agencies is essential to creating an effective digital evidence workflow. At a minimum, all BWC video

should be provided at the time a case is submitted for filing consideration. Important sections of video should be clearly marked and annotated, as prosecutors noted that lack of bookmarking, coupled with time constraints, was a real deterrent to usage. Prosecutors should discuss with the police agencies generating the video footage how video is used, which can result in improved recordings. Surveys of police officers suggest they think BWCs improve evidence collection (Edmonton Police Service, 2015; Gaub et al., 2016; Grossmith et al., 2015; Jennings et al., 2015; Pelfrey Jr & Keener, 2016). Jointly developed guidelines for officers' collection of BWC evidence would benefit both agencies. For instance, Mosler (2015) argues that providing police with a prosecutors' perspective is critical as they can train officers on how best to record consent searches or to minimize inadvertent recordings that will require time-consuming redactions. Importantly, there is a critical need for police and prosecutorial records to link. Only in March 2018 did LAPD adopt a policy of marking videos with a common identifier (i.e., the incident number). In short, for most of the study period, LACA was handling a new source of digital evidence without added personnel and under inconsistent police policies and sharing practices that complicated BWC video usage by prosecutors.

Staffing, Technology, and Funding Strategies

Using a new form of digital evidence, that captures events in real time, to aid the filing decision, to satisfy discovery and data preservation obligations, and to prepare video for trials, is time consuming. The surge in BWC video evidence being received by LACA has led to some personnel additions, including the hiring of 7 paralegals and 7 attorneys. However, given that the LACA has 242 attorneys in its Criminal and Special Litigation Branch and the size of the increased workload, significantly more staffing would be required to adequately address the

situation. With limited budgets, prosecutorial agencies may need to consider how attorneys and/or paralegals and/or other technical support personnel can best be utilized to handle the growing availability of digital evidence. Prosecuting attorneys, however, are required to determine the appropriate criminal filing charges, to develop case strategies, to handle pretrial motions and to conduct trials. It would be helpful for those attorneys if law enforcement highlighted or bookmarked where in the recordings the most relevant evidence is located. If not, paralegals could be used to identify sections of video recordings of direct value to the case and mark them for attorneys, whether filing or trying cases, among their other case responsibilities. In addition to paralegal assistance, technical support personnel could provide needed training on equipment and software use, including how to redact, clip, download, and copy videos, and could handle technological requests related to digital evidence, including troubleshooting. This would reduce the time an attorney is required to spend viewing BWC evidence.

Another strategy to cope with the avalanche of digital evidence is to target viewing of video evidence by type of offense. Cases would be triaged and those with BWC evidence that is likely to inform the filing decision would be prioritized for viewing. Official data revealed that domestic violence, battery on a peace/other officer, resisting arrest, disorderly conduct, and DUI-refusals were viewed before the filing decision at rates greater than expected by chance, suggesting that BWC for these offenses is considered particularly useful in aiding filing decisions. A related strategy would be to consider adding staff to assist with particular types of cases (e.g., family violence). Beyond personnel considerations, the surge in gigabytes of BWC video accrual creates the need for systematic data storage and ease of retrieval. Prosecutors

should integrate digital evidence into existing case management systems where possible so that prosecutors do not have to break workflow to view BWC video.

Limitations and Directions for Future Research

As with most applied research, there are limitations that affect the interpretation of the findings. The primary data sample consisted of high volume filing attorneys because we wanted to ensure collection of the highest number of surveys over the shortest period. Not surprisingly, filing attorneys were less than enthusiastic at the prospect of any data collection that might slow them down so using a shorter duration for data collection made it more palatable. However, that decision might have artificially lowered the rate of BWC video usage since high volume filers are under the most time pressure and thus may have less time to view video than other filers. Additionally, we asked attorneys to note whatever case id was available at the time they were evaluating the case for filing so that we could focus the data collection on their thinking. We expected that details of the case could be obtained by linking to the official data later. However, lack of standard identifiers (see below) made that less successful than we had hoped.

The quantitative analysis has several limitations which lead to caution in interpretation of findings and directions for future research. Perhaps most importantly, standard identifiers of BWC video records were not mandated until March 2018, which was just one month before the close of official data collection. Only approximately 60% of cases with BWC video during the study period were successfully matched to CCMS based on both an identifier and date; as a results, sampling bias is a concern. Related to police procedure, it could be the case that

identifying information (e.g., incident numbers) was included more often for certain types of

cases (e.g., those more serious) or in certain police divisions. Related to prosecutor procedure,

lack of incident number data in CCMS during the study period was the norm, not the exception.

Incident numbers could have been entered into CCMS at different rates, depending on whether

the case was actually filed. For instance, if a case is an obvious reject, it may be considered less

important to include an incident number during initial case data entry. Also, entry of incident

numbers in CCMS is manual; whereas importing the arrest and/or BWC data directly into CCMS

would alleviate data entry errors. Across all cases during the study period, misdemeanor filing

rates were significantly higher when an incident number was present as compared to when it

was not. When examined by crime type, this pattern held for all crime types except violation of

court order, minor possession and other. To their credit, both LACA and LAPD have been

working to improve entry of Incident Numbers in their respective systems to make the process

more efficient. LAPD has begun requiring BWC evidence to be identified by Incident Number,

and LACA has begun to retrain its personnel with emphasis on the importance of entering

Incident Numbers in CCMS. Looking toward the future, these issues suggest the need for

improved inter-agency collaboration for studies seeking to track the impacts of BWC evidence

for the downstream decisions and processes that unfold following an incident. Moreover, to

better capture the time to filing decision, which might be an important variable for personnel

and management decisions, agencies should explicitly track case receipt and decision dates.

Related, this study provides only an early window into prosecutors' use of BWC evidence

for their filing decisions. Our qualitative focus groups found that prosecutors were not using

BWC evidence frequently, and there were a number of barriers to its use, both technological

and staffing based. As mentioned earlier, LACA has recently received increased funding to begin

to address understaffing issues by adding 7 paralegals and 7 attorneys to assist with BWC

evidence viewing and managing. The hiring process took significant time. It began in the

summer of 2017. By April 2018, all 7 paralegals and 4 attorneys had been hired. The final three

attorneys were hired in June (1) and July (2) 2018. With continued increases in staffing, the use

of BWC evidence in the filing decision at LACA may change dramatically in the years to come.

As BWC video becomes increasingly available (see Figure 3), more research is needed to

determine whether the mere availability of BWC video, as a single piece of unique evidence,

impacts the filing decision—even when the video itself is not viewed. Our descriptive analyses

of primary and official data indicated that the filing rate is higher when BWC video evidence

was available as compared to when it was unavailable. It could be that DCAs view BWC video as

likely to substantiate what is in the paper case file when already leaning toward filing rather

than rejection. Investigation of this possibility should be part of a program of additional

research that follows the evolution of BWC's impacts on the operations of prosecution.

Though organizational differences affect the likelihood of police departments' adopting

BWC (Nowacki & Willits, 2018), BWC usage and the amount of evidence it is generating are

growing. The present study is only able to provide insights into one prosecutorial agency in one

city in the United States that prosecutes misdemeanor offenses.[20] It is possible that BWC

evidence is being viewed and used differently by agencies in other cities or, perhaps even

within the same city, by the LADA when making filing decisions about felony offenses. Future

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[20] LACA does not merely prosecute municipal code offenses like other city attorney's offices do; LACA also prosecutes state penal code offenses as misdemeanors, including many which originate as felony misdemeanor arrests that are referred to their office for misdemeanor prosecution.

research is needed to examine whether and how organizational differences and technological infrastructures impact usage across contexts and agencies. At the within-agency level, there is the need to further study factors that impact individual differences in BWC video usage in the filing decision. Ideally, a multi-site evaluation study is needed, employing counterfactual methods, to address knowledge on how BWC evidence is used by prosecutors.

Conclusions

At this time, it seems widespread adoption of BWCs by law enforcement is virtually unstoppable. If that continues, in the next five to ten years, every case evaluated by filing attorneys will have associated BWC video. Thus, the question is no longer whether filing attorneys will have video evidence but how to best integrate that evidence into the workflow of the filing attorney. There are many potential benefits and challenges that need further exploration as more data becomes available. But a robust exploration of the questions investigated and raised by this study requires changes to existing data collection systems. At a minimum, it is critical that data systems provide information which helps prosecutorial agencies better understand both how the filing process, and ultimately criminal justice outcomes, are changed by the availability and use of BWC video.

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Appendix A: LACA Focus Group Questions and Prompts

General questions

1. Recognizing the weight of the evidence is the determining factor on a decision to file, what other aspects of a case help you decide to file or reject?

2. What is the range of time (i.e. 15 minutes, 1 hour, etc.) that it takes to review/evaluate a case? What makes a case quicker or more straightforward versus one that would take longer?

Turning to BWC video and its impact on the filing decision….

3. How often do you encounter BWC video evidence in the cases you are reviewing?

4. How do you decide whether to watch BWC video or not (in your reviewing the case)?
   Prompts:
   -felt case was a reject/hearing without needing to see videos because other elements missing
   -felt case was clearly a filing without need to review the videos
   -felt BWCs would not contain useful information
   -didn't have the time to watch video

5. What are the biggest logistical challenges to using BWC video?
   Prompts –
   -Difficulty / time spent finding the incident on the recording
   -Difficulty / time spent viewing multiple recordings of the same incident
   -Hard to access

6. What are the biggest procedural challenges to using BWC video?
   Prompts –
   - poor image quality
   - didn't capture the incident
   - didn't add anything to the case

7. How do you watch the BWC evidence? Why did you choose this strategy?
   Prompts –
   - watched parts of the video
   - watched one video in its entirety

8. What types of information has BWC video contributed to the cases you have evaluated?
   Prompts –
   - better understanding of the crime scene
   - better understanding of the witness/suspect statement

Appendix B: BWC Data Entry Form (LACA)

PART 1. – Complete for all cases reviewed

DR or Incident Number: _____ DCA last name: _____

1. Type of case: _____ Custody   _____ Non-custody

2. Did you review BWC video(s) prior to filing/rejecting this case?   ___ Yes   ___ No

PART 2. – Please complete if you said "No" to Question 2 (i.e., you <u>did not</u> view BWC video(s) as part of the filing review process).

3. Did you know if BWC video was available on this case? Pick the answer that best captures your knowledge about BWC video related to the case.
    _____ knew video was available
        _____ knew video was available but was not able to access it due to technical reasons
            Please specify technical reason:
            _____
    _____ knew video was not available
    _____ did not know if video was available or not

4. What were the reasons (<u>select all that apply</u>) that you did not watch the video(s)?
    _____ felt case was a reject / hearing without needing to see video(s) because other elements missing
    _____ felt case was clearly a filing without need to review the video(s)
    _____ felt BWC video(s) would not contain useful information
    _____ would have liked to watch the BWC video(s), but did not have access to them
    _____ would have liked to watch the BWC video(s), but did not have the time to do so

PART 3. – Please complete if you said "Yes" to Question 2 (i.e., you <u>did</u> view BWC video(s) as part of the filing review process).

5. How many videos were associated with the case? _____

6. Did you watch more than one BWC video related to this case? ___ Yes   ___ No

7. Which best describes how you watched the video(s)?
    __ watched a few parts of one video
    __ watched a few parts of more than one video
    __ watched one video in its entirety
    __ watched more than one video, with at least one watched in its entirety
    __ watched more than one video in their entireties
    __ other (please specify):_____
8. Approximately how long (<u>in minutes</u>) did you spend watching BWC video/s on this case?
    _____

9. Did watching BWC video(s) assist you in making your filing decision? ___ Yes ___ No

    a. If you said "yes", why? (<u>select all that apply</u>)
        ___ BWC video showed some element of the offense not apparent in report
        ___ BWC video recorded victim/witness statements
        ___ BWC video showed demeanor of the defendant
        ___ BWC video showed demeanor of the victims/witnesses
        ___ BWC video showed evidence critical to the case
        ___ other (please specify) _____

    b. If you said "no", why not? (<u>select all that apply</u>)
        ___ poor image quality
        ___ did not capture the incident
        ___ did not add anything to the case
        ___ other (please specify) _____

Appendix C. Cases with filing decisions between October 1, 2015 and April 31, 2018

	f	% of total	% of all cases with BWC
Cases in CCMS during study period with valid filing decision date	206,288	100.0%	---
Cases with BWC video*	9,944	4.82%	100.0%
Cases with BWC video matched to CCMS (identifier match only)	6,533	3.17%	65.7%
Cases with BWC video matched to CCMS (identifier and date match)	5,935	2.87%	59.7%

Note: *Less than 0.2% of cases with BWC video share an incident number or other identifier (e.g., department record number). Thus, incidents are effectively individual cases.

Appendix D. Crosswalk table from charge to crime type

CATEGORY	CRIME TYPE	CHARGE	CHARGE DESCRIP
1	Battery on a peace/other officer	PC242&243(b)	battery against peace/other officer
1	Battery on a peace/other officer	PC242/PC243.1	battery against custodial officer
1	Battery on a peace/other officer	PC242/PC243c2	injuring a peace officer
1	Battery on a peace/other officer	PC245(c)	ADW on a peace officer
1	Drug Possession/Sale	BP4060	possession of controlled substance
1	Drug Possession/Sale	HS11350	possessing a controlled substance
1	Drug Possession/Sale	HS11357(c)(1)	under 28.5g cannabis/8g concentrated at k-12
1	Drug Possession/Sale	HS11358(c)	plant
1	Drug Possession/Sale	HS11359(b)	possession of cannabis for sale
1	Drug Possession/Sale	HS11360(a)(2)	sell/offer to sell/transport cannabis
1	Drug Possession/Sale	HS11364a	possession of drug paraphernalia
1	Drug Possession/Sale	HS11375b2	possess cntrlld subst w/o presc (msd/inf
1	Drug Possession/Sale	HS11377(a)	possession of a controlled substance
1	DUI	VC23152a	driving under the influence of alcohol (eff 1/14)
1	DUI	VC23152a*	driving under the influence (pre-2014)
1	DUI	VC23152a/72	dui with minor in vehicle (eff 1/1/14)
1	DUI	VC23152a/82	dui with excessive speed (eff 1/1/14)
1	DUI	VC23152a/no prior	driving under the influence (eff 1/1/14)
1	DUI	VC23152a/pr	driving under the influence w/prior (eff 1/1/14)
1	DUI	VC23152b	driving with unlawful blood alcohol
1	DUI	VC23152b/72	dui with minor in vehicle
1	DUI	VC23152b/pr	driving w/unlawf.blood alcohol w/prior

1	DUI	VC23152E	driving under the influence of a drug
1	DUI	VC23152e	driving under the influence of a drug
1	DUI	VC23152f	driving under the influence of a drug
1	DUI	VC23152f/72	dui drug with minor in vehicle
1	DUI	VC23152f/pr	driving under the influence of a drug
1	DUI	VC23152g	driving under the influence of alcohol and drug
1	DUI	VC23152g/77	dui alc and drug refusal
1	DUI	VC23153a	dui with injuries (eff 1/1/4)
1	DUI	VC23153a/77	dui with injury/refusal (eff 1/1/14)
1	DUI	VC23153a/pr	dui with injuries with prior (eff 1/1/14)
1	DUI	VC23153f	dui alcohol and drug with injuries
1	DUI-refusal	VC23152a/72/77	dui refusal with minor in vehicle (eff 1/1/14)
1	DUI-refusal	VC23152A/77	dui refusal (eff 1/1/14)
1	DUI-refusal	VC23152a/77	dui refusal (eff 1/1/14)
1	DUI-refusal	VC23152a/77*	dui refusal (pre-2014)
1	DUI-refusal	VC23152a/77/82	dui refusal with excessive speed (eff 1/1/14)
1	DUI-refusal	VC23152f/77	dui drug refusal
1	False report to officer	PC148.5(a)	making a false report to ofcr or da
1	False report to officer	PC148.9(a)	giving false information to a peace officer
1	Minor in possession of alcohol	BP25662a	minor in possession of alcohol
1	Prostitution	PC647(b)(1)	prostitution-intent to receive compensation
1	Prostitution	PC647(b)(2)	prostitution-intent to provide compensation
1	Prostitution	PC647b	solicitation for prostitution
1	Prostitution	PC647b/pr	prostitution with priors
1	Public Intoxication	LA41.27c	drinking in public
1	Public Intoxication	PC647(f)	drunk in public
1	Resisting Arrest	PC148(a)(1)	resisting a public/peace officer or emt
1	Resisting Arrest	PC69	resisting a public officer

1	Under the Influence of Drugs	HS11550(a)	use/under influence of controlled substance
1	Vehicle Violations	LA71.02a	failure to obtain dot vehicle permit
1	Vehicle Violations	VC10751	serial/identification number violation
1	Vehicle Violations	VC12500(a)	driving vehicle without a license
1	Vehicle Violations	VC12500(b)	driving motorcycle w/o valid license
1	Vehicle Violations	VC14601.1a	driving on a suspended license
1	Vehicle Violations	VC14601.2a	driving on a suspended license/dui
1	Vehicle Violations	VC14601.3(a)	driving on a suspended/revoked license
1	Vehicle Violations	VC14601.5a	driving on a suspended/revoked license
1	Vehicle Violations	VC14601a	driving on a suspended license
1	Vehicle Violations	VC21200.5	riding a bicycle under the influence
1	Vehicle Violations	VC22106	unsafe starting/backing - inf.
1	Vehicle Violations	VC22350	speeding (infraction)
1	Vehicle Violations	VC23103(a)	reckless driving
1	Vehicle Violations	VC23109(a)	engaging in a speed contest
1	Vehicle Violations	VC23109(c)	exhibition of speed
1	Vehicle Violations	VC23247(e)	driving a vehicle w/o interlock device
1	Vehicle Violations	VC2800(a)	disobeying traffic officer
1	Vehicle Violations	VC2800.1(a)	evading a peace officer's vehicle
1	Vehicle Violations	VC2800.2(a)	recklessly evading a peace officer
1	Vehicle Violations	VC2800.4	evading officer driving wrong direction on hwy.
1	Vehicle Violations	VC31	false information to peace officer
1	Vehicle Violations	VC4462.5	unlawful display of vehicle registration
1	Weapons	LA55.10(b)	carrying knives/daggers in plain view
1	Weapons	PC17500	possession of weapon w/intent to assault
1	Weapons	PC20410	carrying an illegal weapon-belt buckle knife
1	Weapons	PC21310	carrying a concealed dirk or dagger
1	Weapons	PC21510(a)	possession of switchblade knife-motor vehicle
1	Weapons	PC21510(b)	carry switchblade knife on person
1	Weapons	PC21810	possession of metal knuckles

1	Weapons	PC22210	weapon-billy,blackjack,sandbag/club,sap,slungshot
1	Weapons	PC22610(a)	stun gun possession
1	Weapons	PC22810(g)(1)	unlawful use of tear gas
1	Weapons	PC22810a	unlawful possession of tear gas by felon
1	Weapons	PC22900	tear gas violation
1	Weapons	PC25400a1	carrying a concealed firearm in vehicle
1	Weapons	PC25400a1-PR/PC186.22(d)	carry concealed firearm-veh.w pr/gang en
1	Weapons	PC25400a2	carrying a concealed firearm on person
1	Weapons	PC25400a3	causing concealed gun in vehicle
1	Weapons	PC25850a	carrying a loaded firearm
1	Weapons	PC30305a1	possession of ammunition by prohibited person
1	Weapons	PC32310(a)	manufacture/sale of large-capacity magaz
1	Weapons	PC33215	carry illegal weapon-short barreled rifle/shotgun
2	ADW/firearm	PC245(a)(1)	adw- weapon or instrument other than firearm
2	ADW/firearm	PC245(a)(2)	assault with a firearm
2	ADW/firearm	PC245(a)(4)	adw- force likely to produce great bodily injury
2	ADW/firearm	PC245a4/PC186.22(d)	adw-force likely to prod. great bodily injury/gang
2	ADW/firearm	PC254a4	adw- force likely to produce great bodily injury
2	ADW/firearm	PC417(a)(2)	brandishing a firearm
2	ADW/firearm	PC417.4	brandishing a replica firearm
2	Assault and Battery	PC240	assault
2	Assault and Battery	PC242	battery
2	Assault and Battery	PC242&243(d)	battery inflicting serious bodily injury
2	Assault and Battery	PC242/PC186.22(d)	battery w/gang enhancement
2	Assault and Battery	PC242/PC243.25	battery against an elder/dependent adult
2	Assault and Battery	PC242/PC243.2a(1)	battery on school/park/hospital property

2	Assault and Battery	PC242/PC243.3	battery on transportation worker/rider
2	Assault and Battery	PC243.4(e)(1)	sexual battery
2	Assault and Battery	PC246.3(a)	gross negligent discharge of firearm
2	Assault and Battery	PC273a(a)	child abuse - great bodily injury likely
2	Assault and Battery	PC273a(b)	child abuse - great injury not likely
2	Assault and Battery	PC273d(a)	infliction of corporal injury
2	Assault and Battery	PC368(b)(1)	eldr/depdt abuse-great bodily harm/deat
2	Assault and Battery	PC368c	eldr/depdt abuse-not likely-great harm
2	Assault and Battery	PC417(a)(1)	brandishing a weapon
2	Assault and Battery	PC422(a)	threatening great bodily harm
2	Assault and Battery	PC422(a)/PC186.22(d)	criminal threats w/gang enhancement
2	Assault and Battery	PC422.6(a)	interference with civil rights
2	Disorderly Conduct	PC647(e)	unlawful lodging
2	Disorderly Conduct	PC647(h)	prowling
2	Disturbing the Peace	PC370/PC372	public nuisance
2	Disturbing the Peace	PC404.6a	urging a riot
2	Disturbing the Peace	PC415(1)	disturbing the peace-fight
2	Disturbing the Peace	PC415(2)	disturbing the peace - loud noise
2	Disturbing the Peace	PC415(3)	disturbing the peace - offensive words
2	Disturbing the Peace	PC602.1(a)	interference with business establishment
2	Disturbing the Peace	PC653m(a)	annoying/threatening electronic contact
2	Disturbing the Peace	PC653m(b)	repeated annoying electronic contact
2	DV	PC242/PC243(e)(1)	domestic battery involving dating relationship
2	DV	PC242/PC243(e)(1)/PR	battery involving dating relationship with priors
2	DV	PC273.5(a)	spousal battery
2	DV	PC273.5(a)/pr	domestic violence/prior conviction (after 1/1/14)
2	Fraud and Forgery	HS11368	forged prescription violation
2	Fraud and Forgery	PC470(d)&473(b)	making or passing forged instrument
2	Fraud and Forgery	PC472	counterfeit/forged seal

2	Fraud and Forgery	PC475c	possession of completed check
2	Fraud and Forgery	PC484e(c)	intent to use/sell/transfer access card
2	Fraud and Forgery	PC484e(d)	possession of access card account information
2	Fraud and Forgery	PC529.5(c)	possession of false government id
2	Fraud and Forgery	PC537(a)(1)	defrauding an innkeeper--less than $950
2	Lewd Conduct and Related	PC261.5(c)	unlawful sex w/minor - 3 years younger
2	Lewd Conduct and Related	PC288(c)(1)	lewd act on a child of 14/15 yrs. of age
2	Lewd Conduct and Related	PC288a(b)(1)	oral copulation under 18 years old
2	Lewd Conduct and Related	PC314(The President's Task Force on 21st Century Policing ("Task Force"))	indecent exposure
2	Lewd Conduct and Related	PC647(i)	peeping in window
2	Lewd Conduct and Related	PC647(j)(1)	peeping into interior area w/instrument
2	Lewd Conduct and Related	PC647(j)(4)	disorderly conduct by distributing intimate image
2	Lewd Conduct and Related	PC647.6(a)(1)	child molestation
2	Lewd Conduct and Related	PC647.6(a)(2)	interest in person believed to under 18
2	Lewd Conduct and Related	PC647a	lewd conduct
2	Lewd Conduct and Related	PC647j3A	concealed camera to film body/undergarm
2	Trespassing	LA41.24a	trespass on private property
2	Trespassing	LA41.24d	trespass on private property
2	Trespassing	PC369i(a)	illegal entry on railroad land
2	Trespassing	PC602(k)	trespass--lands, w/intent to injure.
2	Trespassing	PC602(m)	trespass--intent to occupy lands.
2	Trespassing	PC602(o)	trespass--refusal to leave private prop.
2	Trespassing	PC602.5(a)	unauthorized entry of a dwelling house
2	Trespassing	PC602.5b	aggravated trespass

2	Trespassing	PC602k/PC186.22(d)	tres.lands w intent to injure/gang enhan
2	Trespassing	PC664/PC602.5b	attempted aggravated trespass
2	Vandalism	PC594.2(a)	possession of vandalism or graffiti tools
2	Vandalism	PC594.3a	vandalism of place of worship
2	Vandalism	PC594A	vandalism
2	Vandalism	PC594a	vandalism
2	Vandalism	PC594a/PC186.22(d)	vandalism with gang enhancement
2	Vandalism	PC594a-b1	vandalism damage over $400
2	Vandalism	PC594a-b2A	vandalism damage under $400
2	Vandalism	PC594b1	vandalism (over $400 damage)
2	Vandalism	PC594b2A	vandalism (less than $400 damage)
2	Vandalism	PC594b2B	vandalism (less than $400 damage w/prior
2	Vandalism	VC23110(a)	throwing substances at vehicles
2	Violation of Court Order	PC166(a)(1)	contempt of court-disorderly
2	Violation of Court Order	PC166(a)(4)(Gang)	gang injunction
2	Violation of Court Order	PC166(a)(9)	contempt of court--gang injunction
2	Violation of Court Order	PC166(c)(1)	contempt of court - protective order (1/1/09)
2	Violation of Court Order	PC166a4	willful disobedience of a court order
2	Violation of Court Order	PC273.6(a)	viol. of protective/restraining order
3	Burglary/Shoplifting/Theft	PC459	burglary
3	Burglary/Shoplifting/Theft	PC459.5	shopilifting
3	Burglary/Shoplifting/Theft	PC466	burglary tools
3	Burglary/Shoplifting/Theft	PC484(a)/PC490.1(a)	petty theft (infraction)
3	Burglary/Shoplifting/Theft	PC484a	petty theft
3	Burglary/Shoplifting/Theft	PC484a/PC490.1(a)	petty theft under $50
3	Burglary/Shoplifting/Theft	PC484a/PC490.2(a)	petty theft

3	Burglary/Shoplifting/Theft	PC485	misappropriation of property
3	Burglary/Shoplifting/Theft	PC487(c)	grand theft from the person of another
3	Burglary/Shoplifting/Theft	PC487(d)(1)	grand theft automobile
3	Burglary/Shoplifting/Theft	PC487a	grand theft
3	Burglary/Shoplifting/Theft	PC487b3	grand theft by employee
3	Burglary/Shoplifting/Theft	PC487d1	grand theft-auto or animal (prior to 2014)
3	Burglary/Shoplifting/Theft	PC487-e	grand theft dog
3	Burglary/Shoplifting/Theft	PC490.1a	petty theft (infraction)
3	Burglary/Shoplifting/Theft	PC496a	receiving stolen property
3	Burglary/Shoplifting/Theft	PC508	embezzlement by employee
3	Burglary/Shoplifting/Theft	PC530.5(a)	identity theft
3	Burglary/Shoplifting/Theft	PC530.5(c)(1)	identifying information theft
3	Burglary/Shoplifting/Theft	PC530.5(c)(2)	possession of personal identifying info w/prior
3	Burglary/Shoplifting/Theft	PC530.5(c)(3)	poss 10 or more personal ident. info
3	Burglary/Shoplifting/Theft	PC530.5(e)	mail theft
3	Burglary/Shoplifting/Theft	PC664/PC487a	attempted grand theft
3	Burglary/Shoplifting/Theft	PC664/PC496a	attempted receiving stolen property
3	Hit and Run	VC20001(a)	hit and run with injuries
3	Hit and Run	VC20002(a)	hit and run
3	Other	BP17500	making false and misleading stmts in advertising
3	Other	BP22980.2(a)	unlawful sale of tobacco products w/o license
3	Other	BP25658(a)	sell, furnish or give alcohol to a minor >21

3	Other	LA104.15(b)(1)	own or operate and unlawful establishment
3	Other	LA41.23-2	unlawful entry upon housing auth. devt
3	Other	LA42.00b	prohibited street vending
3	Other	LA43.01-3	gambling
3	Other	LA45.19.6.2.A	unlawful operation medical marijuana business
3	Other	LA47.15A1	presence as spectator at speed contest
3	Other	LA87.69	searchlight/generator/floodlight without permit
3	Other	PC1203.2(a)	violation of probation
3	Other	PC135	destroying evidence
3	Other	PC136.1(b)(1)	dissuading a witness or victim-report
3	Other	PC148.3(a)	false report of emergency
3	Other	PC148.5c	making a false report to civilian
3	Other	PC191.5(b)	vehicular manslaughter while intoxicated
3	Other	PC192c2	vehicular manslaughter
3	Other	PC236	false imprisonment
3	Other	PC247.5	discharge a laser at an aircraft
3	Other	PC290.018(g)	failure to register as transient sex offender
3	Other	PC330	illegal gaming
3	Other	PC350(a)(1)	sale of counterfeit goods <1
3	Other	PC350(a)(2)	sale counterfeit items over $950 val. or 1000 item
3	Other	PC418	unlawful detainer w/ force or violence
3	Other	PC419	illegal possession of lands
3	Other	PC420.1	illegal lockout- inf
3	Other	PC452(d)	unlawfully causing a fire-property
3	Other	PC602.1b	interference with public agency
3	Other	PC646.9(a)	stalking
3	Other	VC10801	operation of a chop shop
3	Other	VC10854	unlawful use or tampering by a bailee
3	Other	VC4462b(B)	false registration-inf
3	Other	VC4463(a)(1)	false evidence of documents

3	Vehicle Theft/Tampering	PC496d(a)	purchase or receipt of stolen vehicle
3	Vehicle Theft/Tampering	PC664/VC10851a	attempting to drive without owner's consent
3	Vehicle Theft/Tampering	VC10851(a)	driving vehicle without owner's consent
3	Vehicle Theft/Tampering	VC10852	vehicle tampering

Appendix E: Propensity Score Estimation and Covariate Balance Details

Table A5-1 contains results of a multinomial logistic regression predicting the

multivalued treatment (Model 1) and two logistic regressions predicting of BWC video

availability (Model 2) and, among cases that have BWC video, BWC video viewing before the

filing decision (Model 3). Predictors include crime type, age, sex, race, agency, branch, month

and year used as predictors and listwise deletion is used to address missing data. Relative risk

ratios are reported for the multinomial logistic regression, and odds ratios are reported for the

logistic regressions; thus, values greater than one indicate positive effects, whereas values less

than one indicate negative effects. While the primary purpose of estimating these models is to

obtain the propensity for treatment for subsequent use in the propensity score analyses for the

binary treatment variables and in the MMWS weighting models for the multivalued treatment,

we briefly discuss some key findings focusing on Model 1. It is important to keep in mind that

the base outcome in the multinomial logistic regression model is 'no video.'

Table A5-1. *Multinomial Logistic and Logistic Regression Models Predicting BWC Treatments*

	Model 1 Multinomial Logistic Regression		Model 2 Logistic Regression	Model 3 Logistic Regression
	Not Viewed	Viewed Before Filing Decision	Video Available	Viewed Before Filing Decision
	RRR (se)	RRR (se)	OR (se)	OR (se)
Crime Type				
Domestic Violence	2.00*** (0.15)	1.97*** (0.38)	1.99*** (0.14)	1.08 (0.25)
ADW/Firearm	1.65*** (0.22)	2.74** (0.88)	1.76*** (0.22)	1.39 (0.51)
Weapons	1.42	2.75*	1.56**	1.80

	(0.26)	(1.16)	(0.27)	(0.87)
Battery on a peace/other officer	1.98**	10.35***	2.91***	5.46***
	(0.49)	(3.62)	(0.58)	(2.53)
Resisting Arrest	1.11	7.71***	1.93***	9.07***
	(0.24)	(2.12)	(0.31)	(3.54)
False Report to Officer	1.10	0.00	0.97	---
	(0.40)	(0.00)	(0.36)	---
Fraud and Forgery	0.46	1.68	0.61	7.47
	(0.33)	(1.73)	(0.36)	(9.64)
Burglary/Shoplifting/Theft	0.72**	0.11***	0.66***	0.14**
	(0.07)	(0.07)	(0.06)	(0.09)
Vehicle Theft/Tampering	1.24	1.07	1.23	0.61
	(0.19)	(0.48)	(0.18)	(0.31)
Trespassing	0.69*	0.21**	0.62**	0.28
	(0.11)	(0.13)	(0.09)	(0.18)
Vandalism	1.31*	0.87	1.27*	0.60
	(0.15)	(0.31)	(0.14)	(0.24)
Disorderly Conduct	0.00	0.66	0.18*	---
	(0.00)	(0.48)	(0.13)	---
Disturbing the Peace	0.64*	0.00	0.56**	---
	(0.14)	(0.00)	(0.13)	---
Lewd Conduct and Related	0.43*	1.11	0.54*	2.61
	(0.15)	(0.59)	(0.16)	(1.88)
Prostitution	0.03***	0.00	0.03***	---
	(0.02)	(0.00)	(0.02)	---
Hit and Run	0.56**	0.58	0.59**	1.06
	(0.11)	(0.24)	(0.10)	(0.56)
DUI	1.61***	0.49*	1.41***	0.42*
	(0.15)	(0.15)	(0.13)	(0.15)
DUI-Refusal	2.70***	7.72***	4.22***	4.21***
	(0.42)	(2.23)	(0.53)	(1.58)
Drug Possession/Sale	0.30***	0.49*	0.32***	1.78
	(0.04)	(0.15)	(0.04)	(0.64)
Under Influence of Drugs	0.25	0.00	0.21*	---
	(0.18)	(0.00)	(0.15)	---
Minor in Possession of Alcohol	0.00	0.00	---	---
	(0.00)	(0.00)	---	---
Public Intoxication	0.37	0.00	0.33	---
	(0.27)	(0.00)	(0.23)	---
Violation of Court Order	1.10	0.23**	0.96	0.24*
	(0.13)	(0.12)	(0.11)	(0.13)
Vehicle Violations	0.42***	0.08***	0.35***	0.23**

	(0.05)	(0.03)	(0.04)	(0.11)
Other	0.96	0.43	0.86	0.56
	(0.21)	(0.27)	(0.18)	(0.41)
Age	1.00	1.00	1.00*	0.99
	(0.00)	(0.00)	(0.00)	(0.01)
Gender	0.99	1.32*	1.03	1.27
	(0.05)	(0.18)	(0.05)	(0.21)
Race				
Black	1.03	0.76	0.99	0.75
	(0.07)	(0.14)	(0.07)	(0.16)
Hispanic	1.22***	1.04	1.20**	0.90
	(0.07)	(0.16)	(0.07)	(0.16)
Other	1.17	0.86	1.14	0.68
	(0.11)	(0.22)	(0.10)	(0.21)
Agency				
Police Felony Ref	2.78***	1.92***	2.63***	0.83
	(0.17)	(0.27)	(0.15)	(0.14)
DA Felony Ref	3.03***	1.45*	2.76***	0.70*
	(0.17)	(0.23)	(0.15)	(0.13)
Other	0.01***	0.01***	0.01***	4.20
	(0.00)	(0.01)	(0.00)	(5.91)
Branch				
Central Branch (CE)	0.31***	0.60*	0.34***	2.00**
	(0.02)	(0.13)	(0.02)	(0.49)
Metropolitan Branch (HS)	0.69***	3.92***	0.86	4.24***
	(0.06)	(0.99)	(0.07)	(1.38)
Van Nuys Branch (VN)	0.49***	0.26***	0.47***	0.44**
	(0.03)	(0.06)	(0.03)	(0.12)
Family Violence Unit (FV)	0.29***	1.29	0.36***	3.88***
	(0.02)	(0.25)	(0.03)	(0.88)
Harbor Branch (SP)	0.45***	3.60***	0.68***	7.34***
	(0.05)	(0.72)	(0.07)	(1.99)
Pacific Branch (PA)	0.27***	0.21***	0.27***	0.52
	(0.03)	(0.09)	(0.03)	(0.26)
Gang & Gun Prosecution Section (GD)	0.44***	0.00	0.38***	---
	(0.11)	(0.00)	(0.09)	---
SO/MM/CT[1]	0.47	6.49***	0.95	15.38***
	(0.22)	(3.02)	(0.31)	(10.35)
Year				
2016	1.92***	0.95	1.80***	0.38*
	(0.23)	(0.36)	(0.21)	(0.16)
2017	4.23***	5.39***	4.34***	0.93

	(0.48)	(1.83)	(0.47)	(0.36)
2018	9.36***	12.76***	9.71***	0.83
	(1.22)	(4.85)	(1.20)	(0.38)
Month				
February	1.18	1.44	1.21*	1.26
	(0.11)	(0.34)	(0.11)	(0.36)
March	1.32**	1.77**	1.38***	1.50
	(0.12)	(0.39)	(0.12)	(0.40)
April	1.50***	1.60*	1.51***	1.21
	(0.13)	(0.36)	(0.13)	(0.32)
May	1.73***	1.82	1.74***	0.91
	(0.20)	(0.61)	(0.20)	(0.37)
June	1.59***	3.70***	1.79***	1.49
	(0.19)	(1.05)	(0.20)	(0.52)
July	1.57***	1.67	1.58***	1.09
	(0.19)	(0.55)	(0.18)	(0.42)
August	1.37**	1.89*	1.43***	1.39
	(0.16)	(0.55)	(0.15)	(0.49)
September	1.58***	1.90*	1.62***	0.81
	(0.18)	(0.57)	(0.17)	(0.30)
October	1.90***	2.40**	1.95***	0.89
	(0.20)	(0.67)	(0.20)	(0.31)
November	2.14***	2.69***	2.19***	0.97
	(0.23)	(0.77)	(0.22)	(0.34)
December	2.61***	2.29**	2.59***	0.54
	(0.27)	(0.67)	(0.25)	(0.19)
Constant	0.01***	0.00***	0.01***	0.13***
	(0.00)	(0.00)	(0.00)	(0.08)
N	116511		116421	2858
Loglikelihood	-12346.40		-11464.27	-899.30
X²	4908.72***		4354.36***	490.18***

Exponentiated coefficients
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
OR=Odds Ratio, RRR=Relative Risk Ratio, --- indicates empty cell (i.e., no observations).
Reference Groups: Crime Type (Assault and Battery); Gender (Female); Race (White); Agency (LAPD Misdemeanor); Branch (SF); Year (2015); Month (January)
[1]Special Trials (SO) / Marijuana Enforcement Unit (MM) / City Attorney Hearings (CA)

Relative to assault and battery, the relative likelihood of there being a BWC video that is

not viewed and the relative likelihood of a BWC video being viewed before the filing decision

are *both* higher for domestic violence, ADW/firearm, battery on a peace/other officer, and DUI-

refusal (p<0.01). Relative to LAPD misdemeanor cases, cases that DA felony referrals and cases that are police felony referrals significantly increase the relative likelihood of there being a BWC video that is not viewed and a video that is viewed prior to the filing decision (p<0.01). Not surprisingly, the relative likelihood of a video not being viewed as well as a video being viewed prior to the filing decision increases each year relative to 2015, as compared to base outcome of no video.

Covariate Balance

Figures 5 through 8 illustrate successful covariate balance before and after matching for both binary treatments. Specifically, Figure A5-1 shows the distribution of propensity scores both before matching and after matching on the propensity for treatment (i.e., viewing a video prior to the filing decision). While there are overlaps in propensity scores across the distribution, there are notably differences in the propensity score distributions including, for example, differences in the size and location of the interquartile ranges or middle fifty percent of propensity scores. After 1-to-1 nearest neighbor matching on the propensity score, the right side of Figure A5-1 shows that the propensity score distributions are now similar. Figure A5-2 summarizes the covariate balance for the video viewed treatment. A covariate that is adequately balanced has a mean difference less than 20 percent of standard deviation, with ideal balance being a mean difference of less than 10 percent of a standard deviation. Prior to matching, 9 variables are out of balance and another 13 variables have less than ideal covariate balance. After matching on the propensity score, all covariates are balanced with covariate means differing by no more than 10 percent of a standard deviation.

Figure A5-1. Propensity Scores for the Video Viewed Treatment and Control Groups, Before and After Matching

Note: see measures section for additional variable information.

Figure A5-2. Covariate Balance for Video Viewed Treatment, Before and After Matching

Figures 7 and 8 similarly show propensity score distributions and covariate balance, respectively, for the video availability treatment. Prior to matching, the propensity score distributions show considerable differences. However, following 1-to-1 nearest neighbor propensity score matching, the distributions of the propensity score are similar (see Figure A5-3). Figure A5-4 shows that, prior to matching, 11 variables are imbalanced and another 9 have less than ideal covariate balance. After matching on the propensity score, all covariate mean differences being less than 10 percent of a standard deviation.
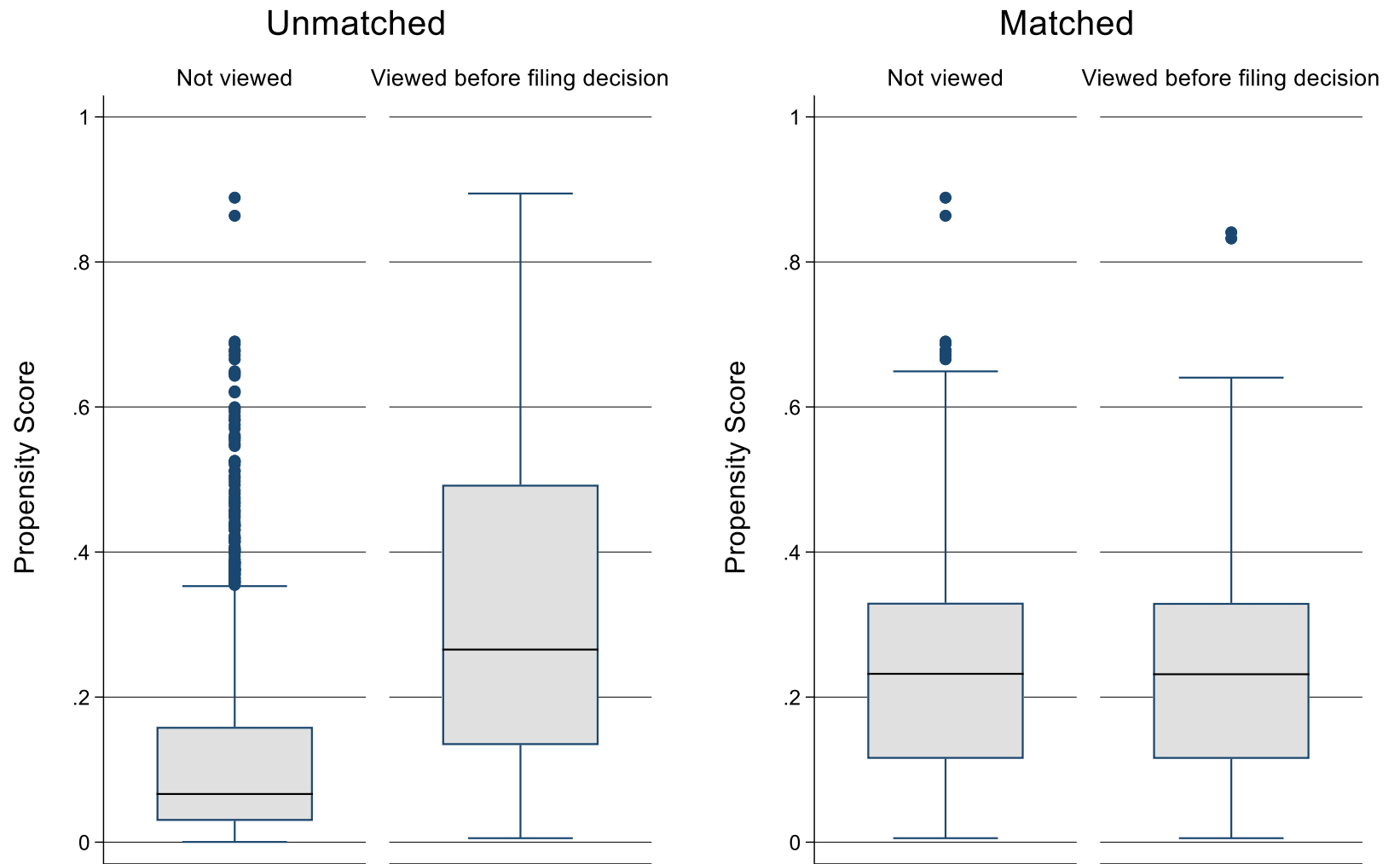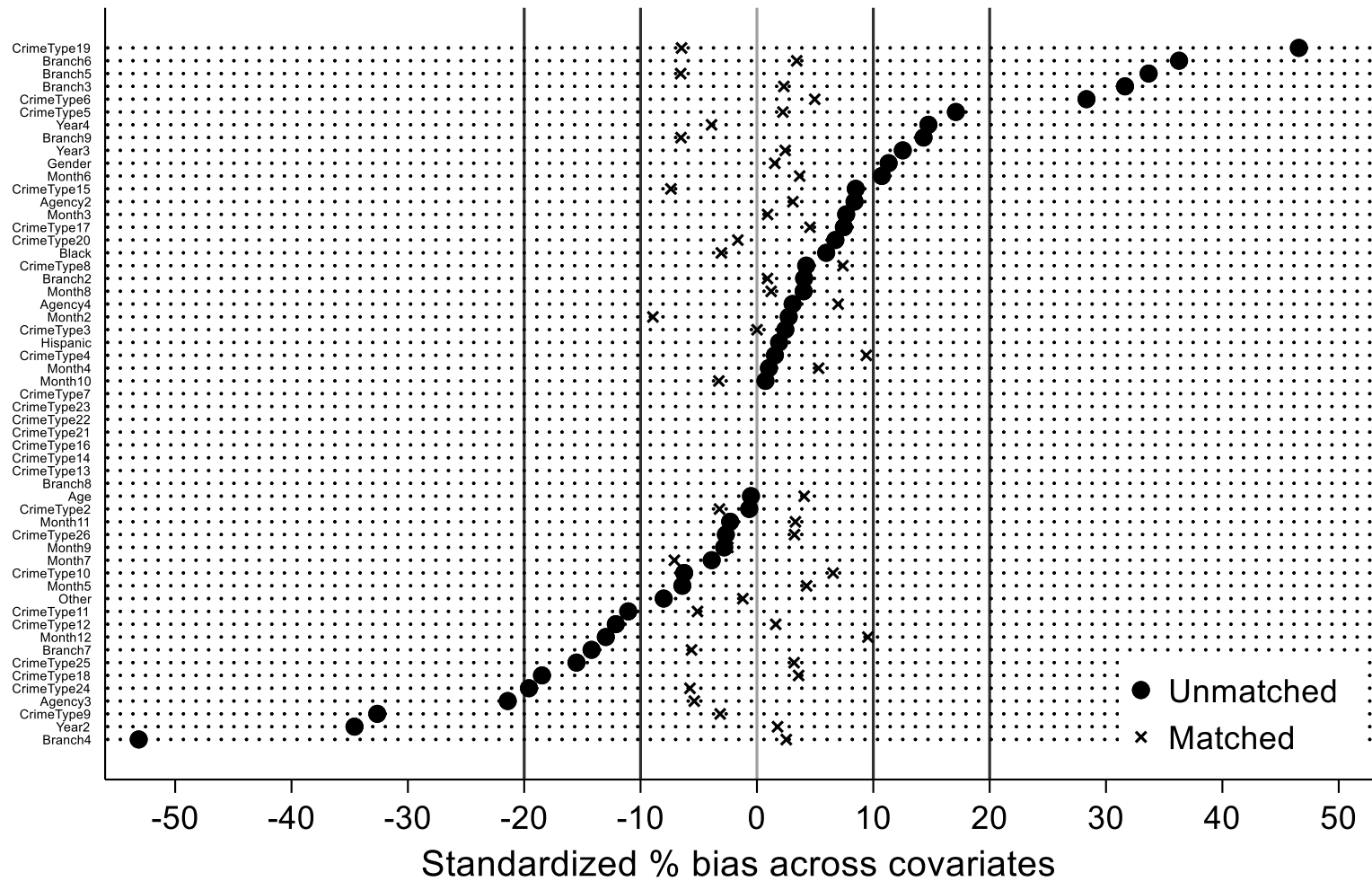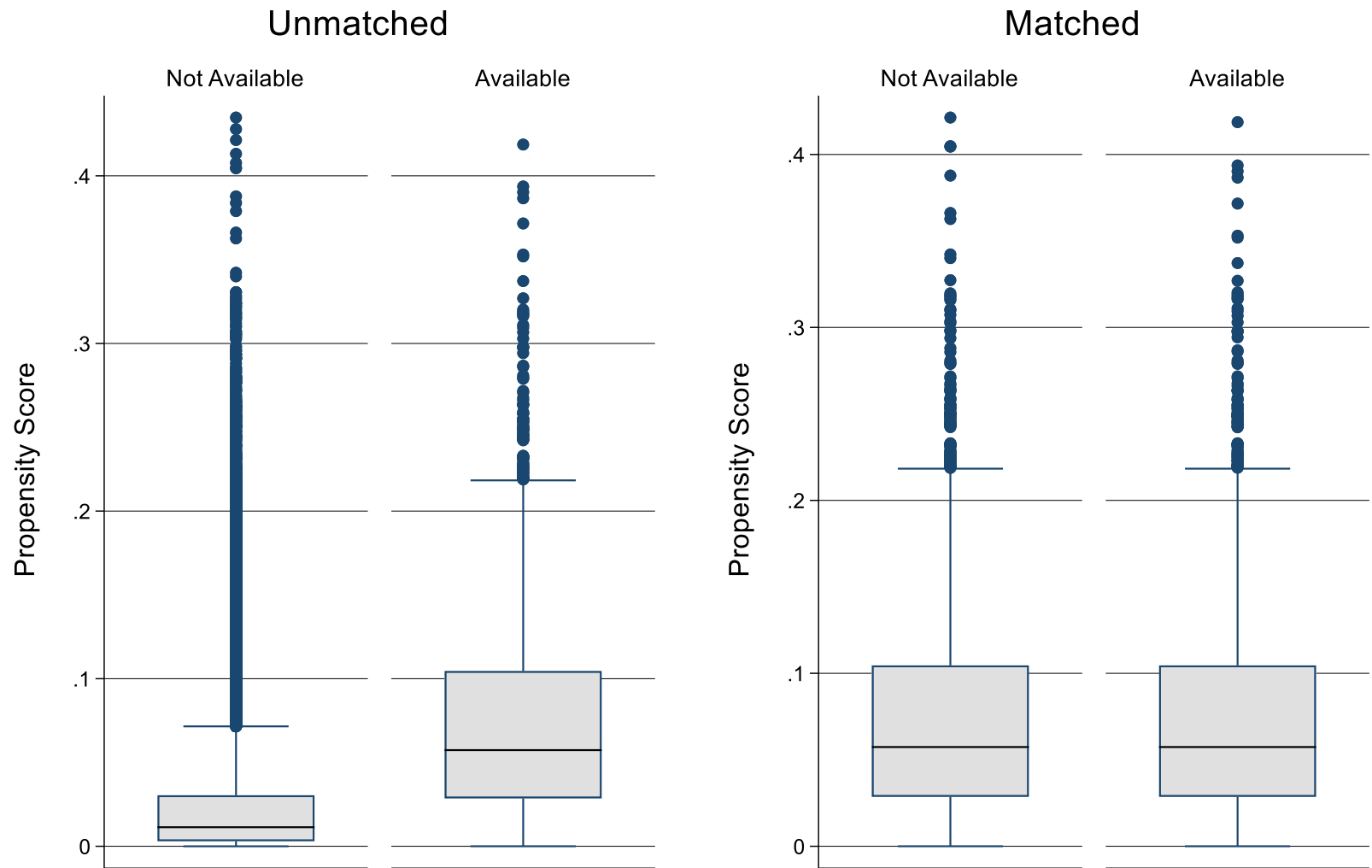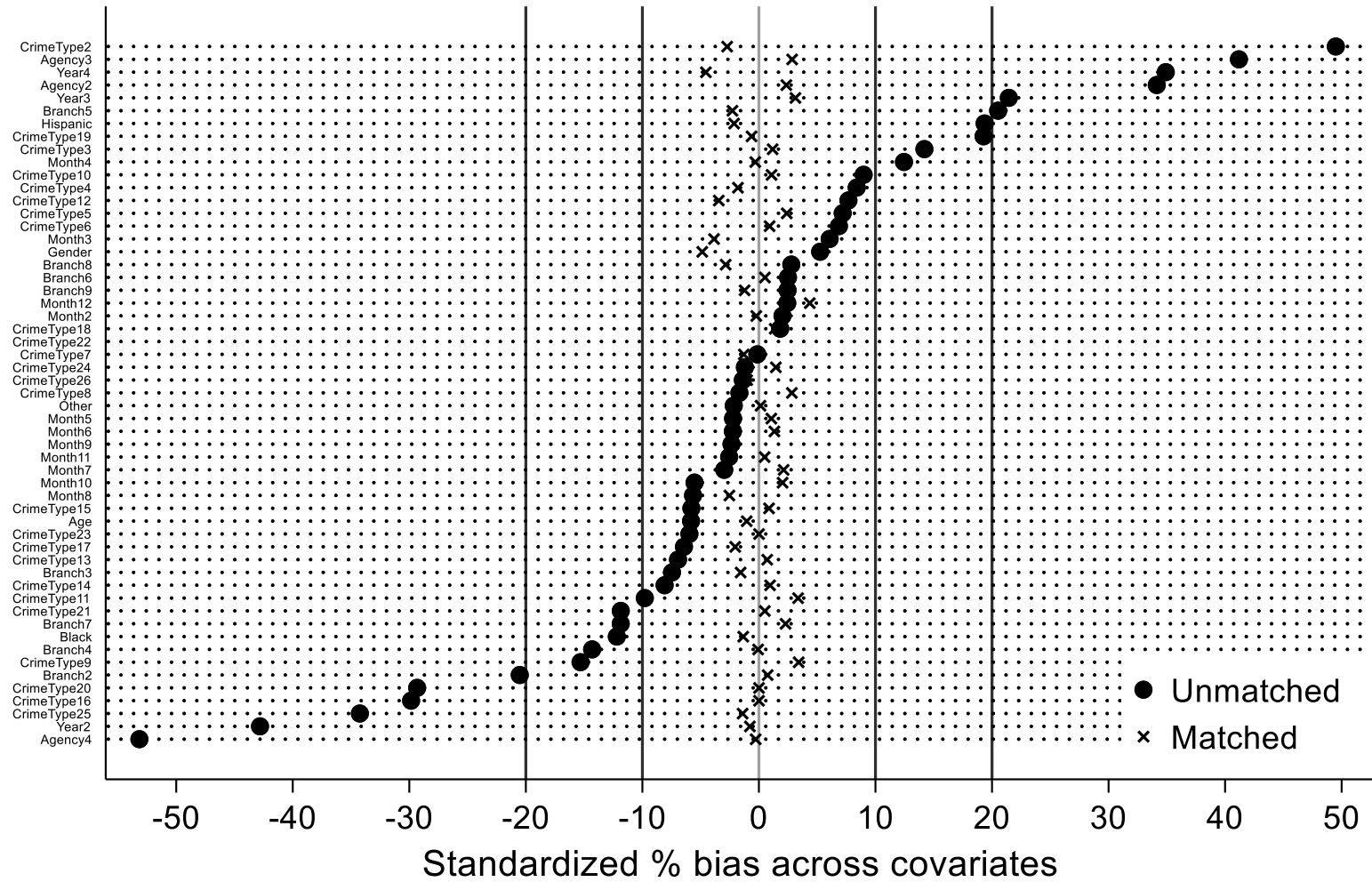
Figure A5-3. Propensity Scores for the Video Available Treatment and Control Groups, Before and After Matching

Note: see measures section for additional variable information.

Figure A5-4. Covariate Balance for Video Available Treatment, Before and After Matching

Finally, Tables A5-2 and A5-3 report means and variances for the treated and control groups before and after entropy weighting. Differences in means and variances are virtually eliminated across all covariate with entropy weighting, whereas there are notable mean and variance differences in many variables when the control group is unweighted.

Table A5-2. *Covariate Balance for Video Available Treatment, Before and After Entropy Weights*

	Unweighted				Entropy Weighted			
	Mean		Variance		Mean		Variance	
	Treated	Control	Treated	Control	Treated	Control	Treated	Control
Domestic Violence	0.317	0.118	0.216	0.104	0.317	0.317	0.216	0.216
ADW/Firearms	0.033	0.012	0.032	0.012	0.033	0.033	0.032	0.031
Weapons	0.018	0.008	0.018	0.008	0.018	0.018	0.018	0.018
Battery on Peace/other Officer	0.011	0.004	0.011	0.004	0.011	0.011	0.011	0.011
Resisting Arrest	0.017	0.009	0.017	0.009	0.017	0.017	0.017	0.017
False Report to Officer	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Fraud and Forgery	0.001	0.002	0.001	0.002	0.001	0.001	0.001	0.001
Burglary/Shoplifting/Theft	0.060	0.102	0.056	0.091	0.060	0.060	0.056	0.056
Vehicle Theft/Tampering	0.022	0.011	0.022	0.011	0.022	0.022	0.022	0.022
Trespassing	0.020	0.036	0.019	0.034	0.020	0.020	0.019	0.019
Vandalism	0.044	0.030	0.042	0.029	0.044	0.044	0.042	0.042
Disorderly Conduct	0.001	0.004	0.001	0.004	0.001	0.001	0.001	0.001
Disturbing the Peace	0.008	0.016	0.007	0.016	0.008	0.008	0.007	0.007
Lewd Conduct and Related	0.004	0.009	0.004	0.009	0.004	0.004	0.004	0.004
Prostitution	0.001	0.046	0.001	0.043	0.001	0.001	0.001	0.001
Hit and Run	0.014	0.023	0.014	0.022	0.014	0.014	0.014	0.014
DUI	0.152	0.146	0.129	0.125	0.152	0.153	0.129	0.129
DUI-Refusal	0.042	0.011	0.040	0.011	0.042	0.042	0.040	0.040

Drug Possession/Sale	0.031	0.103	0.030	0.093	0.031	0.031	0.030	0.030
Under the Influence of Drugs	0.001	0.009	0.001	0.009	0.001	0.001	0.001	0.001
Minor in possession of alcohol	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
Public Intoxication	0.001	0.003	0.001	0.003	0.001	0.001	0.001	0.001
Violation of Court Order	0.036	0.039	0.035	0.037	0.036	0.036	0.035	0.035
Vehicle Violations	0.047	0.147	0.045	0.126	0.047	0.047	0.045	0.045
Other	0.010	0.011	0.010	0.011	0.010	0.010	0.010	0.010
			140.30				140.30	140.30
Age	34.400	35.100	0	156.500	34.400	34.400	0	0
Gender	0.790	0.768	0.166	0.178	0.790	0.790	0.166	0.166
Black	0.184	0.233	0.150	0.179	0.184	0.184	0.150	0.150
Hispanic	0.583	0.487	0.243	0.250	0.583	0.583	0.243	0.243
Other	0.074	0.080	0.069	0.073	0.074	0.074	0.069	0.069
Police Felony Referral	0.175	0.066	0.145	0.061	0.175	0.175	0.145	0.145
DA Felony Referral	0.222	0.078	0.173	0.072	0.222	0.222	0.173	0.173
Other	0.001	0.128	0.001	0.111	0.001	0.001	0.001	0.001
Central Branch (CE)	0.127	0.203	0.111	0.162	0.127	0.127	0.111	0.111
Metropolitan Branch (HS)	0.149	0.176	0.127	0.145	0.149	0.149	0.127	0.127
Van Nuys Branch (VN)	0.236	0.299	0.180	0.210	0.236	0.236	0.180	0.180
Family Violence Unit (FV)	0.120	0.061	0.105	0.057	0.120	0.120	0.105	0.105
Harbor Branch (SP)	0.045	0.040	0.043	0.038	0.045	0.045	0.043	0.043
Pacific Branch (PA)	0.034	0.059	0.033	0.056	0.034	0.034	0.033	0.033
Gang & Gun Prosecution Section (GD)	0.008	0.006	0.008	0.006	0.008	0.008	0.008	0.008
SO/MM/CT[1]	0.004	0.002	0.004	0.002	0.004	0.004	0.004	0.004
2016	0.184	0.372	0.150	0.234	0.184	0.184	0.150	0.150
2017	0.493	0.387	0.250	0.237	0.493	0.493	0.250	0.250
2018	0.287	0.146	0.205	0.125	0.287	0.287	0.205	0.205
February	0.099	0.093	0.089	0.084	0.099	0.099	0.089	0.089
March	0.118	0.099	0.104	0.089	0.118	0.118	0.104	0.104
April	0.133	0.094	0.116	0.085	0.133	0.133	0.116	0.116

May	0.052	0.057	0.049	0.054	0.052	0.052	0.049	0.049
June	0.056	0.061	0.052	0.057	0.056	0.056	0.052	0.052
July	0.051	0.058	0.048	0.054	0.051	0.051	0.048	0.048
August	0.063	0.078	0.059	0.072	0.063	0.063	0.059	0.059
September	0.064	0.070	0.060	0.065	0.064	0.064	0.060	0.060
October	0.084	0.100	0.077	0.090	0.084	0.084	0.077	0.077
November	0.085	0.092	0.077	0.083	0.085	0.085	0.077	0.077
December	0.103	0.095	0.092	0.086	0.103	0.103	0.092	0.092

Notes: [1]Special Trials (SO) / Marijuana Enforcement Unit (MM) / City Attorney Hearings (CA). Optimization summary. Iteration 1 Max Difference = 1,448,599.860 Iteration 19 (final) Max Difference=0.002

Table A5-3. *Covariate Balance for Video Viewed Treatment, Before and After Entropy Weights*

	Unweighted				Entropy Weighted			
	Mean		Variance		Mean		Variance	
	Treated	Control	Treated	Control	Treated	Control	Treated	Control
Domestic Violence	0.319	0.316	0.218	0.216	0.319	0.319	0.218	0.217
ADW/Firearms	0.035	0.032	0.034	0.031	0.035	0.035	0.034	0.034
Weapons	0.018	0.018	0.017	0.018	0.018	0.018	0.017	0.017
Battery on Peace/Other Officer	0.030	0.008	0.030	0.007	0.030	0.030	0.030	0.029
Resisting Arrest	0.061	0.010	0.057	0.010	0.061	0.061	0.057	0.057
False Report to Officer	0.000	0.003	0.000	0.003	0.000	0.000	0.000	0.000
Fraud and Forgery	0.003	0.001	0.003	0.001	0.003	0.003	0.003	0.003
Burglary/Shoplifting/Theft	0.008	0.068	0.008	0.064	0.008	0.008	0.008	0.008
Vehicle Theft/Tampering	0.015	0.023	0.015	0.023	0.015	0.015	0.015	0.015
Trespassing	0.008	0.021	0.008	0.021	0.008	0.008	0.008	0.008
Vandalism	0.025	0.047	0.025	0.045	0.025	0.025	0.025	0.025
Disorderly Conduct	---	---	---	---	---	---	---	---
Disturbing the Peace	0.000	0.009	0.000	0.009	0.000	0.000	0.000	0.000
Lewd Conduct and Related	0.010	0.003	0.010	0.003	0.010	0.010	0.010	0.010
Prostitution	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
Hit and Run	0.023	0.013	0.022	0.013	0.023	0.023	0.022	0.022

DUI	0.101	0.161	0.091	0.135	0.101	0.101	0.091	0.091
DUI-Refusal	0.154	0.025	0.131	0.024	0.154	0.154	0.131	0.131
Drug Possession/Sale	0.041	0.029	0.039	0.028	0.041	0.041	0.039	0.039
Under the Influence of Drugs	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
Minor in possession of alcohol	---	---	---	---	---	---	---	---
Public Intoxication	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
Violation of Court Order	0.010	0.040	0.010	0.039	0.010	0.010	0.010	0.010
Vehicle Violations	0.023	0.051	0.022	0.049	0.023	0.023	0.022	0.022
Other	0.008	0.010	0.008	0.010	0.008	0.008	0.008	0.008
Age	34.390	34.400	131.700	141.700	34.390	34.370	131.700	131.600
Gender	0.828	0.784	0.143	0.170	0.828	0.827	0.143	0.143
Black	0.203	0.181	0.162	0.148	0.203	0.203	0.162	0.162
Hispanic	0.592	0.581	0.242	0.244	0.592	0.592	0.242	0.242
Other	0.056	0.077	0.053	0.071	0.056	0.056	0.053	0.053
Police Felony Referral	0.205	0.171	0.163	0.142	0.205	0.205	0.163	0.163
DA Felony Referral	0.149	0.233	0.127	0.179	0.149	0.149	0.127	0.127
Other	0.003	0.001	0.003	0.001	0.003	0.003	0.003	0.003
CE	0.137	0.125	0.118	0.110	0.137	0.137	0.118	0.118
HS	0.258	0.132	0.192	0.115	0.258	0.258	0.192	0.192
VN	0.071	0.262	0.066	0.193	0.071	0.071	0.066	0.066
FV	0.228	0.103	0.176	0.092	0.228	0.228	0.176	0.176
SP	0.132	0.031	0.115	0.030	0.132	0.132	0.115	0.114
PA	0.015	0.037	0.015	0.036	0.015	0.015	0.015	0.015
GD	0.000	0.010	0.000	0.009	0.000	0.000	0.000	0.000
SO/MM/CT	0.015	0.002	0.015	0.002	0.015	0.015	0.015	0.015
2016	0.081	0.200	0.075	0.160	0.081	0.081	0.075	0.075
2017	0.544	0.485	0.249	0.250	0.544	0.544	0.249	0.248
2018	0.349	0.278	0.228	0.201	0.349	0.349	0.228	0.227
February	0.106	0.097	0.095	0.088	0.106	0.107	0.095	0.095
March	0.142	0.114	0.122	0.101	0.142	0.142	0.122	0.122
April	0.137	0.133	0.118	0.115	0.137	0.137	0.118	0.118

May	0.041	0.054	0.039	0.051	0.041	0.041	0.039	0.039
June	0.078	0.052	0.073	0.049	0.078	0.078	0.073	0.072
July	0.043	0.052	0.041	0.050	0.043	0.043	0.041	0.041
August	0.071	0.062	0.066	0.058	0.071	0.071	0.066	0.066
September	0.061	0.065	0.057	0.061	0.061	0.061	0.057	0.057
October	0.084	0.084	0.077	0.077	0.084	0.084	0.077	0.077
November	0.078	0.086	0.073	0.078	0.078	0.079	0.073	0.072
December	0.071	0.108	0.066	0.096	0.071	0.071	0.066	0.066

Notes: Optimization summary. Iteration 1 Max Difference = 17,199.240; Iteration 13 (final) Max Difference=0.008

Taken together, for both binary treatment variables, treatment and control groups exhibited covariate balance across age, sex, race, agency, branch and, importantly, crime type. Both the 1-to-1 nearest neighborhood propensity score matched groups and the entropy weighted controls resulted in good, if not near perfect covariate balance, and thus estimates from these two methods should be unbiased under the assumption of no unmeasured confounders as well as similar.

Appendix F: Filing Decision by Video Availability, Primary data

	Knew Video Was Available		Did not Know Video was Available		Total	
	%	f	%	f	%	f
Filed	52.2	1177	51.4	1325	100	2502
Hearing	8.5	191	7.0	181	100	372
Rejected	38.4	865	39.7	1023	100	1888
Other	1.0	22	1.9	49	100	71
Total		*2255*		*2578*		*4833*