



Report on the Madison Police Department Body-Worn Camera Pilot



Office of the Independent Monitor

www.cityofmadison.com/independent-police-monitor

OIM@cityofmadison.com (608)261-7161





Report on the
Madison Police Department
Body-Worn Camera Pilot

October 10, 2025

Robin Copley, Esq.
Independent Police Monitor

Chioma Njoku
Office Manager

Dr. Gregory Gelembiuk
Data Analyst

TABLE OF CONTENTS

Introduction	3
Failure to Perform a Randomized Controlled Trial.....	3
Failure to Track Officer Time Spent on BWC Tasks	4
Failure to Modify SOP to Better Comply with Recommended Policy.....	5
Failure to Measure and Analyze the Most Important Metric Specified in BWC Committee Report.....	6
Errors and other Issues in Data Analysis	7
Cross-Contamination of Data from Control Districts.....	12
Budget Analysis Scanty on Detail.....	12
Impacts with Respect to Race and Ethnicity.....	12
Sample Size Issues for Surveys and Focus Groups	12
Effects on Trust.....	13
Conflicts of Interest	13
Public Records Requests for BWC Video	13
Conclusions	14
Recommendations.....	14
Appendix 1 – Language in Council Resolutions and former Chief Barnes' Memo	16
Appendix 2 – Changes to BWC SOP.....	18
Appendix 3 – One Example of a Critical Difference between MPD SOP and Committee Model Policy	19
Appendix 4 – Quantitative Data on Officer BWC Time Requirements	21
Appendix 5 - Difference in Differences Analysis of BWC Pilot Metrics	22
Appendix 6 – Disclosure: Background on OIM's Data Analyst	32
Appendix 7 - Strict Preconditions for BWC Implementation Specified in BWC Committee Report.....	34

Introduction

The Office of the Independent Monitor (OIM) is tasked with providing civilian oversight of the Madison Police Department (MPD). This includes a responsibility to actively monitor MPD, perform audits of MPD programs and activities and, at the discretion of the Monitor or Board, to publish public reports throughout the year about matters within the duties of the OIM. The following is an assessment of the MPD body-worn camera (BWC) pilot study and report. The primary purpose of this report is not to litigate the question of BWC implementation per se, but to audit MPD's BWC pilot and report. The Council resolutions authorizing the BWC pilot mandated third party evaluation of MPD's report on the pilot. Potential deployment of BWCs, and the pilot program, are matters of substantial public interest and concern. The Police Civilian Oversight Board Research & Analysis subcommittee chose examination of the MPD BWC pilot study as one of three initial priority areas on which to focus.

The BWC pilot program did generate some useful data. However, severe flaws in study design and implementation limit its value for understanding the potential impacts of BWC implementation in Madison. MPD's Chief at the time of the pilot appears to have ignored multiple directives from the Council, as reviewed below. Though, under Wisconsin statute, a police Chief has authority over the day to day operations of their police department, they are required to follow the lawful orders of a city council, such as the policy directives the Madison Common Council issued in the resolutions authorizing the BWC pilot program ([Wis. Stat. 62.09\(13\)\(a\)](#)): "The chief shall obey all lawful written orders of the mayor or common council."). The failure to do so in this case should be reviewed, so that the underlying problems may be better understood and avoided in the future.

OIM wishes to emphasize that the failure to follow Council directives in this case should not be attributed to MPD's current Chief and leadership. OIM also wishes to state its appreciation for the assistance of MPD's Data Team in obtaining the BWC pilot data, enabling re-analysis.

Failure to Perform a Randomized Controlled Trial

The Body-Worn Camera Feasibility Review Committee and Common Council specified that the BWC pilot must be a "rigorous randomized controlled trial". Moreover Chief Barnes informed the Council that it would be a randomized controlled trial (RCT) – see Appendix 1. However, instead, it appears that MPD simply handed out cameras to North District officers, then tried to compare the results post hoc to other districts without cameras. The results of such an observational analysis are far less reliable and trustworthy than what would have been produced by an RCT. Not only wasn't there a rigorous RCT performed, but no RCT was performed at all.

In an RCT, one assigns cameras at random to officers - either on an individual officer basis or on a shift basis. Some officers (or shifts) receive the cameras and others do not. One then compares the results of officers with BWCs to those without BWCs (where the latter is the control). Thus, everything is essentially identical between the two groups, other than whether they have the BWCs. Seeking to make inferences from the type of data MPD collected (instead

of using an RCT) is a fraught task and can generate invalid conclusions, because the North District may differ in key ways from other districts.

The Madison community has a primary interest in assessing the benefits versus harms/costs of BWC implementation, as reflected in the recommendations of the Body-Worn Camera Feasibility Review Committee. Meanwhile, a party intent on deploying BWCs would have a primary interest in merely troubleshooting the technology and policies, with no need for an RCT. In the absence of an RCT and in other critical omissions, the design of Madison's BWC pilot appears to basically reflect the latter perspective, with no weight given to the former.

Failure to Track Officer Time Spent on BWC Tasks

The largest cost of a BWC program, by far, is the time spent by all officers with BWCs on BWC-related tasks (tagging video, reviewing video when writing reports or preparing for court, uploading video, etc.) plus training. Multiple studies have found that officer time spent on BWC-related tasks typically comes out to about half an hour per officer per eight hour shift (see Appendix 4). If a department implements a BWC program, all officers must do multiple BWC-related tasks, and that leaves less time to do everything else (i.e., core policing tasks). This creates an understaffing problem, and to relieve that while still providing the same level of services, the department ultimately need to hire more officers. This problem is mitigated if the department is staffed with a large excess of officers to begin with, but that appears not to be the case with MPD.

ETICO, the firm that MPD retained for its own staffing analysis, notes that BWC administrative time needs to be included in patrol officer staffing analysis:

The administrative duties listed in Table 4 occur daily for every officer fielded in patrol. The time spent performing these administrative duties is time taken away from the ability to answer calls for service. Thus, each administrative duty increases the need for officers in the Field Operations Bureau. Many of these administrative duties are unavoidable either due to labor agreements or practicality. However, they should be reviewed continuously due to their direct effect on patrol staffing. Now that all officers are using body-worn cameras, the time spent donning and doffing the cameras, along with any additional administrative time to document camera footage, needs to be averaged across all officers and added to the administrative time per shift.¹

In its 2018 staffing report,² MPD noted a trend of patrol officers spending more time on fewer incidents, and the additional tasks necessitated by BWC deployment would add to this. In its 2023 staffing report,³ based on ETICO analysis, MPD argues that it is already understaffed and needs to add thirty two officer positions to patrol. And that is before even considering the

¹ Etico Solutions, Inc. (2019) College Station Police Department Resource Allocation Study. Field Operations & Operations Support. <https://wtaw.com/wp-content/uploads/2019/04/CScoun041119cspd.pdf>

² Madison Police Department 2018 Patrol Staffing Report. <https://www.cityofmadison.com/police/documents/PatrolWorkload2018.pdf>

³ Madison Police Department 2023 Patrol Staffing Report. <https://www.cityofmadison.com/police/documents/PatrolWorkload2023.pdf>

added workload and reduced officer availability that department-wide BWC implementation would impose.

The Council explicitly directed MPD to track officer time during the pilot (see Appendix 1), but MPD did not comply with this directive. Apparently, MPD did not track officer time at all. As a resolution authorizing the pilot stated, “officer time for tasks related to body-worn cameras during the pilot shall be recorded in work logs in order to gain a better understanding of the complete and true costs for Body-Worn Camera utilization.” This mechanism is what other police departments have used to track this time expenditure, so as to accurately estimate true BWC implementation cost. Note that for a police agency leader advocating BWC implementation, there would be an apparent incentive not to track this time, since it would greatly increase the projected cost of BWC implementation, potentially undercutting support.

There is also the time spent by administrative staff on tasks for a BWC program – for example, redacting video. Staff are required for this, and MPD specified the associated cost. But for a BWC program, the time routinely required of all officers (i.e., separate from administrative staff) to perform BWC-related tasks on a daily basis, in aggregate, dwarfs administrative time. An article in Tone Madison notes that MPD's BWC report should be regarded “as, above all, a political document” insofar as it provides detailed information on administrative staff time requirements related to redaction (where a Madison ordinance change to allow MPD to charge for video redaction was being advocated), while entirely failing to provide information on work hours officers in MPD’s North District spent on actual BWC tasks during the pilot.⁴

This matter also bears on the question of opportunity costs (the loss of potential gain from other alternatives when one alternative is chosen). The Body-Worn Camera Feasibility Review Committee report states: “The Common Council should engage in informed deliberation on whether resources required for BWC implementation would best be allocated to BWC implementation or other competing needs.” Unfortunately, we lack financial information from the pilot to perform this analysis properly, given that no data was recorded on the largest underlying cost. Given the absence of this information, the best fallback approach may be to use the mean estimated time for BWC-related tasks recorded in studies in other police departments.

Failure to Modify SOP to Better Comply with Recommended Policy

The Council explicitly directed that the policy written by Chief Barnes be modified to be in better compliance with the policies recommended by the Body Worn Camera Feasibility Review Committee – see Appendix 1. Chief Barnes again did not follow this directive. It appears that MPD tinkered with a few tiny random elements in the policy, but did absolutely nothing to move it toward better compliance with the BWC Committee policy recommendations (see Appendix 2).

⁴ Gordon, S. Dec. 4, 2024. Between the lines, MPD’s body-cam study is kinda about redaction fees. Tone Madison. <https://tonemadison.com/articles/between-the-lines-mpds-body-cam-study-is-kind-about-redaction-fees/>

The SOP that MPD used is in contradiction to some of the most important policy provisions recommended by the Body Worn Camera Feasibility Review Committee. For just one example, see Appendix 3.

Failure to Measure and Analyze the Most Important Metric Specified in BWC Committee Report

The pilot failed to measure and test the single most important metric specified in the Body-Worn Camera Feasibility Review Committee report. Separate from cost, the single biggest concern stated in that report was the potential increase in criminal charges brought by prosecutors (District Attorney Offices), particularly for misdemeanor offenses, when BWC video is available. Most BWC studies (albeit not all) that have tracked criminal charges have shown an increase in prosecutorial charging rates, particularly for lower-level offenses.^{5 6 7 8} One study, in Los Angeles, found an approximately 150% increase in the likelihood of misdemeanor charges being filed by prosecutors in cases with BWC video,⁹ though in most studies the increase was smaller. Mike Gennaco of OIR, who works in Los Angeles, noted that prosecutors would tend to automatically bring misdemeanor charges in cases where they knew BWC video was available, and that often included cases in which the individual was innocent, and the charged individual would often then plead out to get out of jail and get on with their life.

In Madison, such an effect could most heavily impact communities of color, given the neighborhoods that are most heavily patrolled (and that would receive the most exposure to BWCs). As the Body Worn Camera Feasibility Review Committee report clearly states, the pilot was not to be conducted until:

“Arrangements have been made for a rigorous, randomized controlled trial as a pilot program, with tracking and analysis of data on key outcomes, and particularly prosecutorial charging rates. A primary use of the trial would be to determine if charging rates and pleading rates are increased, particularly for misdemeanors, for cases in which BWC video is available. If there is statistically significant evidence of an increase in charging rates, particularly for misdemeanors, which can be causally connected to the implementation of BWCs, measures sufficient to fully offset the increase should be taken before BWC program continuation or more widespread BWC implementation. If

⁵ Peterson, K. & Y.F. Lu. (2023) The Downstream Effects of Body-worn Cameras: A Systematic Review and Meta-analysis. Justice Quarterly 40(6): 765-790. <https://doi.org/10.1080/07418825.2023.2181855>

⁶ Yokum, D., A. Ravishankar, & A. Coppock (2019) A randomized control trial evaluating the effects of police body-worn cameras. Proceedings of the National Academy of Sciences. 116(21): 10329-10332. <https://doi.org/10.1073/pnas.1814773116>

⁷ Goodall, M. July, 2007. Guidance for Police use of Body-Worn Video Devices. Police and Crime Standards Directorate. <https://library.college.police.uk/docs/homeoffice/guidance-body-worn-devices.pdf>

⁸ Clare, J., D. Henstock, C. McComb, R Newland, & G.C. Barnes (2021) The results of a randomized controlled trial of police body-worn video in Australia. Journal of Experimental Criminology 17: 43–54. <https://doi.org/10.1007/s11292-019-09387-w>

⁹ Groff, E.R., J.T. Ward & J. Wartell (2018) The Role of Body-Worn Camera Footage in the Decision to File. Report for the Laura and John Arnold Foundation. Philadelphia, PA: Criminal Justice Department, Temple University.

https://web.archive.org/web/20200504185701/https://liberalarts.temple.edu/sites/liberalarts/files/BWCProsecution_FinalReport_1_18_19.pdf

expansion of implementation occurs after the pilot program, MPD, as well as the Dane County District Attorney's Office, should continue to collect data on the effects of BWCs to continue to ascertain if BWCs are producing increases in charging rates for low-level offenses or other unintended negative consequences. If so, the City should take the necessary steps vis-à-vis the MPD and/or the District Attorney's Office to fully offset any unintended negative consequences."¹⁰

But the effects on prosecutorial charging rates and pleading rates were not included in the MPD report and appear not to have been measured.

For clarity, we will note here that officers make initial charging decisions (i.e. "referred charges"), which are essentially recommendations to prosecutors, who make the ultimate formal charging decisions. Prosecutors can bring additional charges beyond those recommended by officers, or decline to press the charges recommended by officers, or otherwise alter the charges brought.

Moreover, the only "hard" (non-opinion) outcomes analyzed (see MPD BWC report Appendix A, "Officer-Community Interaction") were the effects of BWCs on (1) the number of arrests, (2) the number of cases, (3) the number of citations, and (4) the number of citations per case. In addition, one survey question asked if charges were added after review of the BWC by the officer or sergeant ("In the 88 instances of review, no charges were added") - but from the scientific literature on BWCs, there's no reason to expect that an officer reviewing video would lead additional charges to be brought.

Data on officer charging decisions were collected. Of data collected, this variable would be the most proximate to prosecutorial charges. Thus, it appears puzzling that there were no analyses of the effect of BWCs on officer-issued referred charges.

Errors and other Issues in Data Analysis

It appears that there were multiple major errors in the analysis of BWCs in MPD's report, such that none of the results can be taken as valid. The core of Dr. Turner's analysis (i.e., the most important part of the analysis) was of the effect of BWCs on outcomes like arrests, citations, and cases. These analyses were based on spreadsheets that MPD provided Dr. Turner and OIM, for arrests, citations, and offenses. Here I will dissect issues in the source data and analysis.

A. Entirely erroneous number of arrests and cases.

Dr. Turner states that he used MPD data from "January 1, 2024, through August 28, 2024" and that "In total, across all the reporting districts in Madison (North, Central, East, Midtown, South, West) there were 9813 citations issued, 5506 cases, 11,514 arrests made" in that period. MPD provided Turner with spreadsheets for offenses, calls for service, citations, and arrests, with police districts specified for each. In addition, the case number was specified for each offense, call for service, citation, or arrest, and referred charges or municipal citations were specified for

¹⁰ Brown, T., K. Findley, V. Figueroa, K. Jorgenson, C. Myadze, & L. Schieve. January 26, 2021. Final Report and Model Policy of the Police Body-Worn Camera Feasibility Review Committee.
<https://madison.legistar.com/View.ashx?M=F&ID=10662658&GUID=23587F1C-D42E-42ED-80BB-E412497C9EF5>

each arrest. Furthermore, a spreadsheet of all cases was provided, but without police district specified. MPD shared with OIM the spreadsheets provided Turner.

There were indeed 9813 citations listed for this period in MPD's spreadsheet on citations (including both traffic and municipal citations). However, the number of arrests and cases stated by Turner appear entirely invalid. MPD's arrest spreadsheet shows a total of 5,869 arrests in this period. This rate of arrests over eight months was consistent with MPD's 2024 annual report, which states that over all of 2024, there were 9,116 arrests of adults and 462 arrests of juveniles, for a total of 9,578 arrests. The number of arrests specified by Turner and presumably used in his analysis, for January 1, 2024 through August 28, 2024, appears clearly erroneous. We could find no way to interpret MPD's data that would generate Turner's arrest number, though his number is relatively close to the total number of referred criminal charges plus municipal citations specified by MPD for this period (11,588). It appears possible that Turner erroneously counted each charge or citation listed in the arrest spreadsheet as a separate arrest.

There also appears to be no way to interpret MPD's data that can generate the number of cases Turner specifies (5,506). Based on the case report spreadsheet MPD provided Turner and OIM, there were 23,490 distinct cases from January 1, 2024 through the end of August, 2024 (with 23,111 through August 28, 2024), though police district is not recorded in that particular spreadsheet. In the specified time period, for spreadsheets that included police district as an entry, there were 10,120 cases associated with offenses, 4,724 cases in which there was an arrest, and 4,733 cases in which a citation was given. None of those comes close to matching the number specified by Dr. Turner. It is not clear what set of cases was used in his analysis.

Finally, we will note here some idiosyncrasies in what MPD counts as an arrest, since this is useful to understand when interpreting the data and findings. An arrest is counted as having occurred, with an arrest number generated, when an individual is apprehended for criminal violations, for parole or probation violations/revocations/holds, on warrants of various other types, for cited municipal ordinance violations, for cited non-traffic state statute violations (e.g., underage alcohol violation), and for certain cited traffic statute violations such as for tinted windows. Note that for the last three categories, the individual is cited and released (i.e., the individual need not be retained in custody for the instance to be counted as an arrest). Most types of traffic stops/citations (e.g., for speeding) are not counted as arrests.

B. Missing arrests and citations

We discovered that a substantial number of arrests and citations appeared to be missing in MPD's spreadsheets, when these were compared to other sources of information.

Discrepancies in TraCS data versus LERMS data:

The citations spreadsheet that MPD provided OIM and Dr. Turner was from the TraCS (Traffic and Criminal Software) system, which officers use in the field to enter citations. A comparison of the TraCS citations spreadsheet with the arrest spreadsheet we were provided, from MPD's LERMS (Law Enforcement Records Management System) database, showed numerous entries for which citations had apparently been given (e.g., for violations of municipal ordinances, or

state statutes with only a forfeiture penalty), that were not in the TRaCS system. We queried MPD with a small sample of such LERMS entries (that were not included in the TRaCS data), and MPD's case processing supervisor informed us that these corresponded to paper tickets that had been manually scanned into LERMS. We then added to the citations spreadsheet all entries in the LERMS data, but absent in the TRaCS data, that corresponded to apparent tickets for (a) municipal ordinance violations, (b) state statute violations with only a forfeiture penalty, or (c) traffic violations for which tickets are customarily issued even though the underlying offense is a criminal violation (e.g., second offense OWI). This added a total of 630 citations.

Missing juvenile arrest and citation data:

This reflected inconsistent recording of offenses referred to restorative justice. For offenses committed by 12-16 year old juveniles, where a citation would be given, an MPD officer can refer the juvenile to restorative justice (eliminating the citation, provided that the juvenile completes the restorative justice program). In MPD's spreadsheet of arrests, these arrests of individuals referred to restorative justice were variously (a) specified as cited/summonsed, with an arrest number provided, (b) specified as referred to restorative justice, with an arrest number provided, or (c) not included at all. This issue first became apparent upon comparing MPD's spreadsheet of arrests to a spreadsheet of restorative justice cases. Moreover, the frequency of instances of such arrests not being included in MPD's arrests spreadsheet changed over time, becoming more common as one moved toward the present (and varying across districts). The inconsistent handling of such instances results in a spurious apparent trend of decreasing juvenile arrests and citations over time, affecting our analysis of officer activity. We needed metrics that faithfully tracked officer activity and rectified this problem by merging the missing citations/arrests/cases into the arrests and citations spreadsheets provided by MPD. There were 97 such citations.

C. Duplication of arrests, referred charges, and citations.

We found a substantial number of apparent duplicate entries of arrests, referred criminal charges, and citations in the spreadsheets provided by MPD. For example, in some instances the same actual arrest and set of referred charges appears to have been entered twice under different arrest numbers, with the entries carrying the same date, address, date of birth, subject demographics, etc. Unless Madison has a plague of twins committing crimes together, the only viable explanation appears to be duplication of entries. We manually purged obvious duplicate entries.

D. Violated analytical assumptions, rendering analyses invalid

In the absence of an RCT, difference in differences (DiD) analysis was used to examine the results of the BWC trial. Given that there wasn't an RCT, this was one of the only options for trying to draw conclusions from the data. However, a DiD analysis is only valid if certain strong assumptions hold. The most important assumption in DiD is the parallel trends assumption – basically, this is the assumption that trends in the treatment and control groups are parallel in the absence of the treatment (which in this case is BWC use). One should never conduct DiD analysis on data without first seeking to verify that this assumption appears to hold true – if it

doesn't, one can't legitimately conduct DiD analysis (the result could be entirely wrong, with a biased estimate of treatment effect).

It is widely understood that one should never trust a DiD study that doesn't demonstrate parallel trends in the absence of treatment (e.g., via a graph showing this in the pretreatment period). However, the report failed to provide either a graph of the trends for arrests, cases, and citations, or the results of statistical tests of parallel trends in the pre-treatment period. Without that information, it is impossible to assess whether the assumptions needed to apply DiD analysis hold for these data.

It turns out that the parallel trends assumption appears violated – at least if all other Madison police districts are used as the control group, as Dr. Turner states he did. Specifically, the parallel trends assumption appears violated for the number of arrests, the number of municipal citations, the number of cases associated with citations, and the racial disparity in Black versus white arrests. This is apparent in a statistical test for parallel pretrends (see Appendix 5 for details) and can be seen graphically. But we were able to modify the approach to conduct valid analyses of these outcomes, by using only the East and South police districts as the control group – i.e. the districts that are the best demographic matches to the North district.^{11 12}

E. Results of reanalysis of BWC trial data

We performed a fresh DiD analysis on the BWC trial data, after cleaning up deficiencies in the data as noted above (see sections B and C). In our analyses, in addition to testing for an effect of BWC deployment on arrests and total citations (including both traffic and municipal), we tested for an effect of BWC deployment on municipal citations, traffic citations, all recorded offenses, referred criminal charges (inferred from data in the arrests spreadsheet), cases associated with recorded offenses, cases associated with citations, and cases associated with arrests. We also tested for an effect of BWC deployment on the Black:white racial disparity in arrests. In all of these analyses, we tested for parallel pretrends, to ensure that DiD was being applied appropriately. We tested for an effects of BWCs using both classical standard errors and robust standard errors, using the latter to protect against potential minor violations of distributional assumptions. We would suggest placing high evidential weight only on DiD results that proved significant with robust standard errors.

DiD analysis showed no significant effect of BWCs on the number of arrests, the number of municipal citations, the number of cases associated with citations, the number of referred criminal charges, and the disparity in the number of Black versus white arrested individuals (see Appendix 5 for details).

The number of traffic citations showed an apparent significant decrease with BWCs both when using conventional standard errors ($p < 0.001$) and when using robust standard errors ($p = 0.024$). Other outcomes showed an apparent significant effect of BWCs only when using

¹¹ Blank, L. Feb. 28, 2016. The Shocking Racial Gap of Madison, WI.

<https://fascinationhub.wordpress.com/2016/02/28/the-shocking-racial-gap-of-madison-wi/>

¹² City of Madison, WI. Neighborhood Indicators Project. 2022 Edition. <https://madison.apl.wisc.edu/>

conventional standard errors but not when using robust standard errors: decrease in the number of citations, combining traffic and municipal (conventional standard errors $p < 0.001$; robust standard errors $p = 0.224$), increase in the number of recorded offenses (conventional standard errors $p = 0.0371$; robust standard errors $p = 0.244$), increase in the number of cases associated with recorded offenses (conventional standard errors $p = 0.0224$; robust standard errors $p = 0.0663$) and increase in the number of cases associated with arrests (conventional standard errors $p = 0.0433$; robust standard errors $p = 0.093$).

It should be noted that apparent significant effects may well just be a consequence of violations of the assumptions underlying DiD analysis, particularly the parallel trends assumption. For example, traffic citations show a statistically significant moderate decrease in the North district during the BWC trial (all else equal). However, MPD operations are decentralized, and differences in traffic enforcement management and initiatives across districts could potentially produce the same result (without it being an effects of BWCs). This is one of the weaknesses of using a quasi-experimental design with DiD, rather than a true randomized controlled trial (where you are actually comparing across randomized units in the same district). If the observed moderate decrease in traffic citations is actually an effect of the BWC trial, one possible explanation is that it is due to the reduction in time that officers have available for actual traffic enforcement given the increased administrative workload generated by BWC-related tasks.

We will also note that it is important to understand that a failure to detect a statistically significant effect in various metrics should not be interpreted as clear evidence that BWCs had no effect on these metrics, since the quite limited size of the dataset (with only a three month trial in one district) may have provided insufficient power to detect an effect where one existed.

As discussed earlier, in some studies in other cities, BWCs were found to cause substantial increases in the number of official criminal charges filed, particularly for lesser offenses. However, this effect was mainly or entirely a result of changes in prosecutorial charging decisions.^{13 14} At this point, DiD analysis should be conducted on the number of actual charges filed by the District Attorney's Office. Based on very limited information, it is OIM's understanding that the Dane County District Attorney's charge declination rate and upcharging rate may be relatively low. Thus, given the absence of a significant effect on referred criminal charges, it seems likely that DID analysis of official charges will not show a significant effect.

¹³ Groff, E.R., J.T. Ward & J. Wartell (2018) The Role of Body-Worn Camera Footage in the Decision to File. Report for the Laura and John Arnold Foundation. Philadelphia, PA: Criminal Justice Department, Temple University.

https://web.archive.org/web/20200504185701/https://liberalarts.temple.edu/sites/liberalarts/files/BWCProsecution_FinalReport_1_18_19.pdf

¹⁴ Peterson, K. & Y.F. Lu. (2023) The Downstream Effects of Body-worn Cameras: A Systematic Review and Meta-analysis. *Justice Quarterly* 40(6): 765-790. <https://doi.org/10.1080/07418825.2023.2181855>

However, the only way this can really be determined is by obtaining and analyzing the District Attorney's charging rate data.

Cross-Contamination of Data from Control Districts

It appears that at least some patrol officers responding to calls and making arrests in control districts (i.e., outside the North district) during the trial period were wearing BWCs. We first became aware of this when reading a case report (case number 2024-00296379, an OWI accident) for an unrelated analysis. BWC use by officers operating in control districts would have tended to diminish and obscure any actual treatment effect, since the effect of BWCs was estimated by contrasting the North district with the control districts.

Budget Analysis Scanty on Detail

The Council resolution passed on August 1, 2023, authorizing the BWC pilot, states “BE IT FURTHER RESOLVED, that the Madison Police Department provide the Common Council a full budget analysis regarding the approximate cost of full implementation and ongoing operating costs”.

MPD provides cost estimates in the report, but they're scanty on detail. The report states: "Cost estimates were created by MPD staff based on known unit pricing and take potential collateral/related costs into account. Known unit costs from three major BWC vendors were used to create this estimated cost summary."

Which three vendors? And were the capabilities recommended in the Body Worn Camera Feasibility Review Committee report included in the cost (and choice of vendors)? For example, were automatic triggers included in the cost (where the BWC would automatically activate in certain circumstances)? In the report, there is no breakdown of cost, other than for administrative staffing needs, so it's impossible to check the accuracy of the costs provided and whether essential requirements were fulfilled. And, of course, the budgetary impact on overall MPD staffing needs (given time needed for BWC-related tasks by all officers) is not included.

Impacts with Respect to Race and Ethnicity

The BWC pilot report states: “Given the racial and ethnic diversity in the North district, it was chosen as the pilot district as it allows the opportunity to consider if the BWC pilot affects a multiply racialized community." However, there appears to have been virtually no examination of the impacts with respect to race and ethnicity. And because an RCT was not done, the report used the other districts, with quite different demographics, as controls. It's not clear how MPD intended to achieve the quoted aim given the problematic design of their pilot.

Sample Size Issues for Surveys and Focus Groups

In the report, MPD attempts to make inferences based on two focus groups of only five people each. That is really an inadequate number of people. There's no reason to think those focus groups were representative. The sample sizes (Ns) in the survey data tables are somewhat better, though the number in the North District during the treatment (BWC) period is only 22. That is a quite small sample size to try to draw conclusions from. Also, such survey responses

(i.e., who chose to respond to the surveys) would typically be very demographically skewed. Older white homeowners tend to respond much more to these kinds of surveys.

Effects on Trust

The MPD report repeatedly says that BWCs should be adopted to improve trust – e.g., "BWC may aid in furthering trust building and providing transparency." But there is no good evidence that BWCs increase trust. Separate from MPD's finding of no significant change in trust in their pilot, large well-conducted surveys haven't found such an effect. The largest such survey was conducted as part of an NYPD cluster randomized controlled trial. The result: "We find no statistically significant differences between BWC treatment and control precincts in general perceptions of the NYPD or the average assessment of police officer behavior among those who have had recent encounters with the NYPD."¹⁵

Conflicts of Interest

Dr. Broderick Turner, who performed most of the analyses for MPD's BWC report, is a paid consultant for a BWC manufacturer, Axon.¹⁶ This appears to constitute a classic financial conflict of interest. MPD failed to disclose this in their report.

BWC implementation by MPD would probably involve a competitive RFP (as mentioned in the report), and Axon would almost certainly be an applicant. Moreover, Axon provides an excellent product which more closely matches the specification laid out by the Body-Worn Camera Feasibility Review Committee report. So, Axon stands a good chance of benefitting from MPD BWC deployment. A vast number of individuals have the capacity to carry out the analyses in the MPD pilot BWC report (ANOVA, DiD, etc.) and hundreds of people and firms have both that capability and experience analyzing such BWC datasets. MPD was not constrained in retaining a non-conflicted analyst to carry out this work.

However, we will also note that the analyses conducted by Dr. Turner did not show any overt indications of bias.

For the sake of full disclosure related to this report, the past history of BWC advocacy by OIM's data analyst is documented in Appendix 6.

Public Records Requests for BWC Video

We contacted several cities of relatively comparable size to Madison, seeking information on the public records impact of BWC implementation. We received useful responses from three cities – Milwaukee WI, Cleveland OH, and Cincinnati OH. All stated that BWC implementation had resulted in a heavy public records burden. The police departments for Cleveland (population ~ 365,000), Cincinnati (population ~ 315,000), and Milwaukee (population ~

¹⁵ Braga, AA, J.M. MacDonald, & L.M. Barao (2021) Do body-worn cameras improve community perceptions of the police? Results from a controlled experimental evaluation. 19:279-310.
<https://link.springer.com/article/10.1007/s11292-021-09476-9>

¹⁶ Madison City Channel - Common Council: Meeting of April 19, 2022. See 5:50:45 mark and 6:10:36 mark in this recording, where alders question Dr. Broderick Turner.
<https://media.cityofmadison.com/mediasite/Showcase/madison-city-channel/Presentation/3c4fa6e0e3c24fbca291da17ae1b85a71d/Channel/d29c91089bda40e7bb0fba20311ff0755f>

564,000) employ, respectively, 7, 7, and 5 full time staff to specifically respond to BWC public records requests. Cleveland provided the most detailed information, stating that last year, they received 1,537 public records requests for BWC video (a number that they said was growing by about 300 additional requests annually), and redacted and released 3,214 BWC videos. Milwaukee stated that they receive at least 3,000 requests for dashcam or BWC video each year, with the bulk being for BWC videos. The number of requests reported by these departments appears roughly comparable to what MPD reported for its short (three month) BWC trial in one police district, after scaling up from the limited duration and spatial extent of the MPD trial. MPD stated that it received 66 public records requests for which they had BWC video available and 141 BWC video requests which were duplicates or where there were no relevant records (i.e., the high proportion of the latter is consistent with the fact that there was only BWC video available from one of six police districts over three months).

Conclusions

MPD's Chief at the time of the BWC pilot appears to have ignored multiple directives from the Madison Common Council, which had approved proceeding with the pilot under very specific conditions. The highly flawed design of the pilot severely limited its ability to capture the types of data needed by elected officials to make informed decisions moving forward.

The data that was captured can exclude the possibility that BWC deployment caused very large changes in the number of cases, arrests, citations, recorded offenses, referred criminal charges, or racial disparities. There was an apparent modest decrease in traffic citations. However, the design flaws of the study, and its relatively small size and short duration, leave open the possibility of smaller but substantial changes in the outcomes listed here. Moreover, prosecutorial decisions remain unmeasured. Finally, the failure to capture and provide key data on BWC program cost severely limits our understanding of the fiscal impacts of a BWC program.

Recommendations

1. Upon being appointed Madison Chief of Police, Chiefs should be explicitly informed that under Wis. Stats. 62.09(13)(a), they are required to "obey all lawful written orders of the mayor or common council". Under Wisconsin Statutes, police chiefs have independent authority to manage day-to-day operations of MPD, but Chiefs are not free to disregard Council or Mayoral lawful written directives, such as those in the resolutions authorizing the BWC pilot program.
2. In hiring external consultants, MPD should seek individuals and firms that do not have a financial conflict of interest. Whenever such a conflict of interest does exist, it should be disclosed in any resulting reports. The Departments of Statistics at University of Wisconsin - Madison is one of the top university statistics departments in the nation. In the future, for trials such as this, MPD may wish to consider collaborating with statisticians at UW-Madison for experimental design and data analysis.
3. External audits should routinely be performed on certain MPD reports, such as those generated in-house on MPD trials. These can help reveal problems or limitations in reports and can serve a function similar to peer review of scientific publications.

4. MPD should endeavor to maintain data that is as accurate, consistent, and accessible as possible, and should maximize cohesion across data systems. While it is inevitable that some data entry errors will occur, particularly in the field, high data standards should be maintained. Accurate, cohesive, accessible data is critical both for effective data-driven policing and for proper oversight of police activities.
5. If the City still chooses to pursue potential BWC implementation, it should consider performing a proper randomized controlled trial BWC pilot program, to actually achieve the aims specified by the Body-Worn Camera Feasibility Review Committee and Common Council. If such a trial is performed, the City should consider increasing the length or size of the BWC pilot, to achieve greater statistical power. With insufficient power, a substantial effect might not be detected, even if present. Consideration might also be given to randomizing by shift rather than individual officer, to minimize contamination between the control and BWC arms of the trial.
6. OIM strongly recommends that MPD bring its BWC SOP into better compliance with the recommendations of the Body-Worn Camera Feasibility Review Committee. Former Chief Barnes, who personally authored the MPD SOP, asserted that differences from the Committee's recommended policy were due to conflicts with state statute. However, on the whole, this is simply not true. The primary author of the Committee's recommended policy was Professor Keith Findley of the UW Law School, who well aware of state statute. Insofar as there might be any conflicts with state statute, these do not account for most of the differences between the Committee's recommended policy and MPD SOP.
7. OIM recommends that MPD and the City take the necessary steps to implement the ten preconditions specified by the Body-worn Camera Feasibility Review Committee before implementing BWCs (see Appendix 7). The Committee's report states "If the City, MPD, and the DA's Office fail to fulfill these preconditions, then the Committee unanimously agrees that BWCs should not be implemented in Madison." At this time, the large majority have not been implemented.
8. OIM recommends that, as specified in the Body-Worn Camera Feasibility Review Committee report, the Council and Mayor should explicitly discuss whether they wish to allocate funding to BWC implementation rather than other competing needs. Moreover, this should include discussion of the impact of BWC implementation on effective staffing levels, and, what degree of reduction in police services (including in the proportion of proactive policing time), if any, might be considered acceptable to accommodate BWC implementation, given the City's fiscal constraints.

Appendix 1 – Language in Council Resolutions and former Chief Barnes' Memo

Relevant excerpts from Council resolutions authorizing the BWC pilot program only under specific conditions, and excerpt from a memo from Chief Barnes. Key language underlined. Yellow highlighting = directives to record and provide data on officer time on BWC-related tasks and training. Blue highlighting = requirement that the BWC study be a rigorous randomized controlled trial. Magenta highlighting = directive that for the pilot program, MPD must work to bring the SOP into better compliance with the policy recommendations of the Body Worn Camera Feasibility Review Committee.

Excerpts from April 19, 2022 resolution passed by Council:

<https://madison.legistar.com/LegislationDetail.aspx?ID=5558429&GUID=7FD88A11-E420-4469-8AA1-C74BC8AE0584&FullText=1>

WHEREAS, officer time needed for bodycam-related tasks -- e.g., viewing video when necessary, tagging video, providing input for redaction when necessary, uploading video, and related administrative work such as responding to public records requests for video and performing redactions when needed, preparing video for the district attorney, ensuring video is properly stored, etc. should be accounted for in the design and implementation of the “rigorous, randomized trial” included in the Body-Worn Camera Pilot, and

WHEREAS, training will be required for all officers using body-worn cameras in order to comply with department SOPs, and therefore should be accounted for in the design and implementation of the “rigorous, randomized trial” included in the Body-Worn Camera Pilot, and....

NOW THEREFORE BE IT RESOLVED, that the Common Council authorizes the Madison Police Department to implement a pilot program for body-worn cameras according to specific criteria; and

BE IT FURTHER RESOLVED, that a pilot for Body-Worn Cameras in the City of Madison is required to implement recommendations listed in the final report of the Body-Worn Camera Feasibility Review Committee to the greatest extent feasible including, but not limited to, the stipulation that “arrangements be made for a rigorous, randomized controlled trial”; and the Council direct the Mayor’s office to collaborate with outside entities to advance the Body Worn Camera Feasibility Review Committee recommendations; and....

BE IT FURTHER RESOLVED, that officer time for tasks related to body-worn cameras during the pilot shall be recorded in work logs in order to gain a better understanding of the complete and true costs for Body-Worn Camera utilization, and that this requirement shall be stipulated in Madison Police Department’s Standard Operating Procedures during the extent of the pilot; and

BE IT FURTHER RESOLVED, that after conducting a thorough review of the implementation of the body-worn camera pilot program the Madison Police Department shall submit a report to the Common Council that describes Madison Police Department’s use of the cameras, policies and procedures governing their use, and qualitative and quantitative data related to their

use, **officer time** and administrative staff time **needed for body-cam related tasks and training**; and that report shall be subject to evaluation by a third party identified by the Common Council; and....

BE IT FINALLY RESOLVED, that upon receipt of said report the Common Council will refer the report to the Madison Civilian Oversight Board and Independent Monitor for a thorough review of the report to assess the costs and benefits of MPD officers wearing body-worn cameras."

From August 1, 2023. Resolution passed by Council:

<https://madison.legistar.com/LegislationDetail.aspx?ID=6259937&GUID=23C374AE-53D0-4B67-88BD-5C7FA20EA4D3>

"WHEREAS, on April 19, 2022, via Resolution File Number 68625, the Common Council authorized the Madison Police Department (MPD) to implement a Body Worn Camera Pilot program...

WHEREAS, in the report provided by the OCA, there are numerous areas including requirements related to hardware, deactivation, tracking, retention, and reporting as well as coordination with the Independent Monitor (IM) and Civilian Oversight Board (COB) and the District Attorney's office that are not consistent with the Body Worn Camera Feasibility Review Committee recommendations, and

WHEREAS, as per Resolution File Number 68625, after conducting a thorough review of the implementation of the body-worn camera pilot program the Madison Police Department shall submit a report to the Common Council that describes Madison Police Department's use of the cameras, policies and procedures governing their use, and qualitative and quantitative data related to their use, **officer time** and administrative staff time **needed for body-cam related tasks and training**; and that report shall be subject to evaluation by a third party identified by the Common Council; and

BE IT RESOLVED, that **Common Council directs MPD to continue to work towards updating their policy to have better compliance with the Body Worn Camera Feasibility Review Committee recommendations during the Pilot program**, and...."

2023 memo from Barnes:

<https://madison.legistar.com/View.ashx?M=F&ID=12089966&GUID=715C386B-EFB2-46F5-913E-D256C63AAF6C>

"We believe we have sufficiently completed all requirements of the BWC Pilot Study which was approved by council in 2022. The Madison Police Department respectfully submits (1) MPD's BWC Pilot Study Policy (2) **MPD's BWC Pilot RCT Study Proposal** (3) MPD's BWC Overview PowerPoint Presentation and (4) Madison's BWC Feasibility Committee's Proposed Policy."

Appendix 2 – Changes to BWC SOP

Below are all changes to the BWC SOP, comparing the version provided Council for their August 1, 2023 vote and the version that was apparently used for the BWC pilot, shown in Appendix C of the MPD report. It appears that essentially nothing was done to bring the SOP into better compliance with the Body-Worn Camera Feasibility Review Committee recommended policy.

- pg. 37. Deleted "o Keeping true and accurate records of the above"
- pg. 40. "d. Inadvertent footage of juveniles will not be released." changed to "d. Any inadvertent filming of juveniles shall be redacted"
- pg. 41. Deleted "In situations where an individual is taken into custody or transported by MPD into the custody or care of another institution, the Officer's involvement is considered concluded when custody of the individual is transferred to the next agency (e.g., transport to the Dane County Jail)"
- pg. 42. Deleted "The deactivation shall also be documented in the corresponding report."
- pg. 42. Deleted "a. Department members are not permitted to compile videos, screenshots, or still images based off of BWC footage, in order to create a standing database of suspects for future use. The use of such screenshots to identify unknown individuals related to open investigations is permitted. b. In accordance with Madison General Ordinances 23.63 and 23.64, facial recognition technology will not be used with BWC footage."
- pg. 42. Deleted "3. Officers and Sergeants are not permitted to share their log-in or access credentials with any other personnel."
- pg. 43. "once available on the data management system" changed to "once available on management system"
- pg. 45. Misnumbering - goes from "4" to "viii"

Appendix 3 – One Example of a Critical Difference between MPD SOP and Committee Model Policy

One of the many crucial differences between the policies recommended by the Body-Worn Camera Feasibility Review Committee report and MPD's BWC SOP:

The Body Worn Camera Feasibility Review Committee report recommends:

No law enforcement officer shall review or receive an accounting of any electronic recording of an incident prior to completing any required initial reports, statements, and interviews regarding the recorded event, unless doing so is necessary, while in the field, to address an immediate threat to life or safety.

The MPD SOP instead states:

1. Officers may review or receive an account of any electronic recording of an incident prior to completing any required initial reports, statements, and interviews regarding the recorded event.

a. If an officer is suspected of a violation of Code of Conduct or an SOP, or involved in an officer-involved critical incident or other serious use of force, the Department reserves the right to limit or restrict an officer from viewing the video file.

Under the MPD policy, one loses much of the value of BWCs as a police accountability tool, and critical evidence is compromised.

As the Marshall Project notes: "Should Cops Get to Review the Video Before They Report? Sorry, Mr. Bratton. Science says no."¹⁷

The MPD Policy & Procedure Review Committee report states: "Cognitive science research has clearly shown that an individual's memory of what happened will be suggestively influenced and altered by viewing video footage. Once an officer views a video, what had been two independent lines of evidence – the officer's eyewitness memory and the recorded footage – are no longer two independent lines of evidence, since the eyewitness memory of the officer has been tainted by viewing the recording."

The OIR Report states: "exposure to the footage can – consciously or not – undermine the purity of their recollections and therefore the legitimacy of the resultant testimony."

The ACLU notes: "If an officer is inclined to lie or distort the truth to justify a shooting, showing an officer the video evidence before taking his or her statement allows the officer to lie more effectively, and in ways that the video evidence won't contradict.... if the officer watches the video and discovers that certain elements that put them in a poor light happened not to have been captured—or that there's a moment when the subject wasn't in frame that the officer can

¹⁷ Pezdek, K. Aug. 13, 2015. Should Cops Get to Review the Video Before They Report? Sorry, Mr. Bratton. Science says no. The Marshall Project. <https://www.themarshallproject.org/2015/08/13/should-cops-get-to-review-the-video-before-they-report>

say he reached for his waistband—then the officer will feel at liberty to shade and color their account of events, if not to lie outright....Even for officers who are trying to tell the truth (as we hope most do), showing them the video can easily influence their memory of events. A camera worn on a police officer's body may capture some things an officer didn't see and miss things an officer did see.... Memory is highly malleable, and an officer's initial recollections of what took place are likely to be altered by viewing the video, so that details that don't appear on video are forgotten and things captured by the video are recalled as if experienced firsthand....if officers set down their memories before they are contaminated by viewing the video, they may capture important elements of the truth that a video has missed."¹⁸

In a 2024 review, Hillary B. Farber (Professor of Law, University of Massachusetts School of Law) writes: "BWCs likely will not deliver the benefits the public expects without sound policies to guide their use. The 'write first, then watch' approach is among the most important BWC policy law enforcement agencies should adopt. Pre-review policies, which most police departments have adopted, have numerous negative effects on accuracy and accountability in police-civilian encounters. Allowing police officers to view BWC footage before writing reports robs the accused and the judicial system of the officers' original memories. And giving officers access to recordings undermines public confidence that officers will be truthful in memorializing their own perception of events. 'Write first, then watch' policies not only avoid these pitfalls but also conform to the standards supported by cognitive science."¹⁹

Moreover, it is not enough to that the "Department reserves the right to limit or restrict an officer from viewing the video file" if "an officer is suspected of a violation of Code of Conduct or an SOP, or involved in an officer-involved critical incident or other serious use of force". Other than with officer-involved shootings, MPD wouldn't know in advance which police encounters would lead to subsequent complaints, so as to be able to restrict officers from watching those BWC videos. On top of that, even in incidents that don't involve potential officer misconduct, potentially valuable evidence captured in memory would be cross-contaminated and lost if officers are allowed to view BWC video before writing incident reports.

The science is crystal clear, that officers should not watch BWC video before writing an incident report or giving an initial statement.²⁰

¹⁸ Stanley, J. & P. Bibring. January 13, 2015. Should Officers Be Permitted to View Body Camera Footage Before Writing Their Reports? ACLU. <https://www.aclu.org/news/national-security/should-officers-be-permitted-view-body-camera-footage-writing-their-reports>

¹⁹ Farber, H.B. (2024) Write before You Watch: Policies for Police Body-Worn Cameras That Advance Accountability and Accuracy. *American Criminal Law Review*. 61(1): 59-94. https://scholarship.law.umassd.edu/cgi/viewcontent.cgi?params=/context/fac_pubs/article/1246/&path_info=Farber.pdf

²⁰ Jones, K.A. & D. Strange. (2022) Officer Memory Could Be Tainted by BWC Footage; So, What Is the Solution? *Journal of Applied Research in Memory and Cognition*, 11(2), 166–170. <https://doi.org/10.1037/mac0000040>

Appendix 4 – Quantitative Data on Officer BWC Time Requirements

Quantitative empirical data on officer time requirements (increased workload) imposed by BWC implementation. This is a comprehensive set of the estimates found online (i.e., it is not cherry-picked). The source of the information is linked in each case:

- **Spokane pilot program audit**²¹ - 30 minutes to 1 hour per shift based on officer surveys.
- **Spokane after full implementation**²² - 28.2 minutes per shift based on officer work logs.
- **Toronto**²³ - Front line officers 39 minutes per shift based on officer surveys. Various time allocations are specified for other classes of officers as well (detectives, sergeants, etc.).
- **U.S. Customs and Border Patrol**²⁴ - 30 minutes per hour of footage; 1-2 hours per shift given 2-3 hours of footage per shift.
- **Rochester**²⁵ - When there are no technical problems, 20 minutes per shift in winter; expect would be longer in summer (given more calls for service in summer).
- **Berkeley**²⁶ - Memo based on survey of other departments, ~30 minutes per shift.
- **Richmond, VA**²⁷ - 1 hour per shift. Could be reduced if technology were developed to automate certain tasks.
- **Los Angeles County Sheriff's Department**²⁸ - 45 minutes to 1 hour per shift.

²¹ Staben, D. (2015) Body Worn Camera Pilot Program Audit. Spokane Police Department Office of Professional Accountability. <https://bja.ojp.gov/sites/g/files/xyckuh186/files/media/document/body-worn-camera-pilot-program-audit.pdf>

²² Final Report of the Ad Hoc Committee of the Civilian Oversight Commission Regarding Body Worn Cameras and Recommendations of the Sheriff Civilian Oversight Commission. July 26, 2018. County of Los Angeles – Sheriff Civilian Oversight Commission. <https://web.archive.org/web/20200910182525/https://coc.lacounty.gov/LinkClick.aspx?fileticket=N3yfPmbNik4%3D&portalid=35>

²³ Toronto Police Service. June, 2016. Body-Worn Cameras. A report on the findings of the pilot project to test the value and feasibility of body-worn cameras for police officers in Toronto. <https://bja.ojp.gov/sites/g/files/xyckuh186/files/media/document/tps-body-worn-camera-pilot-project-evaluation.pdf>

²⁴ CBP Body-Worn Camera Working Group. August, 2015. Body-Worn Camera Feasibility Study Report. U.S. Customs and Border Protection. <https://www.cbp.gov/sites/default/files/documents/body-worn-camera-20151112.pdf>

²⁵ Rochester Institute of Technology - Center for Public Safety Initiatives (2017) Evaluation of Body-Worn Cameras in the Rochester Police Department: Final Report. <https://www.cityofrochester.gov/sites/default/files/migrated/WorkArea-DownloadAsset.aspx-id-21474837234.pdf>

²⁶ Daniel, C. (2015) Memo - Body-Worn Cameras for Police Officers. Berkeley Office of the City Manager. <https://web.archive.org/web/20150912122845/http://www.berkeleyside.com/wp-content/uploads/2015/01/2015-01-27-Item-27b-Body-Worn-Cameras.pdf>

²⁷ White, M.D. & A. Malm (2020) Cops, Cameras, and Crisis: The Potential and the Perils of Police Body-Worn Cameras. New York University Press. <https://ebin.pub/cops-cameras-and-crisis-the-potential-and-the-perils-of-police-body-worn-cameras-9781479865864.html>

²⁸ Office of Inspector General - County of Los Angeles. September, 2015. Body-Worn Cameras: Policy Recommendations and Review of LASD's Pilot Program.

Appendix 5 - Difference in Differences Analysis of BWC Pilot Metrics

Dr. Turner appears to have used Ordinary Least Squares regression for DiD analysis. Given that arrests, cases, citations, and charges are count data, we instead employ Poisson regression, using the `glm` function in R. For each outcome variable, we first test for violation of the parallel trends assumption in the pretreatment period. In the absence of evidence of a violation of this assumption, we then perform DiD, using the `marginaleffects` library in R.^{29 30} We confirmed that the WDD estimator of Wheeler & Ratcliffe (2018) produced identical results.³¹ We start by using all other districts as the comparison group for the North district (as Dr. Turner did). Where a significant violation of the parallel trends assumption was observed using all districts as the comparison group, we performed the analyses used the East + South districts as the comparison group, given their demographic similarity to the North district. We used all data in the spreadsheets MPD provided, running from January 1, 2023 through the end of August (generally August 28) 2024.

Arrests

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is significant (we observe a significant violation of the parallel trends assumption in the pretreatment period).

```
Coefficients:
      Estimate Std. Error z value Pr(>|z|)
(Intercept)  3.021e+00  1.993e-02 151.585 < 2e-16 ***
North        -1.476e+00  4.751e-02 -31.066 < 2e-16 ***
Day           3.484e-04  7.208e-05   4.833 1.34e-06 ***
North:Day     -5.825e-04  1.768e-04  -3.295 0.000984 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 9171.5  on 939  degrees of freedom
Residual deviance: 3033.8  on 936  degrees of freedom
AIC: 6818.8

Number of Fisher Scoring iterations: 5
```

https://web.archive.org/web/20170131024950/https://oig.lacounty.gov/Portals/OIG/Reports/Body-Worn%20Cameras_OIG%20Report.pdf

²⁹ Models to Meaning: How to Interpret Statistical Models with `marginaleffects` for R and Python.

<https://marginaleffects.com/bonus/hypothesis.html#difference-in-differences>

³⁰ Wooldridge, J.M. (2023) Simple approaches to nonlinear difference-in-differences with panel data. The *Econometrics Journal* 26(3): C31–C66. <https://academic.oup.com/ectj/article/26/3/C31/7250479>

³¹ Wheeler, A.P. May 30, 2022. Staggered Treatment Effect DiD count models.

<https://andrewpwheeler.com/2022/05/30/staggered-treatment-effect-did-count-models/>

So we proceed with the same test for North district versus East plus South district as the comparison group. North:Day is not significant, so we proceed with DiD analysis.

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  2.1001516  0.0324760  64.668  <2e-16 ***
North       -0.5554858  0.0539891 -10.289  <2e-16 ***
Day         -0.0001312  0.0001208  -1.086    0.278
North:Day   -0.0001029  0.0002016  -0.511    0.610
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 2131.9  on 939  degrees of freedom
Residual deviance: 1661.0  on 936  degrees of freedom
AIC: 4956.2

Number of Fisher Scoring iterations: 5

```

Results of DiD test, using Poisson regression and the `marginalEffects` library, with classical standard errors then with robust standard errors. The latter was used to protect against potential minor violations of distributional assumptions. A significant treatment (BWC) effect was not observed.

```

Estimate Std. Error      z Pr(>|z|)      S 2.5 % 97.5 %
      0.11      0.396 0.279      0.781 0.4 -0.666  0.887

Estimate Std. Error      z Pr(>|z|)      S 2.5 % 97.5 %
      0.11      0.822 0.134      0.893 0.2 -1.5    1.72

```

All Citations (traffic + municipal)

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is not significant, so we proceed with DiD.


```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  3.3359421  0.0167230 199.482  <2e-16 ***
North       -1.6458580  0.0420714 -39.121  <2e-16 ***
Day          0.0006418  0.0000595  10.786  <2e-16 ***
North:Day    -0.0002271  0.0001513  -1.501    0.133
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 15875  on 939  degrees of freedom
Residual deviance:  6161  on 936  degrees of freedom
AIC: 10139

Number of Fisher Scoring iterations: 5

```

Results of DiD test, using Poisson regression and the `marginalEffects` library, with classical standard errors then with robust standard errors. With classical standard errors, significance ($p < 0.05$) was observed, but significance was not observed with robust standard errors.

```

Estimate Std. Error    z Pr(>|z|)    S 2.5 % 97.5 %
      3.11      0.751 4.14  <0.001 14.8  1.64  4.58

```

```

Estimate Std. Error    z Pr(>|z|)    S 2.5 % 97.5 %
      3.11      2.56 1.21    0.224 2.2 -1.91  8.13

```

Traffic Citations

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is not significant, so we proceed with DiD.

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  3.064e+00  1.936e-02 158.277  < 2e-16 ***
North       -1.625e+00  4.730e-02 -34.344  < 2e-16 ***
Day          4.745e-04  6.952e-05   6.825  8.8e-12 ***
North:Day    1.716e-04  1.685e-04   1.018    0.309
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 11007.9  on 939  degrees of freedom
Residual deviance:  4516.7  on 936  degrees of freedom
AIC: 8196.7

Number of Fisher Scoring iterations: 5

```

Results of DiD test, using Poisson regression and the marginaleffects library, with classical standard errors then with robust standard errors. Significance ($p < 0.05$) was observed with both classical standard errors and robust standard errors.

Estimate	Std. Error	z	Pr(> z)	S	2.5 %	97.5 %
3.5	0.659	5.31	<0.001	23.1	2.21	4.79

Estimate	Std. Error	z	Pr(> z)	S	2.5 %	97.5 %
3.5	1.55	2.26	0.024	5.4	0.461	6.54

Municipal Citations

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is significant (we observe a significant violation of the parallel trends assumption in the pretreatment period).

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  1.9235176  0.0331197  58.078 < 2e-16 ***
North        -1.7039961  0.0922187 -18.478 < 2e-16 ***
Day           0.0010792  0.0001149   9.395 < 2e-16 ***
North:Day    -0.0017486  0.0003497  -5.000 5.75e-07 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 9304.2  on 929  degrees of freedom
Residual deviance: 5935.8  on 926  degrees of freedom
AIC: 8221.9

Number of Fisher Scoring iterations: 6

```

So we proceed with the same test for North district versus East plus South district as the comparison group. North:Day is not significant, so we proceed with DiD analysis.

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  0.9431219  0.0615861  15.314 < 2e-16 ***
North       -0.6177139  0.1066019  -5.795 6.85e-09 ***
Day         -0.0001145  0.0002287  -0.500  0.617
North:Day    -0.0006132  0.0004059  -1.511  0.131
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 2552.8  on 847  degrees of freedom
Residual deviance: 2339.6  on 844  degrees of freedom
AIC: 3931.3

Number of Fisher Scoring iterations: 6

```

Results of DiD test, using Poisson regression and the `marginalEffects` library, with classical standard errors then with robust standard errors. A significant treatment (BWC) effect was not observed.

```

Estimate Std. Error      z Pr(>|z|)    S 2.5 % 97.5 %
-0.00253      0.24 -0.0106    0.992 0.0 -0.472  0.467

Estimate Std. Error      z Pr(>|z|)    S 2.5 % 97.5 %
-0.00253      0.947 -0.00267    0.998 0.0 -1.86  1.85

```

Offenses

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is not significant, so we proceed with DiD.

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  4.2094809  0.0113546 370.730 < 2e-16 ***
North       -1.5797550  0.0272687 -57.933 < 2e-16 ***
Day         -0.0001965  0.0000424  -4.634 3.59e-06 ***
North:Day    0.0001544  0.0001011   1.528  0.127
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 19364.2  on 939  degrees of freedom
Residual deviance:  2621.6  on 936  degrees of freedom
AIC: 7488.6

Number of Fisher Scoring iterations: 4

```

Results of DiD test, using Poisson regression and the margineffects library, with classical standard errors then with robust standard errors. With classical standard errors, significance ($p < 0.05$) was observed, but significance was not observed with robust standard errors.

```
Estimate Std. Error      z Pr(>|z|)      S 2.5 % 97.5 %
      -2.06      0.99 -2.08  0.0371 4.8    -4 -0.123
```

```
Estimate Std. Error      z Pr(>|z|)      S 2.5 % 97.5 %
      -2.06      1.77 -1.17  0.244 2.0 -5.53  1.41
```

Referred Criminal Charges

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is not significant, so we proceed with DiD.

```
Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  3.407e+00  1.676e-02 203.272  <2e-16 ***
North        -1.439e+00  3.835e-02 -37.534  <2e-16 ***
Day           4.736e-06  6.185e-05  0.077   0.939
North:Day     -3.339e-05  1.417e-04 -0.236   0.814
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 10782.6  on 939  degrees of freedom
Residual deviance: 3545.1  on 936  degrees of freedom
AIC: 7618.7

Number of Fisher Scoring iterations: 5
```

Results of DiD test, using Poisson regression and the margineffects library, with classical standard errors then with robust standard errors. A significant treatment (BWC) effect was not observed.

```
Estimate Std. Error      z Pr(>|z|)      S 2.5 % 97.5 %
      0.113      0.689 0.164   0.869 0.2 -1.24  1.46
```

```
Estimate Std. Error      z Pr(>|z|)      S 2.5 % 97.5 %
      0.113      1.43 0.0792   0.937 0.1 -2.69  2.92
```

Cases Associated with Arrests

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is not significant, so we proceed with DiD.

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  2.910e+00  2.156e-02 134.966  <2e-16 ***
North        -1.446e+00  4.980e-02 -29.042  <2e-16 ***
Day          -4.647e-05  7.979e-05  -0.582    0.560
North:Day    -1.786e-04  1.859e-04  -0.960    0.337
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 5694.6  on 939  degrees of freedom
Residual deviance: 1187.2  on 936  degrees of freedom
AIC: 4877.7

Number of Fisher Scoring iterations: 4

```

Results of DiD test, using Poisson regression and the marginalesffects library, with classical standard errors then with robust standard errors. With classical standard errors, significance ($p < 0.05$) was observed, but significance was not observed with robust standard errors.

```

Estimate Std. Error      z Pr(>|z|)    S 2.5 % 97.5 %
    -1.05      0.521 -2.02   0.0433 4.5 -2.07 -0.0318

Estimate Std. Error      z Pr(>|z|)    S 2.5 % 97.5 %
    -1.05      0.627 -1.68   0.093 3.4 -2.28  0.175

```

Cases Associated with Citations

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is significant (we observe a significant violation of the parallel trends assumption in the pretreatment period).

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  2.809e+00  2.226e-02 126.189  <2e-16 ***
North        -1.575e+00  5.488e-02 -28.698  <2e-16 ***
Day          2.603e-04  8.094e-05   3.216   0.0013 **
North:Day    -4.236e-04  2.037e-04  -2.079   0.0376 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 6404.8  on 939  degrees of freedom
Residual deviance: 1327.1  on 936  degrees of freedom
AIC: 4869.1

Number of Fisher Scoring iterations: 5

```

So we proceed with the same test for North district versus East plus South district as the comparison group. North:Day is not significant, so we proceed with DiD analysis.

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  1.874e+00  3.622e-02  51.752  <2e-16 ***
North        -6.399e-01  6.187e-02 -10.343  <2e-16 ***
Day          -6.609e-05  1.342e-04  -0.492    0.622
North:Day    -9.716e-05  2.301e-04  -0.422    0.673
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 1636.8  on 939  degrees of freedom
Residual deviance: 1160.5  on 936  degrees of freedom
AIC: 4208.1

Number of Fisher Scoring iterations: 5

```

Results of DiD test, using Poisson regression and the marginaleffects library, with classical standard errors then with robust standard errors. A significant treatment (BWC) effect was not observed.

```

Estimate Std. Error      z Pr(>|z|)      S  2.5 % 97.5 %
    0.276      0.359 0.769    0.442 1.2 -0.428  0.98

Estimate Std. Error      z Pr(>|z|)      S  2.5 % 97.5 %
    0.276      0.395 0.699    0.484 1.0 -0.498  1.05

```

Cases Associated with Offenses

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is not significant, so we proceed with DiD.

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)  3.722e+00  1.453e-02 256.197 < 2e-16 ***
North       -1.654e+00  3.625e-02 -45.610 < 2e-16 ***
Day         -2.423e-04  5.440e-05 -4.455  8.4e-06 ***
North:Day    -3.714e-06  1.358e-04 -0.027    0.978
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

    Null deviance: 12289.9  on 939  degrees of freedom
Residual deviance: 1211.1  on 936  degrees of freedom
AIC: 5582.7

Number of Fisher Scoring iterations: 4

```

Results of DiD test, using Poisson regression and the `marginalEffects` library, with classical standard errors then with robust standard errors. With classical standard errors, significance ($p < 0.05$) was observed, but significance was not observed with robust standard errors.

```

Estimate Std. Error      z Pr(>|z|)    S 2.5 % 97.5 %
    -1.74      0.762 -2.28   0.0224 5.5 -3.23 -0.247

```

```

Estimate Std. Error      z Pr(>|z|)    S 2.5 % 97.5 %
    -1.74      0.948 -1.84   0.0663 3.9 -3.6  0.117

```

Racial Disparity – relative number of arrests of Black versus white individuals

Pre-test of the parallel trends assumption for North district versus all other districts as the comparison group. The relevant coefficient is that for North:Day. It is significant (we observe a significant violation of the parallel trends assumption in the pretreatment period).

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -0.0206779  0.0419529  -0.493   0.6221
North        0.2108509  0.0998780   2.111   0.0348 *
Days        -0.0009575  0.0001534  -6.243  4.29e-10 ***
North:Days    0.0008652  0.0003746   2.310   0.0209 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 1928.0  on 929  degrees of freedom
Residual deviance: 1816.5  on 926  degrees of freedom
AIC: 4051.4

Number of Fisher Scoring iterations: 4

```

So we proceed with the same test for North district versus East plus South district as the comparison group. North:Day is not significant, so we proceed with DiD analysis.

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -0.0475925  0.0677954  -0.702   0.4827
North        0.2377654  0.1131891   2.101   0.0357 *
Day         -0.0002331  0.0002540  -0.918   0.3588
North:Day     0.0001407  0.0004258   0.330   0.7410
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 1402.7  on 929  degrees of freedom
Residual deviance: 1378.5  on 926  degrees of freedom
AIC: 3078.6

Number of Fisher Scoring iterations: 3

```

Results of DiD test, using Poisson regression and the marginaleffects library, with classical standard errors then with robust standard errors. A significant treatment (BWC) effect was not observed.

```

Estimate Std. Error      z Pr(>|z|)    S  2.5 % 97.5 %
    -0.03    0.0354 -0.846    0.398 1.3 -0.0994 0.0395

Estimate Std. Error      z Pr(>|z|)    S  2.5 % 97.5 %
    -0.03    0.0531 -0.564    0.573 0.8 -0.134 0.0742

```


Appendix 6 – Disclosure: Background on OIM's Data Analyst

I, Gregory Gelembiuk, am OIM's data analyst and wish to document here my own history of advocacy regarding BWC implementation. In 2015, I circulated the first petition requesting BWC implementation by MPD.³² Over the next several years, I continued to advocate for BWC implementation, principally to the MPD Policy & Procedure Review Ad Hoc Committee.

As a scientist, however, I continued to closely follow BWC research, ultimately concluding that research had failed to provide evidence of most of the expected benefits, such as a hoped-for reduction in use of force.³³ By 2019, I had become a BWC skeptic, concerned that harms and costs associated with BWC implementation may outweigh benefits. I served on the Body-Worn Camera Feasibility Review Committee, but resigned shortly before release of the final report, given scientific errors in the final report. An exchange of letters to the Council then ensued, including corroboration of a key error in the report by the authors of a cited article.³⁴ I have continued to closely follow the science on BWCs.

At this point, I believe that there is reasonable evidence that BWC implementation can improve documentation of stop and frisks.³⁵ And there is clear anecdotal evidence that BWC implementation can help hold individual officers accountable in some cases (where there would otherwise only be conflicting testimony). However, certain of my concerns remain, including BWC perceptual biases that generally favor officers at the expense of those they are interacting with,^{36 37 38 39} BWC program cost, and potential BWC contributions to overcriminalization in

³² Gelembiuk, G.W. Sept. 6, 2015. Implement Police Body Cameras in Madison, WI.

<https://www.change.org/p/madison-common-council-madison-police-and-fire-commission-mayor-city-of-madison-implement-police-body-cameras-in-madison-wi>

³³ Lum, C., C.S. Koper, D.B. Wilson, M. Stoltz, M. Goodier, E. Eggins, A. Higginson, & L.G. Mazerolle. (2020) Body-Worn Cameras' Effects on Police Officers and Citizen Behavior: A Systematic Review. New Delhi, India: Campbell Collaboration. <https://onlinelibrary.wiley.com/doi/full/10.1002/cl2.1112#cl21112-bib-0067>

³⁴ Gelembiuk, G.W. June 10, 2021. External Corroboration of Errors in BWC Committee Report.

<https://drive.google.com/file/d/1iFCvykqx8Rztqp93KMA7oWQT4hT1Rz98/view?usp=sharing>

³⁵ Braga, A.A., J.M. MacDonald, & J. McCabe (2022) Body-worn cameras, lawful police stops, and NYPD officer compliance: A cluster randomized controlled trial. *Criminology* 60: 124-158. <https://doi.org/10.1111/1745-9125.12293>

³⁶ Stanley, J. March 11, 2016. A Video That Every Potential Juror Should See. ACLU.

<https://www.aclu.org/news/privacy-technology/video-every-potential-juror-should-see>

³⁷ Bailey, R.L., G.L. Read, Y.J.H. Yan, J. Liu, D.A. Makin, & D. Willits (2021) Camera Point-of-View Exacerbates Racial Bias in Viewers of Police Use of Force Videos. *Journal of Communication* 71(2): 246–275, <https://doi.org/10.1093/joc/jqab002>

³⁸ Turner, B.L., E.M. Caruso, M.A. Dilich, & N.J. Roesse (2018) Body camera footage leads to lower judgments of intent than dash camera footage. *Proceedings of the National Academy of Sciences USA* 116(4): 1201–1206. www.pnas.org/cgi/doi/10.1073/pnas.1805928116

³⁹ Jones, K.A., W.E. Crozier, & D. Strange (2019) Look there! The effect of perspective, attention, and instructions on how people understand recorded police encounters. *Behavioral Sciences & the Law* 37:711–731. <https://doi.org/10.1002/bsl.2441>

some localities.^{40 41 42 43 44} Science teaches actively open-minded thinking and, reflecting the available research, my own views on BWCs have followed a circuitous path, shifting with time.

As a scientist I learned to be acutely aware of my own cognitive biases and, in my professional life, I work hard to mitigate these.^{45 46 47} I am self-reflective and seek to always question my own beliefs and conclusions,⁴⁸ aspiring to accurate understanding and prediction.⁴⁹

Finally, I will note that the evidence and logic presented in this report should, in themselves, provide a sufficient basis for assessing the validity of the report's conclusions.

⁴⁰ Groff, E.R., J.T. Ward & J. Wartell (2018) The Role of Body-Worn Camera Footage in the Decision to File. Report for the Laura and John Arnold Foundation. Philadelphia, PA: Criminal Justice Department, Temple University.

https://web.archive.org/web/20200504185701/https://liberalarts.temple.edu/sites/liberalarts/files/BWCPProsecution_FinalReport_1_18_19.pdf

⁴¹ Peterson, K. & Y.F. Lu. (2023) The Downstream Effects of Body-worn Cameras: A Systematic Review and Meta-analysis. *Justice Quarterly* 40(6): 765-790. <https://doi.org/10.1080/07418825.2023.2181855>

⁴²Yokum, D., A. Ravishankar, & A. Coppock (2019) A randomized control trial evaluating the effects of police body-worn cameras. *Proceedings of the National Academy of Sciences*. 116(21): 10329-10332. <https://doi.org/10.1073/pnas.1814773116>

⁴³ Goodall, M. July, 2007. Guidance for Police use of Body-Worn Video Devices. Police and Crime Standards Directorate. <https://library.college.police.uk/docs/homeoffice/guidance-body-worn-devices.pdf>

⁴⁴ Clare, J., D. Henstock, C. McComb, R Newland, & G.C. Barnes (2021) The results of a randomized controlled trial of police body-worn video in Australia. *Journal of Experimental Criminology* 17: 43–54. <https://doi.org/10.1007/s11292-019-09387-w>

⁴⁵ Suttie, J. March 24, 2021. Why Thinking Like a Scientist Is Good for You. Greater Good Magazine. https://greatergood.berkeley.edu/article/item/why_thinking_like_a_scientist_is_good_for_you

⁴⁶ Kahan, D.M. Dec. 3, 2018. Why Smart People Are Vulnerable to Putting Tribe Before Truth. *Scientific American*. <https://www.scientificamerican.com/blog/observations/why-smart-people-are-vulnerable-to-putting-tribe-before-truth/>

⁴⁷ Sellier, A.L., I. Scopelliti, & C. Morewedge (2019) Debiasing Training Improves Decision Making in the Field. *Psychological Science* 30(9) :1371-1379. <https://doi.org/10.1177/0956797619861429>

⁴⁸ Baron, J., O. Ozan, and O. Yilmaz (2023). Actively open-minded thinking and the political effects of its absence. *Divided: Open-Mindedness and Dogmatism in a Polarized World*. Oxford University Press.162-C9P184. <https://doi.org/10.1093/oso/9780197655467.003.0009>

⁴⁹ Tetlock, P.E. & D. Gardner. (2015) *Superforecasting: The Art and Science of Prediction*. Crown Publishers/Random House. <https://psycnet.apa.org/record/2015-22864-000>

Appendix 7 - Strict Preconditions for BWC Implementation Specified in BWC Committee Report

Below is text from the Committee report, along with a color-coded statement on whether each precondition has been satisfied.

Green = precondition satisfied

Yellow = precondition partially satisfied

Red = precondition not satisfied

While the Committee struggled to come to consensus on whether to recommend for or against BWCs, the Committee was unanimous that BWCs should only be implemented if done so in a context that includes good policies and procedures as part of an overall package of reforms that enhances the potential for desired effects and minimizes the potential for unintended harms as much as possible. Thus, the following should be strict preconditions for implementation of BWCs.

Madison should adopt a BWC program only if:

1. MPD has formally adopted the BWC policies recommended by the Body-Worn Camera Feasibility Review Committee with, at most, minor modifications that do not alter the essential substance and principles outlined in this Report and in the Model Policy, which are designed to minimize officer discretion, minimize potential bias in the captured images, protect legitimate privacy interests, minimize opportunities for exacerbating racial disparities and increased criminalization of marginalized groups, minimize opportunities for mass surveillance of civilians, ensure the integrity of the recordings, enhance accountability and transparency, and enhance access to the truth.

This precondition is not satisfied. The current MPD SOP has multiple major differences from the Committee's recommended policy.

2. Accompanying all disclosure or release of BWC footage shall be a statement, either written as a document or added to the beginning of the video, informing viewers of the perceptual bias (detailed below) inherent in viewing BWC video footage, with an instruction to the viewer to consider this risk and its impact before reaching a conclusion about the footage, in order to arrive at valid judgements.[1] This instruction may include:
 - a. Because the BWC is not aimed at the wearer, it may not capture relevant actions of the wearer. BWC footage may not accurately capture the intent and possible misconduct of the person wearing the BWC, since they are largely invisible in their own BWC video. Research shows that human beings tend to judge more harshly the person who is the subject in a video and therefore to skew perception in favor of the wearer and against the subject because BWCs are pointed at the subject.

- b. BWC footage may promote or create an exaggerated perception of aggression of subjects interacting with the BWC wearer, given motion and jostling of the BWC on the wearer.
- c. BWC footage may promote or create an exaggerated perception of the height and size of subjects interacting with the BWC wearer, dependent on the position of the BWC mount.
- d. The speed at which BWC footage is viewed may affect perception of subject intent or actions. Slowing down footage may make the subject appear more deliberate in their actions, while speeding up footage may make the subject appear more aggressive.
- e. BWC footage provides a record of events, but that record is not comprehensive and is subject to the viewer's interpretation. BWC footage should be considered within the context of other evidence provided.

It appears that no action has been taken to satisfy this precondition.

- 3. Given ongoing advances in research, experts on cognitive and perceptual biases should periodically be consulted for recommendations on steps that should be taken to best mitigate these biases in judgements based on body camera footage (e.g., specific trainings for prosecutors, etc.), and appropriate actions should be taken, based on these recommendations.

It appears that nothing has been done to satisfy this precondition.

- 4. The Independent Police Monitor and Police Civilian Oversight Board are fully operational and have access to BWC video footage as set forth elsewhere in this report and model policy.

This precondition is satisfied.

- 5. The City and MPD have made substantial and sustained progress toward adopting the other reforms recommended by the previous Madison Police Department Policy and Procedure Review Ad Hoc Committee, especially in the areas of Accountability, Use of Force, and Response to Critical Incidents.

Though only a limited portion of the Ad Hoc Committee recommendations have been implemented at this point, OIM judges this precondition substantially satisfied.

- 6. A system and or process for sharing BWC video footage files – preferably an electronic file sharing system if feasible – with the Dane County District Attorney's Office and the Public Defender's Office in time for informing charging decisions for cases referred by MPD for potential criminal charges.

It appears that no action has been taken to satisfy this precondition.

7. The Dane County District Attorney's Office has formally enacted a policy to review any relevant BWC video before making a charging decision in any case referred by MPD where BWC video is available.

It appears that no attempt has been made to negotiate and obtain such a commitment.

8. The Dane County District Attorney's Office has firmly committed to measures sufficient to prevent an overall increase in charging rates and criminalization in low-level offenses caused by MPD BWC implementation.

It appears that no attempt has been made to negotiate and obtain such a commitment.

9. Arrangements have been made for a rigorous, randomized controlled trial as a pilot program, with tracking and analysis of data on key outcomes, and particularly prosecutorial charging rates. A primary use of the trial would be to determine if charging rates and pleading rates are increased, particularly for misdemeanors, for cases in which BWC video is available. If there is statistically significant evidence of an increase in charging rates, particularly for misdemeanors, which can be causally connected to the implementation of BWCs, measures sufficient to fully offset the increase should be taken before BWC program continuation or more widespread BWC implementation. If expansion of implementation occurs after the pilot program, MPD, as well as the Dane County District Attorney's Office, should continue to collect data on the effects of BWCs to continue to ascertain if BWCs are producing increases in charging rates for low-level offenses or other unintended negative consequences. If so, the City should take the necessary steps vis-à-vis the MPD and/or the District Attorney's Office to fully offset any unintended negative consequences.

A BWC pilot has occurred, but it wasn't conducted as an RCT. No analysis has been performed of prosecutorial charging rates. MPD and the DA's Office have not yet committed to continued collection and analysis of the specified data.

10. The Common Council should engage in informed deliberation on whether resources required for BWC implementation would best be allocated to BWC implementation or other competing needs.

It appears that such a deliberation has yet to occur.

If the City, MPD, and the DA's Office fail to fulfill these preconditions, then the Committee unanimously agrees that BWCs should not be implemented in Madison.⁵⁰

⁵⁰ Brown, T., K. Findley, V. Figueroa, K. Jorgenson, C. Myadze, & L. Schieve. January 26, 2021. Final Report and Model Policy of the Police Body-Worn Camera Feasibility Review Committee.
<https://madison.legistar.com/View.ashx?M=F&ID=10662658&GUID=23587F1C-D42E-42ED-80BB-E412497C9EF5>