

Police Officer Body-Worn Cameras

ASSESSING THE EVIDENCE

by Michael D. White, PhD



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Letter from the Assistant Attorney General

Dear colleagues,

I am pleased to bring you this resource from the Office of Justice Programs (OJP) Diagnostic Center on body-worn video cameras. This review was produced for a Diagnostic Center client seeking to understand the costs and benefits to the law enforcement community to use body-worn camera technology, and we believe the information assembled by the Diagnostic Center can be of use to law enforcement departments throughout the country.

As you may know, OJP is committed to translating scientific evidence about what works in criminal justice and public safety to the field, ensuring it is both accessible and user friendly. OJP launched the Diagnostic Center in spring 2012 to facilitate this translation process of science into outcomes. The Diagnostic Center is a technical assistance resource for state, local, and tribal policymakers seeking to implement data-driven strategies to combat crime and improve public safety.

In pursuing that mission, the Diagnostic Center undertook this literature review of the current evidence on the challenges and benefits of body-worn video camera technology. I hope that this resource, which we are proud to be publishing jointly with our colleagues from the Office of Community Oriented Policing Services (COPS Office), helps inform your department's conversations about the use of body-worn video cameras in the field.

If you are interested in receiving services from the OJP Diagnostic Center, please visit www.OJPDiagnosticCenter.org or call 1-855-657-0411 to learn more about how the Diagnostic Center engages with client communities to improve public safety.

Sincerely,



Karol V. Mason
Assistant Attorney General
Office of Justice Programs

Executive Summary

In recent years, technological innovation has continually shaped law enforcement, from less-lethal devices (e.g., TASER) and forensic evidence to advanced crime analysis. The most recent technological innovation that may redefine policing is officer body-worn camera systems.

The technology has received considerable attention in the media and among policing officials. For example, in her August 2013 ruling that declared the New York Police Department's (NYPD) stop, question, and frisk program unconstitutional, Judge Shira Scheindlin included body-worn cameras as part of the judicial order.

On September 11, 2013, the Police Executive Research Forum (PERF) held a conference on the technology. Although advocates and critics have made numerous claims regarding body-worn cameras, there have been few balanced discussions of the benefits and problems associated with the technology and even fewer discussions of the empirical evidence supporting or refuting those claims.

This publication provides a review of the available evidence on officer body-worn cameras. The goal is to provide a comprehensive resource that will help law enforcement agencies to understand the factors they should consider to make informed decisions regarding the adoption of body-worn camera technology.

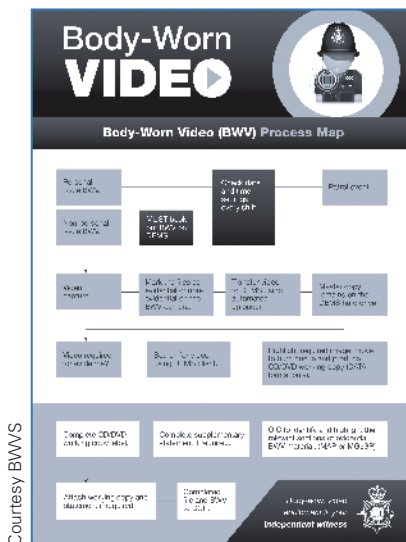
Resources and research

This publication reviews several available resources that offer a starting point for exploring the body-worn camera technology (see Appendix A for greater detail):

- The UK Home Office's Guidance for the Police Use of Body-Worn Video Devices (Goodall 2007)
- The National Institute of Justice's (NIJ) A Primer on Body-Worn Cameras for Law Enforcement (ManTech 2012)
- Body Worn Video Steering Group, www.bwvsg.com

This resource also provides an overview of empirical studies to date that have examined the implementation and impact of officer body-worn cameras. The overwhelming theme from this review is the lack of available research on the technology. This publication identifies five empirical studies:

1. Plymouth Head Camera Project (England)(Goodall 2007)
2. Renfrewshire/Aberdeen Studies (Scotland)(ODS Consulting 2011)



3. Rialto (California) Police Department (Farrar 2013)
4. Mesa (Arizona) Police Department (MPD 2013)
5. Phoenix (Arizona) Police Department (White 2013)

The five studies reviewed here, which vary widely in their methodological rigor, represent the entire body of evidence on body-worn cameras (see also Draisin 2011 for an internal review of the literature on in-car or body-worn cameras conducted for the Orlando Police Department).

Perceived benefits and concerns

The majority of this publication reviews the claims made by advocates and critics regarding body-worn camera technology and includes a discussion of the empirical evidence supporting each claim. Given the lack of research, there is little evidence to support or refute many of the claims, and there are outstanding questions regarding the impact and consequences of body-worn cameras. Nevertheless, the available studies have provided insight into several areas, suggesting that additional study of the technology is warranted. However, police departments should be cautious and deliberate in their exploration of the technology given the lack of research.

Perceived benefits (based on available research and conventional wisdom), along with a discussion of each claim, include the following:

- **Body-worn cameras increase transparency and citizen views of police legitimacy.** This claim has not been sufficiently tested. There have been virtually no studies of citizens' views of the technology.
- **Body-worn cameras have a civilizing effect, resulting in improved behavior among both police officers and citizens.** Several of the empirical studies have documented substantial decreases in citizen complaints (Rialto, Mesa, Plymouth, and Renfrewshire/Aberdeen studies) as well as in use of force by police (Rialto) and assaults on officers (Aberdeen). There is also anecdotal support for a civilizing effect reported elsewhere (Phoenix and in media reports cited in the references list).

However, the behavior dynamics that explain these complaints and use of force trends are by no means clear. The decline in complaints and use of force may be tied to improved citizen behavior, improved police officer behavior, or a combination of the two. It may also be due to changes in citizen complaint reporting patterns (rather than a civilizing effect), as there is evidence that citizens are less likely to file frivolous complaints against officers wearing cameras (Goodall 2007; Stross 2013). Available research cannot disentangle these effects; thus, more research is needed.

- **Body-worn cameras have evidentiary benefits that expedite resolution of citizen complaints or lawsuits and that improve evidence for arrest and prosecution.** The available research offers support for the evidentiary benefits of body-worn camera systems. Several of the empirical studies (Plymouth and Renfrewshire/Aberdeen studies) indicate that body-worn cameras assist in the resolution of citizen complaints against police officers. Findings also suggest that body-worn cameras may reduce the likelihood that citizens will file untruthful complaints (Plymouth and Renfrewshire/Aberdeen studies). While some research has looked into the technology's impact on resolution of citizen complaints (all five studies listed in "Resources and research"), no research has tested the technology's impact on lawsuits against police.

There is no evidence from the U.S. studies regarding the impact of body-worn cameras on arrest and prosecution practices. Evidence from the UK studies indicates that the technology reduces officers' paperwork, enhances their ability to determine whether a crime occurred, and increases the likelihood that cases will end in a guilty plea rather than criminal trial. However, more research is needed.

- **Body-worn cameras provide opportunities for police training.** This claim is mostly untested. There is anecdotal evidence from the UK Home Office guide (Goodall 2007) regarding the use of the technology in police training, and there is one report of a U.S. police department (Miami) doing so (Local 10 2013). More research is needed.

Perceived concerns and problems (based on available research and conventional wisdom), along with a discussion of each claim, include the following:

- **Body-worn cameras create citizen privacy concerns.** Although civil rights advocates have generally supported the use of body-worn cameras by police (Stanley 2013), the impact of the technology on citizen privacy is not fully understood. Federal and state laws regarding the expectation of privacy place some restrictions on using audio and video recording. Moreover, body-worn cameras capture in real time the traumatic experiences of citizens who are victims of crime, who are involved in medical emergencies and accidents, and who are being detained or arrested. Recording these events may exacerbate citizens' trauma. In their model policy template (see Appendix B), the Body Worn Video Steering Group cautions law enforcement agencies about the collateral intrusion of the technology, particularly with regard to religious sensitivities, intimate searches, witnesses and confidential informants, victims, and communications governed by legal privilege. More research is needed.
- **Body-worn cameras create concerns for police officer privacy.** Law enforcement circles have not universally accepted the technology. Police unions in several cities, most recently New York, have claimed that the cameras represent a change in working conditions that must be negotiated

during contract talks (Schoenmann 2012; Celona 2013). There are also concerns that officers may be subjected to unsolicited fishing expeditions by supervisors (White 2013). Experiences from Phoenix and Rialto suggest that including line-level staff in the implementation process from the start, particularly with regard to policy development governing camera use, can alleviate many of these concerns. Nevertheless, everything an officer records is discoverable, even if the officer records events unintentionally (e.g., forgets to stop recording). The implications of the technology for officer privacy are not fully understood, and more research is needed.

- **Body-worn cameras create concerns for officer health and safety.** The UK Home Office guide (Goodall 2007) details a wide range of potential health and safety concerns, from neck injury resulting from the weight of the camera to electrical shock. The vast majority of concerns are rated as low risk. The guide does cite a few concerns as medium risk, including the potential for head injury (i.e., the camera striking the officer's head during an assault), soreness and headaches from the headband (most UK agencies use a unit attached to a headband), and transferred bodily fluids or infectious agents from shared cameras. However, wearing the camera on part of the uniform (e.g., lapel or torso) instead of the head can mitigate nearly all of the stated risks. Nevertheless, there has been no research examining health and safety issues associated with body-worn cameras.
- **Body-worn cameras require investments in terms of training and policy development.** Available research clearly demonstrates the importance of training and policy governing the deployment of body-worn cameras. Officers who wear cameras need to be trained in their use, from recording and downloading video to proper equipment maintenance. Departments must develop clear administrative policies that provide guidance to officers on a wide range of issues, such as when to record and when not to, whether to announce that the encounter is being recorded, and when supervisors can review video. The policies should also address video download procedures, video redaction procedures, preparation of video for prosecution, and data storage and management.

The Body Worn Video Steering Group developed a comprehensive policy template (see Appendix B) that can be used by agencies as a framework for developing their own policies.

Moreover, the Mesa (Arizona) Police Department's evaluation, which focused on the cameras' impact on reducing civil liability, addressing departmental complaints, and enhancing criminal prosecution, clearly demonstrates that administrative policy influences camera usage (MPD 2013). During the one-year evaluation, Mesa employed two different policies governing use of the

camera: one that was restrictive (implemented the first six months) and one that gave officers much more discretion in determining when to record events (implemented the last six months). Camera use declined by 42 percent when the discretionary policy was in effect. The Mesa evaluation also demonstrated that officers who volunteer to wear the technology are more likely to record encounters than officers who are required to wear it.

- **Body-worn cameras require substantial commitment of finances, resources, and logistics.** Available research demonstrates that the resource and logistical issues surrounding adoption of body-worn cameras are considerable and, in many cases, difficult to anticipate. There are direct costs associated with purchasing the hardware (from \$800 to \$1,000 per camera) as well as replacement costs as components break down (MPD 2013). One of the primary resource issues revolves around data storage and management. Body-worn cameras produce an enormous amount of video data that must be properly and securely stored. There are also questions about how quickly specific video can be retrieved (White 2013). The major vendors offer cloud-based storage solutions at a cost, or agencies can choose to manage and store the video locally.



chinahzyg / Shutterstock.com

Further, when body-worn camera video footage is used in court, there are potential expenses associated with reviewing and redacting footage. The more frequently that body-worn camera footage is introduced in court, the greater these expenses will be.

The evaluations in Mesa and Phoenix clearly indicate that adopting body-worn camera technology has a substantial impact, both positive and negative, on the agency that far exceeds the effect on officers who wear the technology. Adopting the technology requires creating an agency-wide process to manage the program that includes nearly every unit, from line supervisors and patrol officers to detectives, technology and data analysts, legal staff, internal affairs, and agency leaders. The technology also impacts other stakeholders outside the law enforcement agency, including the prosecutor's office, defense attorneys, and the courts.

Recommendations

Based on the review of available literature on body-worn camera technology, this publication offers several recommendations for next steps to improve the knowledge base on the technology. These recommendations center on continued exploration of body-worn cameras through deliberate and cautious deployment of the technology, coupled with a methodologically rigorous portfolio of research.

- Agencies interested in adopting body-worn camera technology should proceed cautiously and consider the issues described in the previous section to fully inform their decisions.
- Agencies should collaborate with researchers to design rigorous implementation and impact evaluations of the technology and with experimental research designs.
- Leadership organizations in law enforcement, such as the International Association of Chiefs of Police (IACP), the Police Foundation, and PERF, should consider developing guidelines for implementation and evaluation of body-worn camera technology. IACP and other organizations should collaborate with their UK partners who have been experimenting with this technology for nearly a decade.
- Independent research on body-worn camera technology is urgently needed. Most of the claims made by advocates and critics of the technology remain untested. Federal agencies that support research and development should consider providing funding streams for comprehensive research and evaluation of body-worn camera systems. Researchers should examine all aspects of the implementation and impact of the technology—from its perceived civilizing effect, evidentiary benefits, and impact on citizen perceptions of police legitimacy to its consequences for privacy rights, the law enforcement agency, and other outside stakeholders.
- Body-worn camera systems hold great promise as a training tool for law enforcement, both in the academy and as part of performance evaluation. Post-hoc review of officer (or cadet) behavior during recorded encounters can serve as a mechanism for positive feedback, can identify problems in officer behavior, can help identify best practices in handling critical incidents (e.g., de-escalation), and can eliminate traditional reliance on “final frame” review of officer decisions to use force (i.e., the “split second syndrome” [Fyfe 1986]).

Introduction

“When you put a camera on a police officer, they tend to behave a little better, follow the rules a little better. And if a citizen knows the officer is wearing a camera, chances are the citizen will behave a little better.”

– William A. Farrar, Chief of Police,
Rialto (California) Police Department
(Lovett 2013)

“It would be a nightmare. We can’t have your camera-man follow you around and film things without people questioning whether they deliberately chose an angle, whether they got the whole picture in.”

– Michael R. Bloomberg, Mayor,
New York City (Santora 2013)

Over the past several years, technological innovation has redefined numerous facets of policing, most notably as an extension of law enforcement’s authority to use force (e.g., TASER [see White and Ready 2010]), as a tool for criminal investigation (e.g., DNA testing [see Roman et al. 2008]), and as a mechanism for improving their efficiency and effectiveness (e.g., hot spot analysis and CompStat [see Braga and Weisburd 2010; Weisburd et al. 2003; Braga et al. 2012]).

Technology has also been increasingly used as a mechanism for surveillance and observation, both by citizens and the police. In the early 1990s, dashboard cameras emerged as a new method for capturing the real-time encounters between police and citizens.

Despite early resistance to the dashboard cameras by officers (see Pilant 1995), research demonstrated that the cameras led to increased officer safety and accountability and reduced agency liability. As a result, the technology has been widely embraced by law enforcement (see IACP 2003).

Closed circuit surveillance systems (CCTV) have also become increasingly popular among city leaders and law enforcement as both a method of surveillance (crime prevention) and as a tool for post-hoc criminal investigation (e.g., Boston Marathon bombing)(see Ratcliffe 2011; Welsh and Farrington 2009). And of course the proliferation of smartphones has also exponentially increased the ability to record events as they transpire, especially police-citizen encounters (see Erpenbach 2008; Harris 2010). As a result, video and audio recording has become a ubiquitous part of life in the 21st century.¹

The latest technological development for law enforcement in the area of surveillance involves officer body-worn cameras. There are a number of body-worn camera manufacturers, including Panasonic, VIEVU, TASER International, WatchGuard, and Wolfcom Enterprises.²

The technology includes several components that vary across manufacturers. For example, TASER International's AXON system includes a small camera worn by the officer (on a shirt lapel, hat, or sunglasses) that captures what the officer sees; a device (e.g., smartphone) that records and stores the video (similar to a DVR); and a battery pack that lasts typically from 12–14 hours and that includes the on/off switch for recording. The AXON system comes with a cloud-based data storage service (www.evidence.com) whereby the officer places the recording device in a docking station at the end of the shift, and the storage service securely uploads and stores all video evidence.³ The VIEVU system is a self-contained, pager-sized device that officers wear on their torso, and device includes a docking station for video download and cloud-based data storage.

Police officer body-worn camera technology received significant media attention in 2013. In August 2013, Judge Shira Scheindlin of the Federal District Court in Manhattan ruled that the New York Police Department's (NYPD) stop, question, and frisk (SQF) program is unconstitutional, and as part of the ruling, the judge ordered officers in the highest volume SQF precincts to wear cameras in an effort to prevent racial profiling (Santora 2013).⁴

-
1. For example, the American Civil Liberties Union's smartphone app, called "Police Tape," records encounters with police (see ACLU-NJ n.d.). Consequently, many police leaders instruct their officers to always assume that their actions are being recorded.
 2. Though there are a number of competitor manufacturers, this publication refers primarily to the products developed by VIEVU and TASER International. There are two reasons for this. First, nearly all of the empirical studies reviewed for this publication were based on either the VIEVU or TASER International camera systems. Second, the author conducted an extensive literature review for this publication, and the manufacturers most commonly cited in the identified literature and media sources were, by far, VIEVU and TASER International. VIEVU claims that more than 3,000 police agencies are currently using their product (VIEVU LLC 2014). TASER offers the AXON FLEX and the AXON Body camera systems.
 3. Both VIEVU and TASER have protections in place to insure that video cannot be tampered with or destroyed.
 4. The New York case has continued to evolve. In October 2013, a federal court of appeals issued a stay on the lower court ruling and removed Judge Scheindlin from the case (questioning her objectivity). In November, Bill de Blasio was elected mayor of New York, and he replaced former Police Commissioner Raymond Kelly with Bill Bratton. At the time of this writing, the court of appeals had not scheduled a hearing to review evidence on the case. The implications of these developments for the adoption of body-worn cameras in the NYPD remain unknown.

On September 11, 2013, PERF held a one-day conference on law enforcement's use of the technology. Moreover, there have been dozens of media reports describing police use of the technology.

Unfortunately, there have been few balanced discussions of the merits and drawbacks of police officer body-worn cameras and even fewer empirical studies of the technology in the field. The perceived yet widely touted benefits of the camera technology range from improved citizen and police behavior (e.g., civilizing effect) to reduced use of force, citizen complaints, and lawsuits. The perceived benefits are grounded in a body of literature establishing that human beings change their behavior when they are observed and are more likely to "experience public awareness, become more prone to socially-acceptable behavior and sense a heightened need to cooperate with the rules," (Farrar 2013, 2).⁵ There have been fewer discussions of the technology's drawbacks, but criticism often centers on citizen privacy concerns, officer apprehension regarding unsolicited supervisor review of video, union concerns about changes to officer working conditions, and cost and resource concerns.

The goal of this publication is to provide law enforcement agencies, researchers, and other interested parties with a comprehensive, objective resource that describes the key issues to consider with the technology, that outlines the perceived advantages and limitations of the technology, and that assesses the body of empirical evidence supporting or refuting those claims.

The publication is divided into several major sections. The first section includes a discussion of the methodology employed for this review, as well as brief descriptions of available reports and resources that are useful for understanding body-worn camera technology. This section also provides an overview of the empirical studies that have tested officer body-worn cameras, as well as a summary of the perceived benefits and concerns with the technology. The empirical evaluations, which vary in methodological rigor and independence (e.g., internal agency reviews), serve as the foundation for the current knowledge base on body-worn camera technology.

The next two sections examine the benefits and drawbacks identified by advocates and critics of the technology and include descriptions of available empirical evidence to support or refute those claims. The last section summarizes the evidence on the technology's impact and outlines a series of recommendations for next steps to assess and understand the future of body-worn cameras in law enforcement.

Overall, this review provides a comprehensive discussion of the issues and evidence surrounding officer body-worn cameras. The review also provides a framework that will allow law enforcement agencies to consider the full range of issues regarding adoption of the technology.

5. Farrar (2013) provides a brief review of this literature (for original sources, see Gervais and Norenzayan 2012; Sproull et al. 1996; Milinski et al. 2002; Bateson et al. 2006). Deterrence theory may also be relevant (see Nagin 2013): e.g., risk of apprehension increases with the presence of a body-worn camera.

Resources and Research

A brief note on methodology

To identify the relevant literature on police officer body-worn cameras, the author conducted Internet searches using Google, the National Criminal Justice Reference Service (NCJRS), and the primary scholarly criminal justice and criminology electronic databases, which include the Academic Search Premier (EBSCOhost), HeinOnline, LexisNexis Academic, and Criminal Justice Abstracts. The author also reviewed works cited in identified documents and vetted the list of identified documents with several police scholars. In addition, the author reviewed the websites of the two popular manufacturers of body-worn cameras: i.e., TASER International for the AXON system at www.taser.com and VIEVU at www.viewu.com.

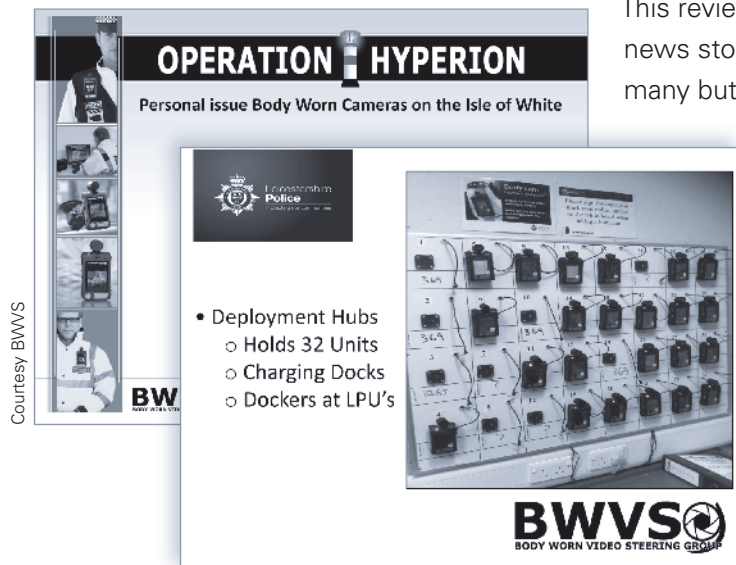
This review also uncovered dozens of newsprint and television news stories on body-worn cameras. This publication reviews many but not all of these news reports. Rather, it summarizes the key themes based on results from a handful of empirical studies and uses the media reports as supplemental documentation.

The following resources describe the technology and offer guidance on its adoption and deployment by police (see Appendix A for greater detail):

- The UK Home Office's *Guidance for the Police Use of Body-Worn Video Devices* (Goodall 2007)
- Body Worn Video Steering Group, www.bwvsg.com
- National Institute of Justice's (NIJ) *A Primer on Body-Worn Cameras for Law Enforcement* (ManTech 2012)
- System Assessment and Validation for Emergency Responders' (SAVER) *Wearable Camera Systems Focus Group Report* (SAVER 2011)
- SAVER's *Camera Systems, Wearable* (SAVER 2012)

These resources represent a starting point for law enforcement agencies considering adoption of body-worn camera technology. The UK Home Office guide, the Body Worn Video Steering Group website, and the National Institute of Justice guide are especially useful.

A handful of reports identified for this review describe evaluations of officer body-worn camera programs (see Table 1). These evaluations represent the only empirical tests to date of the implementation and impact of the technology, and they serve as the foundation of this publication.



Courtesy BWVS

Table 1. Empirical studies of officer body-worn cameras as of September 2013

| Country | Study | Citation | Independent evaluation | Comparative design |
|---------------|--------------------------------|-----------------------|-------------------------------|--------------------|
| England | Plymouth Head Camera Project | Goodall 2007 | Yes: Process Evolution, Ltd. | No |
| Scotland | Renfrewshire/Aberdeen Studies | (ODS Consulting 2011) | Yes: ODS Consulting | No |
| United States | Rialto (CA) Police Department | (Farrar 2013) | No | Yes |
| United States | Mesa (AZ) Police Department | (MPD 2013) | No* | Yes |
| United States | Phoenix (AZ) Police Department | (White 2013) | Yes: Arizona State University | Yes |

* Arizona State University has conducted survey research of Mesa police officers and collected field contact reports for 400 police-citizen encounters; however, the Mesa Police Department directed the outcome evaluation.

Most of the evaluations described here have significant methodological limitations, either because the study does not employ a comparative design (i.e., no comparison group), or the study was carried out internally by the law enforcement agency deploying the technology (raising questions of independence). Also, several of the studies rely heavily on officer surveys that ask about perceptions and attitudes rather than measuring behavior.⁶ The absence of rigorous, independent studies using experimental methods has limited understanding of the impact and consequences of body-worn cameras.

Studies in the United Kingdom

British police agencies were among the first to experiment with and test officer body-worn camera technology. Harris (2010, 6) notes that “the initial pilot studies, small in size, transpired in Plymouth, England, in 2005 and 2006.” Based on positive results from the early pilot studies, the Plymouth Basic Command Unit initiated the “Plymouth Head Camera Project” in October 2006.

As part of the project, which lasted 17 months, the agency purchased 50 camera systems and trained 300 officers to use the technology (Goodall 2007). The camera systems were available for trained officers to sign out voluntarily. Officers recorded 3,054 incidents during the study. Although the Plymouth Head Camera Project study did not use a comparative research design, the goals of the project were as follows (Goodall 2007):

- To provide police officers with optical evidence that would reduce bureaucracy, improve sanction detections, and streamline the criminal justice process

6. See Draisin 2011 for literature review on in-car and body-worn cameras conducted for the Orlando Police Department. Also, the National Institute of Justice recently made an award to the CNA Corporation to evaluate the impact of body-worn cameras in the Las Vegas Metropolitan Police Department. The study is set to begin in early-2014.

- To reduce challenges to police officer evidence in court
- To increase early guilty pleas, reducing wasted police officer and court time
- To reduce the number of malicious complaints made against police officers
- To reduce the incidence of violent crime

Several police agencies in Scotland have also evaluated body-worn camera technology. In July 2011, ODS Consulting published evaluations of the technology in Renfrewshire and Aberdeen (Strathclyde and Grampian Police, respectively).⁷ In Renfrewshire, the Strathclyde police deployed 38 body-worn camera systems for eight months. In Aberdeen, the Grampian police deployed 18 camera systems for three months. Neither study employed a comparative research design. The evaluations focused on the technology's impact on citizen attitudes, criminal justice processing (guilty pleas), citizen complaints, and assaults on officers. In each department, the camera systems recorded approximately 2,500 events.

Studies in the United States

There have been three studies of the technology in the United States. The first study is an evaluation of the Rialto (California) Police Department body-worn camera project, led by Chief of Police William Farrar (Farrar 2013). The Rialto study began in February 2012 and continued through July 2013. The study involved a randomized controlled trial in which half of the department's 54 patrol officers were randomly assigned to wear the TASER AXON body-camera system (ibid.). The work shift was the study's unit of analysis.

"There are 19 shifts during any given week and 54 frontline officers conducted patrols in six teams: two teams work day shifts, three teams work nights, and two teams are cover shifts" (Farrar 2014). Shifts were randomly allocated to treatment and control conditions on a weekly basis. In total, the study assigned 988 shifts into 489 treatment and 499 control conditions over a 12-month period (Farrar, 5–6).

The Rialto experiment tested the impact of the cameras on citizen complaints and police use of force incidents, comparing officers who wear the cameras to officers who do not.⁸

For the second evaluation, the Mesa (Arizona) Police Department outfitted 50 officers with TASER AXON FLEX body-worn cameras on October 1, 2012, and the year-long study was completed in September 2013. The evaluation "focused on the system's impact on reducing civil liability, addressing departmental complaints and enhancing criminal prosecution" (MPD 2013, 1). The evaluation

7. The Strathclyde and Grampian police agencies applied for and received evaluation support from the Scottish Government's Community Safety Unit. The Community Safety Unit appointed ODS Consulting to conduct the evaluation.

8. The Rialto project served as the foundation for Farrar's master's thesis at the University of Cambridge. In 2013, Farrar received the award for Excellence in Evidence-Based Policing, from the Society of Evidence-Based Policing, for this study of body-worn cameras.

also examined officer perceptions of the technology at multiple points in time throughout the study period. The 50 AXON users are compared to a group of demographically similar officers who are not equipped with cameras.

The third evaluation, conducted by the Phoenix (Arizona) Police Department and Arizona State University, is part of the Bureau of Justice Assistance’s Smart Policing Initiative (SPI). The Phoenix study, which involves 56 officers wearing the VIEVU camera system, is testing whether the cameras deter unprofessional behavior from officers, lower citizen complaints, reduce citizen resistance, and disprove allegations against officers. The Phoenix SPI team is also assessing whether the cameras enhance response to domestic violence cases (e.g., increased charging, prosecution, and conviction rates).

Moreover, the third study includes both an extensive process evaluation, which captures implementation of the body-worn camera system, and an assessment of officer perceptions of the technology throughout the project period. The study has a comparative research design, focusing on differences in outcomes between two squads in the Maryvale precinct: the 56 officers wearing body cameras and 50 comparison officers. The officers began wearing the cameras during their shifts in April 2013 (shift periods covered 24 hours a day, seven days a week), and they will continue to do so for one year.

Perceived benefits and concerns

Table 2 provides a summary of the perceived merits and drawbacks of the technology. Such perceived benefits include enhanced transparency and legitimacy, improved behavior (citizen and officer), quicker resolution of complaints/lawsuits, improved evidence for arrest and prosecution and training opportunities. Critics of the technology have raised concerns about privacy (citizen and officer), officer health and safety, training and policy requirements and logistical/resource requirements. The next two sections describe each of the perceived benefits and concerns, as well as the available empirical evidence supporting or refuting each claim.

Table 2. Perceived benefits and concerns with officer body-worn cameras

| Benefits | Concerns |
|--|---|
| <ul style="list-style-type: none"> ■ Increased transparency and legitimacy ■ Improved police officer behavior ■ Improved citizen behavior ■ Expedited resolution of complaints and lawsuits ■ Improved evidence for arrest and prosecution ■ Opportunities for police training | <ul style="list-style-type: none"> ■ Citizens’ privacy ■ Officers’ privacy ■ Officers’ health and safety ■ Training and policy requirements ■ Logistical and resource requirements, including data storage and retrieval |

The Perceived Benefits of Officer Body-Worn Cameras

Increased transparency and police legitimacy

Transparency, or willingness by a police department to open itself up to outside scrutiny, is an important perceived benefit of officer body-worn cameras. Transparency can demonstrate to the community that officers aim to act in a fair and just manner (e.g., procedural justice) when interacting with citizens, which can increase perceptions of police legitimacy (Tyler 1990). A recent article in *Police Magazine* stated that “officer-worn cameras represent the pinnacle of transparency in law enforcement,” and according to the American Civil Liberties Union, “transparency leads to public trust and trust benefits the community” (Clark 2013).

In her recent ruling against the NYPD’s stop, question, and frisk program, Judge Scheindlin wrote that cameras

will provide a contemporaneous, objective record of stop-and-frisks allowing for the review of officer conduct [that] may either confirm or refute the belief of some minorities that they have been stopped simply as a result of their race.... Thus, the recordings should also alleviate some of the mistrust that has developed between the police and the black and Hispanic communities, based on the belief that stops and frisks are overwhelmingly and unjustifiably directed at members of these communities. (Floyd v. City of New York 2013, 26–27)



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Unfortunately, the assertion that body-worn cameras enhance the transparency of a police department has not

been sufficiently tested. To date, there has been little research examining the views and perceptions of citizens regarding police officer body-worn cameras, with the exception of a few studies overseas. The Renfrewshire/Aberdeen studies queried citizens through an online survey in Renfrewshire (n=97) and as part of a citizens panel in Aberdeen (n=701). Citizen support for the technology was high in both cities, at 64 to 76 percent (ODS Consulting 2011).

Also, the Plymouth Head Camera Project in England included brief surveys of 36 crime victims, and the responding officer was wearing a camera. Of the 36 victims, 26 (72 percent) reported that the body-worn camera was beneficial during the encounter with police, and 29 victims (81percent)

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reported that they felt safer as a result of the cameras (Goodall 2007, 68). However, these results are far from definitive. Citizen support for use of body-worn cameras remains unclear, as does the impact of the technology on citizens' trust in the police (e.g., increased transparency and legitimacy).

Improved police officer behavior

Advocates of body-worn cameras have argued the technology will change police officer behavior during encounters with citizens. In the NYPD ruling, the judge noted:

If, in fact, the police do, on occasion, use offensive language—including racial slurs—or act with more force than necessary, the use of body-worn cameras will inevitably reduce such behavior. (*Floyd v. City of New York* 2013, 26–27)

Harris (2010) suggests the technology could increase officer compliance with the Fourth Amendment provisions governing search and seizure.⁹ Several of the empirical evaluations sought to test the potential for improving police officer behavior.

The Rialto evaluation reported that, following implementation of the body-worn camera program, citizen complaints against police declined by 88 percent—from 24 in 2011, a year before the study, to just three complaints during the camera project study period (Farrar 2013). Moreover, use of force by police officers dropped by 60 percent, from 61 to 25 instances, following the start of the body-worn camera study (*ibid.*).

Farrar (2013) reported two findings that seek to tie the use of force reduction to the body-worn cameras:

1. First, “shifts without cameras experienced twice as many incidents of use of force as shifts with cameras” (8).
2. Second, a qualitative review of all use of force incidents determined that officers without cameras were more likely to use force without having been physically threatened. This occurred in five of the 17 use of force incidents involving officers without cameras.

All use of force incidents involving camera-wearing officers began with a suspect physically threatening the officer.

Questions remain regarding the behavior dynamics that led to the decline in use of force and citizen complaints. For example, are the declines a result of changes in officer behavior (e.g., officers less



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9. Harris (2010) notes that approximately 30 percent of police searches are unconstitutional, and the vast majority of those illegal searches produce no evidence. As a result, citizens who experience those violations have no recourse through the exclusionary rule because there is no evidence to exclude.

likely to use force or behave improperly), citizen behavior (e.g., citizens act less aggressively), or some combination of the two? The drop in complaints may also be due to changes in citizen reporting patterns, as evidence suggests that body-worn cameras may reduce the filing of frivolous complaints by citizens.

The Mesa Police Department also assessed the impact of body-worn cameras on officer attitudes and officer behavior. With regard to attitudes, researchers at Arizona State University surveyed officers at multiple points in time regarding the body-worn camera project. To date, the results from only the first survey, as the project began, are available. Officers generally had positive views about the potential impact of the body-worn cameras: i.e., 77 percent believed the cameras would cause officers to behave more professionally (MPD 2013).¹⁰

The Phoenix evaluation addresses similar questions about attitudes and behavior and also includes officer surveys at multiple points in time. Preliminary results indicate that, prior to the start of the project, officers' attitudes were either ambivalent or negative. However, after wearing the camera for three months, some officers' attitudes improved significantly (White 2013).

The Mesa study also examined officer behavior measured through citizen complaints. The first part of the analysis compared the 50 officers who wore AXON cameras to 50 non-camera wearing officers. During the first eight months of the evaluation, the AXON users were the subject of eight complaints; during that same time, the control officers were the subject of 23 complaints.

The second part of the analysis examined the complaint trends of AXON users before and after they started wearing the cameras. In the year before the camera project started, officers were the subject of 30 complaints; at the officers' current pace, they were estimated to generate 12 complaints during the camera project study. If this trend holds, implementing the body-worn camera system will be associated with significant declines in complaints against officers, including:

- 60 percent decline among AXON users (year before compared to study period);
- 65 percent fewer complaints about AXON users compared to non-camera officers.

As with the Rialto study, the behavior dynamics that caused the decline in complaints remain unknown (e.g., civilizing effect on citizens, officers, or both or a change in complaint reporting).¹¹

10. However, officers were not entirely supportive of the body-worn camera project. Only 23 percent of the officers stated that the department should adopt a body-worn camera system, and less than half believed that their fellow officers would welcome the presence of a camera at a scene (MPD 2013).

11. Alternatively, critics have suggested that the body-worn cameras will have a "chilling effect" on police officers, meaning they will become less proactive and as a result, will become less effective in dealing with crime. There is currently no available evidence to support this claim. Farrar, chief of the Rialto Police Department, did address this concern in a recent interview. He stated, "The thinking was that some officers wearing cameras might try to hide and not really do their job. We found the opposite. We actually had 3,000 more officer-citizen contacts during the year (of the experiment)" (Dillon 2013).

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The UK studies also sought to test the impact of the technology on officer behavior. For example, the Plymouth Head Camera Project reported a 14.3 percent reduction in citizen complaints during the first six months of the project as compared to the same six-month period from the prior year. During the project, there were no complaints filed against officers wearing head cameras (Goodall 2007). In the Renfrewshire/Aberdeen studies, officers wearing body cameras recorded more than 5,000 citizen encounters, and only five citizens filed complaints as a result of those incidents. There was no comparison to officers who did not wear cameras.¹²

Improved citizen behavior

Proponents of body-worn cameras have also argued that the technology will improve citizen behavior during encounters with police, suggesting that they will be more respectful and compliant. Unfortunately, there is currently very little evidence to support this assertion outside of anecdotal reports in the media (Lovett 2013) and preliminary results from a few evaluations (Goodall 2007).

The UK Home Office guide (ibid.) states that citizen behavior improves as a result of officer body-worn cameras, though the evidence used to support this statement is not clear:



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Officers using [body-worn cameras] at anti-social behavior hotspots noted that persons present significantly reduce the level of their behavior when officers with head cameras attend, more so than just with the presence of a police officer or PCSO. The equipment can have a greater impact than street CCTV or vehicle-borne cameras as they can be deployed at any position within the incident; those present quickly learn that the recordings include sound, and [body-worn cameras] are more obvious than other CCTV systems that can blend into the background after a short time. (Goodall 2007, 8).

The Renfrewshire/Aberdeen studies examined assaults on officers to ascertain whether officer body-worn cameras change citizen behavior. During the 5,000 recorded encounters in both sites, officers were assaulted on four occasions (ODS Consulting 2011). In the Aberdeen study, there were 62 assaults on officers: 61 against officers not wearing cameras and one against a camera-wearing officer. The researchers concluded that “if police officers wearing [body-worn cameras] had been assaulted in proportion to the overall number of assaults in Aberdeen, it might have been expected that 18 assaults would have taken place” rather than one (ODS Consulting 2011, 12).¹³

12. It is unknown whether any of the agencies described here changed their citizen complaint intake and screening process, which could also explain changes in citizen complaint patterns.

13. The researchers' logic is based on the premise that if 30 percent of officers on patrol are wearing cameras, those officers should experience about 30 percent of assaults against police (30 percent of 61 assaults is 18 assaults). This, of course, does not allow for any differences among officers wearing cameras and those not wearing cameras in terms of the number of encounters, types of encounters, patrol assignments, or time on patrol.

The U.S. empirical evaluations of body-worn cameras provide some insight into the potential for improved citizen behavior. First, the Mesa evaluation asked officers their perceptions of the impact of the cameras on citizen behavior. However, officers were skeptical: only 45 percent of surveyed officers stated that cameras would cause citizens to act more respectfully (MPD 2013). Second, anecdotal evidence from the Phoenix evaluation suggests the technology appears to have a “civilizing effect” on citizens once they realize that a camera is recording their behavior (White 2013).

Last, the Rialto experiment documented a substantial drop in officer use of force. It is possible that this finding may be explained in part by changes in citizen behavior. To be more specific, citizens may have altered their behavior during encounters with officers who are wearing cameras, such as being more respectful and compliant, which led to fewer incidents in which officers needed to use force. Farrar (2013) acknowledges this possibility but notes that his study is unable to offer definitive evidence on citizen behavior:

Members of the public with whom the officers communicated were also aware of being videotaped and therefore were likely to be cognizant that they ought to act cooperatively. However, we did not collect any evidence from these individuals to be able to ascertain this question. (ibid., 10)

Additional research on the dynamics of encounters between citizens and police who wear cameras is required to better understand the nature of the behavior changes that are occurring.¹⁴

Expedited resolution of citizen complaints/lawsuits

Advocates of body-worn cameras have also argued that the technology will facilitate quick resolution of complaints and lawsuits against police officers. While there is no empirical evidence regarding the impact of body-worn cameras on lawsuits against police, there is evidence of a positive impact on citizen complaint resolution. Police departments devote considerable resources to the investigation of citizen complaints (Walker and Katz 2013). However, complaints against police are often adjudicated as “not sustained” because typically no witnesses are present and the complaint involves the officer’s word against the citizen’s. Video evidence changes this dynamic. The researchers of the Renfrewshire/Aberdeen studies concluded:

What is clear is that the process of considering any complaint was made much easier by using the evidence from [body-worn] cameras. This will have provided some reassurance to the officer involved; reduced the time taken to resolve the complaint; and reduced police time in resolving complaints. (ODS Consulting 2011, 12)

14. The Plymouth Head Camera Project sought to reduce crime by 10 percent in the areas where the body-worn cameras were deployed. The simple pre-/post-comparison of crime (year before project compared to year of implementation) indicated little change at 1.2 percent. The Renfrewshire/Aberdeen studies of body-worn cameras documented a significant drop in crime in Aberdeen following deployment of the technology, but limitations in the research design prevent any definitive conclusions about the connection between the cameras and the crime trends (ODS Consulting 2011).

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Harris (2010) notes that the video evidence can provide citizens with additional information that helps them understand the police officer's behavior:

If citizens can see that they were, perhaps, mistaken, or that they did not understand the situation from the officer's point of view, or that they did not have all the facts, they may come away with a better grasp of the situation and feeling that they need not continue with the complaint process. (ibid., 7)

Citizens may be less likely to file "frivolous" or untruthful complaints against officers wearing cameras because citizens know that the video evidence can instantly refute their claims. Rialto Chief of Police Farrar has noted in interviews that the ability to access video has led to quick resolution of potential complaints (Stross 2013). The UK Home Office guide draws similar conclusions, noting that "in a number of cases the complainants have reconsidered their complaint after this [video] review, thus reducing investigation time for unwarranted complaints" (Goodall 2007, 7).¹⁵

Even if we assume that in most cases the recording supports the officer's version of events and not the citizen's, the opposite will surely be true some of the time. In such a case, the officer's conduct can be examined and he or she held accountable for mistakes made or violations committed (Harris 2010, 10).

Evidence for arrest and prosecution

Advocates of body-worn cameras state that the video evidence will facilitate the arrest and prosecution of offenders, as it offers a real-time, permanent record of the events that transpired.

Though U.S. studies have not sufficiently examined this claim, results from several UK studies lend support. The Plymouth Head Camera Project reported that the technology increased officers' ability to document that a violent crime had occurred, and the incidents recorded by body cameras were more likely to be resolved through guilty pleas rather than criminal trials (Goodall 2007).

The UK Home Office guide also noted that quicker resolution of cases led to a 22.4 percent reduction in officer time devoted to paperwork and file preparation and an increase of 9.2 percent in officer time spent on patrol, which amounts to an extra 50 minutes per nine-hour shift. The Renfrewshire/Aberdeen studies also documented quicker resolution of criminal cases through guilty pleas. In Renfrewshire, body-worn camera cases were 70 to 80 percent less likely to go to trial, compared to other court cases. In Aberdeen, none of the body-worn camera cases resulted in a criminal trial (ODS Consulting 2011). The UK Home Office guide comments on this benefit for domestic violence cases:

15. For additional discussion, see also Stecklein 2012.

The evidence gathered using [body-worn cameras] at the scene of a domestic abuse incident has assisted greatly in supporting reluctant witnesses through the court process. In providing an exact record of the demeanor and language of the accused, the disturbance throughout the scene and the emotional effect on the victim, the use of [body-worn cameras] can significantly strengthen the prosecution case. (Goodall 2007, 8)

Results from the Mesa officer survey support the UK Home Office, showing that 80 percent of officers believe that the cameras will improve evidence quality and 76 percent believe that video evidence will facilitate prosecution of domestic violence cases (MPD 2013).

Opportunities for police training

Advocates of body-worn cameras have also suggested the technology can serve as an important training tool (Harris 2010). Post-hoc review of officer behavior could be especially useful when critical incidents, such as use of force, are recorded. The UK Home Office guide identifies professional development as one of the most important benefits of the technology:

[A body-worn camera] has been used by Professional Development Units as a training aid for student officers. The ability to review their performance in detail after an incident is a powerful tool for officers to highlight effective and ineffective actions. When reviewing their evidence, experienced officers who have used the equipment have also been able to assess their behavior and can professionalize their performance accordingly. (Goodall 2007, 8)

There is evidence of at least one police department in the U.S. employing the technology as a training tool. As part of its exploration of the technology, the Miami Police Department has been using body-worn cameras in the training academy since 2012. Miami Police Major Ian Moffitt stated that “we can record a situation, a scenario in training, and then go back and look at it and show the student, the recruit, the officer what they did good, what they did bad, and [what they can] improve on” (Local 10 2013).



Body-worn cameras could also be very useful during investigations of critical incidents, such as use of force. Fyfe (1986) argued that departmental review of officer decision-making during critical incidents traditionally focuses only on the circumstances immediately preceding the use of force or

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what he calls the “split-second syndrome.” However, reliance on the split-second syndrome inhibits “the development of greater police diagnostic expertise” by ignoring the decisions that an officer made prior to the use of force (ibid.). But body-worn cameras can address this problem:

Instead of asking whether an officer ultimately had to shoot or fight his way out of perilous circumstances, we are better advised to ask whether it was not possible for him to have approached the situation in a way that reduced the risk of bloodshed and increased the chances of a successful and nonviolent conclusion. (Fyfe 1986, 224)

The limited available evidence shows that body-worn camera technology could hold great promise both as a training tool for police and as a mechanism for more thorough and fair reviews of officer behavior during critical incidents. Future research should explore these areas.

Concerns and Considerations Regarding Body-Worn Cameras



Concerns for citizens' privacy

Critics of body-worn cameras have cited numerous concerns over citizen privacy. First, the National Institute of Justice (NIJ) guide (ManTech 2012, 7) notes that “federal law blocks the warrantless capturing of photo or video images of people where they have an expectation of privacy, and most states have similar laws.”

Moreover, a number of states require two-party consent before lawful recording of private conversations. The NIJ guide (ManTech 2012, 7) states that “When using [body-worn cameras], considerations on whether or not audio recording is allowed during video recording will require specific research prior to purchases or even

piloting devices” (see also Draisin 2011). For example, in September 2011, the Seattle Police Department determined that use of body-worn cameras would violate Washington state law:

State law bars audio recording of private conversations without the consent of all directly involved. Unauthorized recording exposes police to potential civil suits. State law does allow an exception for dashboard-mounted cameras in police cars but not body cameras on police officers.... The city law department has informed the police department that “it would be unwise to implement a body camera program without first obtaining a legislative exception to the Washington Privacy Act.” (Rosenberg 2011)

In addition, police scholar Sam Walker noted in a recent interview that “the camera will capture everything in its view and that will include people who are not suspects in the stop” (Hinds 2013).

Skeptics have also suggested that citizens, including witnesses and confidential informants, may be less willing to provide information to police, knowing that the encounter is recorded and can be viewed by others later (Harris 2010). A sergeant with the Albuquerque Police Department observed that “officers a lot of times are seeing people on the worst day of their lives, and we’re capturing that on video that’s now a public record” (Hinds 2013).

Body-worn cameras capture in real time the potentially traumatic experiences of citizens who are victims of a crime, those who are involved in medical emergencies and accidents, or those who are being detained or arrested. As such, citizens’ emotional trauma could be exacerbated when they

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realize that the experience has been caught on video. Moreover, the potential for body-worn cameras to be coupled with other technologies, such as facial recognition software, may present additional concerns for citizen privacy.

These concerns highlight the importance of developing detailed policies governing when the body-worn cameras should be turned on and off. For example, the model policy template developed by the Body Worn Video Steering Group provides specific guidance on how to minimize the “collateral intrusion” of the technology, specifically with regard to private dwellings, religious sensitivities, intimate searches, vulnerable witnesses and victims,¹⁶ and communications governed by legal privilege (see Appendix B).

Detailed policies and careful officer training can assuage some citizens’ objections to body-worn cameras. Nevertheless, there are many unanswered questions regarding citizens’ privacy concerns, and additional research is needed.

Concerns for officers’ privacy

Some resistance to body-worn cameras has come from officers themselves. These concerns have echoed the response to dashboard cameras in the mid-1990s (Pilant 1995). Officers expressed concerns over the potential for supervisors to go on unsolicited “fishing expeditions” in an effort to find behavior that will get an officer into trouble (White 2013).

The response from the NYPD following the judicial order to deploy body-worn cameras has been almost universally negative. Former Police Commissioner Raymond Kelly stated that “the body camera issue opens up certainly more questions than it answers” (Lovett 2013).

In May 2012, the Las Vegas Metropolitan Police Department announced that it planned to pilot test body-worn cameras. The Las Vegas Police Protective Association, a police union, responded by threatening to file suit against the department because the cameras represented a “clear change in working conditions” that would have to be negotiated through the union contract (Schoenmann 2012). The NYPD union has made similar claims (Celona 2013).

The experiences of several other police departments shed light on how leaders can respond to officers’ concerns. In Phoenix, police leadership engaged officers from the beginning of the project. Leadership attended every briefing to explain the goals and objectives of the project and to answer officer questions. Line officers were invited to participate in the “scope of work” group that developed the request for proposals from vendors, and they participated in pilot and durability testing

16. The policy template developed by the Body Worn video Steering Group does not provide a definition of “vulnerable witnesses and victims.” Presumably, this category of citizens would include confidential informants, witnesses whose safety may be in jeopardy as a result of the information they provide, and victims of certain types of crime such as domestic violence and sexual assault.

(White 2013). The leadership also engaged the officer union in developing policies and procedures governing camera use. Commander Michael Kurtenbach of the Phoenix Police Department stated that it is “just as important to be transparent with officers as it is with the community” (White 2013).

Similarly, Rialto’s police union participated in developing their department’s administrative policy (Dillon 2013), and the Mesa Police Department created a stakeholder workgroup to manage the implementation of the body-worn camera project. The workgroup included officials from the department’s records unit, evidence section, information technology unit, policy management unit, training unit, and internal affairs as well as the Mesa City Prosecutor’s Office. “The objectives of the workgroup were to minimize the impact on officers and to integrate the on-officer body camera system into existing processes” (MPD 2013, 1).

Although the experiences from Mesa and Phoenix provide important insight, more research is needed to understand police officers’ concerns with the technology.

Concerns for officers’ health and safety

Critics of body-worn cameras have raised questions about the impact of the technology on officer health and safety. For example, Pat Lynch, head of the NYPD’s Patrolmen’s Benevolent Association (PBA), recently questioned numerous aspects of body-worn cameras, including their effect on officer health and safety:

There is simply no need to equip patrol officers with body cams.... Our members are already weighed down with equipment like escape hoods, Mace, flashlights, memo books, ASPs, radio, handcuffs and the like. Additional equipment becomes an encumbrance and a safety issue for those carrying it. (Celona 2013)

The UK Home Office guide (Goodall 2007) provides a comprehensive list of potential hazards to officers who wear cameras and rates the risk level for each hazard.¹⁷ The guide deems many of the hazards low-risk, such as being targeted for assault because of the camera, neck injury from the weight of the camera, and electrical shock. However, the guide does rate several hazards as medium-risk, such as assailants strangulating officers with the camera strap or wire; assailants hitting officers with the camera and causing head injury; cameras transferring infectious agents or bodily fluids when officers share units; and headbands causing soreness, discomfort, and headache (Goodall 2007, 29). The guide also offers measures to reduce the risks. For example, wearing the camera on other parts of the uniform (e.g., a lapel or torso) can mitigate many of the cited health concerns.

Nevertheless, there is little empirical evidence on the potential health and safety risks associated with the technology.

17. The UK Home Office guide (Goodall 2007) deals solely with head-mounted cameras.

Concerns and Considerations

Regarding Body-Worn Cameras

Investments in training and policy

There is consensus from numerous sources regarding the critical importance of developing policies and procedures regarding camera use and training officers in how to use the camera. Many of the camera systems are simple and intuitive in terms of use, but training and policy requirements vary depending on the system.

The NIJ guide (ManTech 2012) states that officer training should emphasize that the technology's primary purpose is for evidence collection, officer safety, and improved public relations, but monitoring officer performance is also a benefit of the system. Police officer reluctance to accept the technology can be minimized by their active involvement in policy development. The NIJ guide highlights the importance of department policy:

If cameras are to be used, policies and procedures will have to be put in place, or expanded on, to address several legal issues. These issues extend beyond the more obvious privacy and civil liberties protections toward which agencies must be sensitive. For example, a policy would have to address when a camera should be used and when it should be turned on or not turned on to ensure fair treatment of all citizens. Parameters would need to be set for voluntary, compulsory and prohibited use of the camera. Camera video may also be considered a public record item and a procedure would need to be created for public assessment and information requests. This policy should be in place before any testing or deployment. (ManTech 2012, 8)

There is a wide range of important issues that should be governed by administrative policy. The Body Worn Video Steering Group's policy template (see Appendix B) outlines many of the key policy areas, such as the following:

- Selection of technology vendor
- Elements of officer training
- Data storage and management
- Video download procedures
- Redaction of video
- Preparation of video for prosecution
- Maintenance and upkeep of the equipment

The policy template also addresses the following questions:

- Will officers volunteer to wear cameras, or will it be required?
- When should officers turn on the camera; when should they turn it off?
- How should officers divide responsibilities if multiple cameras are on scene?
- Whether or not (and how) officers should announce that an encounter is being recorded?
- What should officers record and not record during an encounter?
- When can supervisors review video?

Departments that have adopted body-worn cameras have varied widely on many of these issues. For example, many departments have set limits on how long video will be archived, but the Oakland (California) Police Department is currently storing video indefinitely (Lovett 2013). In terms of camera activation, the Rialto Police Department requires officers to turn on the camera whenever they leave the patrol car to speak with a civilian (Stross 2013).

The Mesa Police Department employed two different policies during their evaluation period. For the first six months, the policy stated, “When practical, officers will make every effort to activate the on-officer body camera when responding to a call or have any contact with the public” (MPD 2013, 2). During the second six months, the policy was less restrictive, asking officers to “exercise discretion and activate the on-officer body camera when they deem it appropriate” (ibid.). The two different administrative policies resulted in the following:

- During the first six months of the Mesa project (with the restrictive policy), the 50 camera-wearing officers averaged 2,327 video files per month (ibid.).
- During the second six-month period (with the less restrictive policy), the same 50 officers averaged 1,353 video files per month (ibid.).

These results represent a 42 percent decline in camera system activations and clearly demonstrate that department policy affects how often officers use the technology.



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Furthermore, the Mesa project included officers who volunteered to wear the camera as well as officers who were assigned to wear it. Results showed that volunteers were more likely to activate the system: each volunteer averaged 71 video files per month, compared to just 28 video files for assigned officers (ibid.).

The Mesa results suggest that officers' use of the technology may decline with less restrictive policies about activation. Discretionary activation may raise concerns among the public and advocacy about the potential for police to record encounters only when it suits them (and failing to record when it may not serve the interests of the officer). As a result, police leaders should consider the activation policy question from an accountability and transparency perspective.

Substantial financial, resource, and logistical commitment

The resource and logistical issues surrounding adoption of body-worn camera technology are considerable and, in many cases, difficult to anticipate. There are direct costs associated with the technology, most notably the costs of each camera (from \$800 to \$1,000 for the TASER AXON and VIEVU models).¹⁸ There may also be replacement costs for hardware such as batteries and cameras. One

of the most important logistical issues involves how the agency will manage the vast amounts of video data that are generated. The NIJ guide states:

This leads to one of the more important items for an agency to consider before purchasing [body-worn camera] units: data storage, management and retention. Not only must the data be protected and backed up regularly, but it must be accessible to all parties involved. Some data needs to be retained forever; other data can be deleted quickly. Crime recordings must be managed by law and through

policies. Even video of standard officer interaction may be retained for a default period of time to cover potential performance complaints. Policies should control the period of time this data is maintained. As recordings become more or less important to [the] agency, adjustments need to be made. The length of storage time can cost numerous man-hours in addition to the actual cost of the storage device. (ManTech 2012, 9)



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18. Departments have dealt with the financial costs of body-worn camera technology in several ways, including state and federal grants, confiscated drug money, and asset forfeiture funds.

The major manufacturers of body-worn cameras offer cloud-based data storage solutions at an annual subscription cost, though a department can also choose to manage the video internally. The Phoenix Police Department has chosen to maintain the video internally while both Rialto and Mesa have employed Evidence.com, which

eliminates the need for on-site storage space by storing the files off-site and allowing agencies to share the files via secure access to the server. Prosecutors can simply log into a remote portal and get the videos they need for their cases. Additionally, the system tracks every activity associated with every file and stores it in an audit log. (Clark 2013)

Regardless of the approach taken, the cost of data storage and management can be significant. The Mesa (2013, 10) report states that “the initial purchase of fifty AXON FLEX cameras, including applicable sales tax was \$67,526.68. The current proposal includes a second year pricing option for video storage with Evidence.com for \$93,579.22 and a third year option for \$17,799.22.”

The Phoenix Police Department has had to devote considerable staff and resources to manage the video data internally, to conduct video redaction for publicly requested files, and to coordinate with the city and county prosecutor offices (White 2013).

The Mesa report (2013) describes the integration issues between Evidence.com and the department’s internal data system (CAD/RMS) that had to be overcome to facilitate evidence discovery and public records requests. The initial procedure required officers to manually record the department report number associated with each video file. However, officers initially failed to record this number in 60 percent of video files, which significantly increased the workload associated with locating files (MPD 2013). Department officials worked with Evidence.com to create a system that would auto-populate the department number, thereby reducing the workload of the officers and the records unit staff. The Mesa report also describes in detail the process and resources required for redacting video footage:

All public records requests involving on-officer video are forwarded to the officer who produced the video.... When an officer receives the public records video request, the officer is required to review the video in its entirety. The review consists of identifying images and information that should not be released, including NCIC/ACJIS information, personal biographical information, juvenile faces, undercover officers, informants, nudity and other sensitive information as determined by the staff attorney. Any items that need to be redacted are identified by the officer by providing a description and time stamp of the selected images. The request is then forwarded to the MPD Video Services Unit (VSU) for action. (MPD 2013, 10)

Concerns and Considerations Regarding Body-Worn Cameras

This redaction process requires substantial time commitment from the officers, as well as record management and video technician staff. During the Mesa project period, the department received three to four video records requests each month (MPD 2013). If no redaction is necessary, the resource burden is limited to the officer who must review the video (and those who manage the process to release the video). In three cases, redaction was necessary, and each case required about 10 hours to complete the video editing (ibid.).

The experiences in both Mesa and Phoenix highlight the considerable resources required to manage a body-worn camera project. Commander Michael Kurtenbach of the Phoenix Police Department noted that the project has a “profound” impact on the police department and other outside agencies (White 2013). The Mesa report concluded:

Program management of 50 on-officer body camera systems requires a considerable amount of operational commitment.... These duties will exponentially increase with any expansion of the on-officer body camera program.... Properly managed, the program is an asset to the organization; however, it can also expose the department to increased liability without effective oversight. (MPD 2013, 5–6)

Conclusion and Recommendations

This publication seeks to provide a comprehensive, objective review of the available evidence on police officer body-worn cameras. The overall goal is to provide a document that describes the primary issues departments should consider when weighing adoption of the technology and that assesses the empirical support for claims made about the technology.

The handful of resources reviewed for this publication represents a good starting point for exploring body-worn cameras. The UK Home Office guide (Goodall 2007), the Body Worn Video Steering Group website (www.bwvsg.com), and the NIJ guide (ManTech 2012) are particularly useful (see Appendix A).

There is little evidence regarding most of the perceived benefits and drawbacks of the technology. For example, little is known about citizen attitudes toward body-worn cameras, most notably whether the technology increases trust, legitimacy, and transparency of the police. The potential for the technology to serve as a training tool for police is also largely unexplored. Moreover, the privacy implications of body-worn cameras, for both citizens and police officers, are not clearly understood and may vary considerably as a result of differences in state law.

Simply put, there is not enough evidence to offer a definitive recommendation regarding the adoption of body-worn cameras by police. Departments considering body-worn cameras should proceed cautiously, consider the issues outlined in this review, and recognize that most of the claims made about the technology are untested.

That said, the evaluations described in this review do offer insights in several key areas, including a potential civilizing effect; evidentiary benefits; and the logistical, resource, and stakeholder commitment required to successfully manage a body-worn camera program. These insights provide an early glimpse into the potential impact and consequences of body-worn cameras.

Civilizing effect

Most of the empirical studies document a reduction in citizen complaints against the police and, in some cases, similar reductions in use of force and assaults on officers.

- The evaluations in Mesa and Rialto documented substantial drops in citizen complaints following deployment of the technology. The UK studies documented a similar effect.
- The Rialto study also documented a substantial drop in use of force incidents, and review of video indicated that officers wearing cameras appeared to be more restrained in their use of force.
- The Aberdeen study documented substantially fewer assaults on camera-wearing officers compared to other officers.

Conclusions and Recommendations

These findings, which are supported by anecdotal evidence from Phoenix, suggest that the cameras may have a civilizing effect. However, the dynamics of police-citizen encounters are complex, and there are numerous potential explanations for the decline in citizen complaints and use of force. One explanation is that body-worn cameras dissuade citizens from filing complaints, especially frivolous complaints (see “Evidentiary benefits” below). Under this explanation, the reductions are not caused by a civilizing effect; rather, they are driven by changes in citizen complaint reporting patterns.

An alternative explanation is that the reduction in complaints, and use of force, is a consequence of improved behavior (i.e., the civilizing effect) – whether it is citizen behavior, officer behavior, or both.

The majority of studies are unable to disentangle these potential effects. Additional independent research, with rigorous methodologies, is required to substantiate these preliminary findings and to identify the underlying dynamics of behavior that are driving the noted reductions.

Evidentiary benefits

The available research offers credible support for the evidentiary benefits of body-worn camera technology:

- Evidence from several studies (Goodall 2007; ODS Consulting 2011) indicates that body-worn cameras assist in the investigation and resolution of citizen complaints and that the technology may reduce the likelihood that citizens will file frivolous or untruthful complaints.
- Results from the UK studies suggest that video evidence from body-worn cameras reduces officer time devoted to paperwork, enhances officers’ ability to determine whether a crime occurred, and increases the likelihood that cases will end in guilty plea rather than criminal trial.

Body-worn cameras create a real-time, permanent record of what transpires during a police-citizen encounter. This video is useful for police, citizens, and prosecutors. Additional research should continue to explore this benefit and quantify the impact in a more formal cost-benefit analysis that assesses both financial and resource savings as well as costs.

Impact on law enforcement agencies and other stakeholders

Results strongly suggest that adopting body-worn camera technology requires a substantial commitment by the law enforcement agency, a commitment that far exceeds the initial outlay of funds to purchase the cameras. Several agencies have described the considerable groundwork that they must complete before camera deployment, such as selecting a vendor; overcoming officer (and union) objections; and developing training and a policy that covers a wide range of critically important issues, from when to turn the cameras on and off to supervisor review and video redaction.

One of the most pressing resource decisions involves storing and managing the video data. Departments that choose to maintain the data locally as opposed to using a storage service must overcome numerous challenges to manage effectively the vast amount of video that officers record and to respond to requests from the public, prosecutors, etc., for that data.

Commander Kurtenbach of the Phoenix Police Department notes that agencies must fully articulate the goals they seek to accomplish with body-worn cameras and that they should be deliberate in their decision-making process because the technology affects all aspects of the law enforcement agency as well as other stakeholder agencies (White 2013).

Recommendations

The following recommendations, which are based on the literature reviewed for this publication, are to help improve and expand the knowledge base on body-worn camera technology:

1. Any agency interested in adopting body-worn camera technology should proceed cautiously and consider the issues described in this review to fully inform their decisions. Other available resources include the UK Home Office guide (Goodall 2007), the published evaluations in the United States (Mesa and Rialto) and abroad (Plymouth and Renfrewshire/Aberdeen evaluations), and the forthcoming proceedings of the September 2013 PERF conference.
2. Independent research on body-worn camera technology is urgently needed. Most of the claims made by advocates and critics of the technology remain untested. Federal agencies that support research and development should consider providing funding streams for comprehensive research and evaluation of body-worn camera systems. Law enforcement agencies that adopt the technology should partner with researchers to evaluate the implementation and impact of body-worn camera systems.
3. Professional organizations in law enforcement, such as the IACP, the Police Foundation, and PERF, should consider developing guidelines for implementation and evaluation of body-worn camera technology. U.S. professional organizations should collaborate with their UK partners who have been experimenting with the technology for nearly a decade.
4. Law enforcement agencies that are planning to adopt officer body-worn cameras should employ rigorous evaluations of the implementation and impact of such systems. The evidence base for this technology is scant, and agencies can increase this knowledge by partnering with independent evaluators to empirically study the impact of the cameras.
5. Research on implementation and impact of body-worn cameras should include citizen surveys that capture perceptions of the technology, particularly with regard to trust, satisfaction, transparency, and legitimacy.
6. Body-worn camera systems hold great promise as a training tool for law enforcement, both in the academy and as part of performance evaluation. Post-hoc review of officer (or cadet) behavior during recorded encounters can serve as a mechanism for positive feedback, can identify problems in officer behavior, can help identify best practices in handling critical incidents (e.g., de-escalation); and can eliminate traditional reliance on “final frame” review of officer decisions to use force (i.e., the “split second syndrome” [Fyfe 1986]).

References

- ACLU-NJ. n.d. "The App Place." American Civil Liberties Union of New Jersey. <http://www.aclu-nj.org/yourrights/the-app-place/>.
- Bateson, Melissa, Daniel Nettle, and Gilbert Roberts. 2006. "Cues of Being Watched Enhance Cooperation in a Real-World Setting." *Biology Letters* 2 (3): 412–414.
- Braga, Anthony A., and David L. Weisburd. 2010. *Policing Problem Places: Crime Hot Spots and Effective Prevention*. New York: Oxford University Press.
- Braga, Anthony A., Andrew V. Papachristos, and David M. Hureau. 2012. "The Effects of Hot Spots Policing on Crime: An Updated Systematic Review and Meta-Analysis." *Justice Quarterly*. doi:10.1080/07418825.2012.673632.
- Celona, Larry. 2013. "NYPD in a 'Snap' Judgment: PBA and Brass Resist Order to Carry Cameras." *New York Post*, August 14, 2013. <http://nypost.com/2013/08/14/nypd-in-a-snap-judgment-pba-and-brass-resist-order-to-carry-cameras>.
- Clark, Mark. 2013. "On-Body Video: Eye Witness or Big Brother?" *Police Magazine*, July 8, 2013. <http://www.policemag.com/channel/technology/articles/2013/07/on-body-video-eye-witness-or-big-brother.aspx>.
- Dillon, Nancy. 2013. "Police Body-Worn Cameras Stop-and-Frisk Judge Suggested Have Helped Rialto Police Department." *New York Daily News*, August 13, 2013. <http://www.nydailynews.com/news/national/cameras-proposed-stop-frisk-judge-ca-police-article-1.1426025>.
- Draisin, Lilian. 2011. *Police Technology: An Analysis of In-Car Cameras and Body Worn Cameras*. Orlando: University of Central Florida.
- Erpenbach, Mary. 2008. "The Whole World is Watching: Camera Phones Put Law Enforcement under Surveillance." *Law Enforcement Technology*, February, 40–41.
- Floyd v. City of New York. 2013. 08 Civ. 1034 (SAS). Case 1:08-cv-01034-SAS-HBP. <http://ccrjustice.org/files/Floyd-Remedy-Opinion-8-12-13.pdf>.
- Farrar, William. 2013. *Self-Awareness to Being Watched and Socially-Desirable Behavior: A Field Experiment on the Effect of Body-Worn Cameras and Police Use-of-Force*. Washington, DC: Police Foundation.
- . 2014. "Operation Candid Camera: Rialto Police Department's Body-Worn Camera Experiment." *The Police Chief* 81: 20–25. http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=print_display&article_id=3226&issue_id=12014.
- Fyfe, James J. 1986. "The Split-Second Syndrome and Other Determinants of Police Violence." In *Violent Transactions*, edited by Anne T. Campbell and John J. Gibbs, 207–225. Oxford: Basil Blackwell.
- Gervais, Will M., and Ara Norenzayan. 2012. "Like a Camera in the Sky? Thinking about God Increases Public Self-Awareness and Socially Desirable Responding." *Journal of Experimental Social Psychology* 48 (1): 298–302.
- Goodall, Martin. 2007. *Guidance for the Police Use of Body-Worn Video Devices*. London: Home Office. <http://revealmmedia.com/wp-content/uploads/2013/09/guidance-body-worn-devices.pdf>.

- Harris, David A. 2010. "Picture This: Body Worn Video Devices ('Head Cams') as Tools for Ensuring Fourth Amendment Compliance by Police." Legal Studies Research Paper Series. Pittsburgh: University of Pittsburgh School of Law.
- Hinds, Kate. 2013. "Some Police Departments Embrace Body Cameras." *WNYC*, August 13, 2013. <http://www.wnyc.org/articles/wnyc-news/2013/aug/13/police-departments-and-body-cameras>.
- IACP (International Association of Chiefs of Police). 2003. *The Impact of Video Evidence on Modern Policing: Research and Best Practices from the IACP Study on In-Car Cameras*. Alexandria, VA: International Association of Chiefs of Police.
- Local 10. 2013. "Miami Police Considers Cameras on Officers." *Local 10*, January 30, 2013. <http://www.local10.com/news/Miami-Police-considers-cameras-on-officers/17983688>.
- Lovett, Ian. 2013. "In California, a Champion for Police Cameras." *New York Times*, August 21, 2013. <http://www.nytimes.com/2013/08/22/us/in-california-a-champion-for-police-cameras.html?pagewanted=all&r=0>.
- ManTech Advanced Systems International, Inc. 2012. *A Primer on Body-Worn Cameras for Law Enforcement*. Washington, DC: National Institute of Justice. <https://www.justnet.org/pdf/00-Body-Worn-Cameras-508.pdf>.
- Milinski, Manfred, Dirk Semmann, and Hans-Jurgen Krambeck. 2002. "Donors to Charity Gain in Both Indirect Reciprocity and Political Reputation." *Proceedings of the Royal Society B: Biological Sciences* 269 (1494): 881–883.
- MPD (Mesa Police Department). 2013. *On-Officer Body Camera System: Program Evaluation and Recommendations*. Mesa, AZ: Mesa Police Department.
- Nagin, Daniel S. 2013. "Deterrence: A Review of the Evidence by a Criminologist for Economists." *Annual Review of Economics* 5:83–106.
- ODS Consulting. 2011. *Body Worn Video Projects in Paisley and Aberdeen, Self Evaluation*. Glasgow: ODS Consulting.
- Pilant, L. 1995. "Spotlight on In-Car Video Systems." *Police Chief* 62 (April): 32.
- Ratcliffe, Jerry. 2011. *Video Surveillance of Public Places*. Problem-Oriented Guides for Police. Washington, DC: Office of Community Oriented Policing Services. <http://ric-doj.zai-inc.com/Publications/cops-p097-pub.pdf>.
- Roman, John K., Shannon Reid, Jay Reid, Aaron Chalfin, William Adams, and Carly Knight. 2008. *The DNA Field Experiment: Cost-Effectiveness Analysis of the Use of DNA in the Investigation of High-Volume Crimes*. Washington, DC: Urban Institute.
- Rosenberg, Matt. 2011. "Seattle Police Memo: Body Cameras Easier Said Than Done, Now." *Social Capital Review*, September 7, 2011. <http://socialcapitalreview.org/seattle-police-memo-body-cameras-easier-said-than-done-now/>.

References

- Santora, Marc. 2013. "Order That Police Wear Cameras Stirs Unexpected Reactions." *New York Times*, August 13, 2013. http://www.nytimes.com/2013/08/14/nyregion/order-that-police-wear-cameras-stirs-unexpected-reactions.html?_r=0.
- SAVER (System Assessment and Validation for Emergency Responders). 2011. *Wearable Camera Systems Focus Group Report*. Washington, DC: U.S. Department of Homeland Security.
- . 2012. *Camera Systems, Wearable*. Washington, DC: U.S. Department of Homeland Security.
- Schoenmann, Joe. 2012. "Police Union Threatens Legal Action over Metro's Decision to Test Body-Mounted Cameras." *Las Vegas Sun*, May 7, 2012. <http://www.lasvegassun.com/news/2012/may/07/police-union-threatens-legal-action-over-metros-de/>.
- Sproull, Lee, Mani Subramani, Sara Kiesler, Janet H. Walker, and Keith Waters. 1996. "When the Interface is a Face." *Human-Computer Interaction* 11 (2): 97–124.
- Stanley, Jay. 2013. *Police Body-Mounted Cameras: With Right Policies in Place, A Win for All*. Washington, DC: American Civil Liberties Union.
- Stecklein, Janelle. 2012. "Forget Dashcams, Salt Lake City Police Chief has Faith in Eyecams." *The Salt Lake Tribune*, November 15, 2012. <http://www.sltrib.com/sltrib/news/55276824-78/cameras-officer-burbank-lake.html.csp>.
- Stross, Randall. 2013. "Wearing a Badge, and a Video Camera." *New York Times*, April 6, 2013. http://www.nytimes.com/2013/04/07/business/wearable-video-cameras-for-police-officers.html?_r=2&.
- TechBeat. 2010. "Officer-Worn Cameras Expand Point of View." *TechBeat*, Fall: 6–7. <https://www.justnet.org/InteractiveTechBeat/Fall-2010.pdf>.
- . 2012. "Primer on Body-Worn Cameras for Law Enforcement." *TechBeat*, Fall: 6–7. https://www.justnet.org/InteractiveTechBeat/fall_2012/TechBeatFall2012.pdf.
- Tyler, Tom R. 1990. *Why People Obey the Law*. New Haven, CT: Yale University Press.
- VIEVU LLC. 2014. "VIEVU Advantage." <http://www.viewu.com/viewu-advantage/>.
- Walker, Samuel, and Charles Katz. 2013. *The Police in America: An Introduction*. 8th ed. Boston: McGraw-Hill.
- Weisburd, David, Stephen D. Matrofski, Ann M. McNally, Rosann Greenspan, and James J. Willis. 2003. "Reforming to Preserve: Compstat and Strategic Problem Solving in American Policing." *Criminology and Public Policy* 2 (3): 421–456.
- Welsh, Brandon C., and David P. Farrington. 2009. *Making Public Places Safer: Surveillance and Crime Prevention*. New York: Oxford University Press.
- White, Michael. 2013. Personal interview with Commander Michael Kurtenbach of the Phoenix (Arizona) Police Department and Professor Charles Katz of Arizona State University about the Phoenix body-worn camera project. September 5, 2013.
- White, Michael, and Justin Ready. 2010. "The Impact of the TASER on Suspect Resistance: Identifying Predictors of Effectiveness." *Crime and Delinquency* 56 (1): 70–102.

APPENDIX A

Useful Guides to Body-Worn Camera Technology

This publication has identified several documents and reports that describe body-worn camera technology and offer guidance on its adoption and deployment by police (see “A brief note on methodology” on page 15). Law enforcement agencies in the United Kingdom have been experimenting with this technology for nearly a decade, and there are a number of valuable resources based on their work.

For example, the UK Home Office published *Guidance for the Police Use of Body-Worn Video Devices* (Goodall 2007). This comprehensive document provides recommendations for policy and practice across a wide range of operational issues, as well as discussions of legal requirements, implementation issues, and health and safety concerns. The document’s executive summary provides definitive statements on the benefits of police body-worn camera systems:

- **Evidential quality:** The cameras provide accurate, real-time evidence of what occurred.
- **Time saving:** The cameras create less written record keeping and enable quicker resolution of cases (guilty pleas).
- **Public order policing:** When citizens see officers wearing cameras, they are less likely to engage in anti-social behavior, and when they do, the cameras help to resolve cases faster.
- **Critical incidents:** The cameras provide a detailed record of police use of force.
- **Domestic abuse:** The cameras aide in prosecution of domestic violence by assisting reluctant witnesses.
- **Professional development:** The cameras provide an excellent tool to review cadet performance at the academy as well as post-hoc review of critical incidents. (Goodall 2007, 7–8)

Police in the United Kingdom have also created the Body Worn Video Steering Group (BWVSG). According to its website (www.bwvsg.com), the mission of the BWVSG is

to bring together organizations experienced in deploying and using Body Worn Video technology so that a code of best practice can be developed and shared with others; to provide a central library of information, a forum for debate, a group of experienced people willing to help others; to promote the use of Body Worn Video; and to design the future of Body Worn Video.

Appendix A: Useful Guides to Body-Worn Camera Technology

The BWVSG holds quarterly meetings (the first was in January 2013) to share information, discuss new and emerging practices, and learn from subject matter experts. The BWVSG website also makes available a range of resources, most notably a comprehensive administrative policy template (see Appendix B) that departments can use as a starting point for developing their own policies.

The U.S. Department of Justice has also developed resources to guide police departments in their consideration of body-worn camera technology. In September 2012, the National Institute of Justice published *A Primer on Body-Worn Cameras for Law Enforcement* (ManTech 2012), which covers a range of important topics, including the reasons why body-worn cameras are useful for law enforcement and the implementation issues that come with the technology (e.g., policies, training, and data storage). The document also includes a “camera market survey” that compares the products of seven leading camera manufacturers along a range of operational and technical specifications as well as cost (see also TechBeat 2010; 2012).

Last, the U.S. Department of Homeland Security (DHS) has examined body-worn camera technology through its System Assessment and Validation for Emergency Responders (SAVER). The goal of the SAVER program is to provide local, state, tribal, and federal authorities with information to assist with purchasing emergency responder equipment, from physical security and decontamination equipment to information technology. SAVER has produced two documents on body-worn cameras, a *Wearable Camera Systems Focus Group Report* with recommendations for product selection and a detailed assessment report, *Camera Systems, Wearable*, that includes a comparative evaluation of different systems.¹⁹

19. At the time this publication was completed, the SAVER resources were in the process of being transferred to <https://www.llis.dhs.gov/>. Note that many of the documents available through SAVER are restricted access.

APPENDIX B

Body-Worn Camera Policy Template

The follow text is reprinted with permission from the Body-Worn Video Steering Group. A Word document version can be downloaded from its website by clicking the "Police BWV Policy Document" hyperlink at www.bwvsg.com/resources/procedures-and-guidelines/.

Title: Body Worn Video

Policy

1 Introduction

- 1.1 This policy is required to ensure police officers using Body Worn Video (BWV) equipment as part of their operational duties are aware of their responsibilities in relation to its use to secure 'best evidence' and to safeguard the integrity of the digital images captured should they need to be produced for evidential purposes.

2 Application

- 2.1 This policy is effective immediately and applies to all police officers and police staff who use BWV or come into contact with the material recorded by BWV.

3 Purpose

- 3.1 The purpose of this policy is to ensure BWV is used correctly so that the Force gains maximum benefit from the operational use of BWV, and that all staff coming into contact with either the equipment or the images are able to comply with legislation and Force requirements.

4 Scope

- 4.1 This policy covers all aspects of the use of BWV equipment by members of staff and the subsequent management of any images obtained.

5 Policy Statement

- 5.1 *X Police* is committed to making the best use of its resources to capture best evidence by taking full advantage of new technology and the use of Body Worn Video in all appropriate circumstances.

6 Benefits

- 6.1 This policy will facilitate the use of BWV to:
 - Enhance opportunities for evidence capture;
 - Increase early guilty pleas, reducing officer case preparation and court time;

Appendix B: Body-Worn Camera Policy Template

- Assist police officers and PCSOs to control anti-social behavior;
- Reduce protracted complaint investigations by providing impartial, accurate evidence;
- Give greater insight into service delivery and identifying good practice.

7 Responsibilities

7.1 This policy will be monitored and reviewed by *X Department*.

The practical implementation of this policy at local level will be monitored by the Divisional Operations Chief Inspectors, District Single Point of Contacts (SPOCS) and supervisors of the BWV users.

Procedure (All procedures are ****RESTRICTED****)

1 Introduction

- 1.1 The use of BWV devices must complement the use of other video and digital evidence gathering devices within the Force. These procedures should be considered a minimum standard for the use of BWV devices.
- 1.2 These procedures have been designed with regard to the current legislation and guidance for the use of overt video recording of police evidence.
- 1.3 All images recorded are the property of the Force and must be retained in accordance with force procedures and the Association of Chief Police Officers (ACPO) Practice Advice on Police Use of Digital Images. They are recorded and retained for policing purposes and must not be shown or given to unauthorized persons other than in accordance with specified exemptions.

2 Objectives

- 2.1 BWV is an overt method by which officers can obtain and secure evidence at the scene of incidents and crimes. These procedures are intended to enable officers to comply with legislation and guidance to create evidence for use in court proceedings.
- 2.2 When used effectively BWV can promote public reassurance, capture best evidence, modify behavior, prevent harm and deter people from committing crime and anti-social behavior. Recordings will provide independent evidence that will improve the quality of prosecution cases and may reduce the reliance on victim evidence particularly those who may be vulnerable or reluctant to attend court.
- 2.3 Using recordings can also affect the professionalism of the service and in the professional development of officers. Officers, trainers and supervisors can use the equipment to review and improve how incidents are dealt with.
- 2.4 The use of BWV relates to crime reduction and investigation strategies and should NOT be confused with the deployment of Public Order trained Evidence Gatherers, which is the subject of other policies.

2.5 Professional Standards Department and line management will not routinely search the back office system for misdemeanors or offences committed by users, but if a complaint is received interrogation of the system can be an appropriate line of enquiry.

3 Equipment

3.1 The BWV equipment is generally a body-mounted camera with built in microphone. The camera stores digital files that, once recorded, cannot be deleted or amended by the operator. Each file carries a unique identifier and is time and date stamped throughout.

3.2 To support the camera systems, stand-alone computers and appropriate software have been purchased for the downloading and storage of digital video files. These provide a full audit trail ensuring evidential continuity is maintained.

4 Upkeep of Equipment

4.1 It will be the responsibility of X supported by Single Points of Contact (SPOC) to keep records of the serial numbers and location of the cameras on their division.

4.2 Any malfunction of the equipment must be reported immediately to the SPOC for that division.

4.3 The divisions will be responsible for the upkeep of the cameras, including the cost of any repairs or damage to equipment.

4.4 Any new equipment must be purchased via the divisional SPOC.

4.5 It will be the responsibility of Divisional Support Services Managers to ensure that there are sufficient DVDs available for use. If staff notices that resources are running low, they should notify the Divisional Support Services Manager accordingly.

5 Training

5.1 All uniform frontline Officers and PCSOs will be trained and have access to BWV.

5.2 Training in the use of the BWV device will be available via an eLearning package on NCALT. Additional guidance on the X software has also been produced by L&D and is available via the Neighborhood Policing Branch intranet site (part of the Communications Department).

5.3 In order to use BWV equipment officers should receive training in all necessary technical aspects of the specific equipment being used and its use. A training package for the equipment will include:

- Legal implications
- Practical use issues
- Evidential continuity
- Health and safety

Appendix B: Body-Worn Camera Policy Template

- Diversity issues
- Professional standards

5.4 The eLearning may be completed individually or as a team led by a supervisor. Once a supervisor is satisfied that a member of staff has completed the eLearning, details of authorized users will be supplied to the SPOC who will issue the necessary log on details.

6 Equipment Issue

6.1 When not in use all equipment must be securely stored in a suitable location within the police station.

6.2 Only officers and PCSOs who have received the appropriate training will be able to “self issue” the equipment. Priority will be given to Neighborhood Response Team (NRT) officers, with any remaining cameras available for issue to Local Support Team (LST) or Neighborhood Policing Team (NPT) staff.

6.3 Cameras will be signed out by the user using their network login and BWV password on *X software*.

6.4 The user must ensure it is working correctly prior to leaving the station, check that the battery is fully charged and the date and time stamp is accurate.

7 Recording an Incident

7.1 The following is guidance on the use of BWV when recording incidents.

a. Decide

Guiding principles are:

- NRT officers will wear BWV when on operational response duty.
- The camera should be switched on when footage might support ‘professional observation’ or would corroborate what would be written in a pocket book.
- The decision to record or not to record any incident remains with the user.
- The user should be mindful that failing to record incidents that are of evidential value may require explanation in court.

b. Start recording early

It is evidentially important to record as much of an incident as possible; therefore recording should begin at the earliest opportunity from the start of an incident.

c. Recordings to be Incident specific

Recording must be incident specific. Users should not indiscriminately record entire duties or patrols and must only use recording to capture video and audio at incidents that would normally be the subject of PNB entries or as ‘professional observation’, whether or

not these are ultimately required for use in evidence. There are a few instances where recording should not be undertaken and further guidance on when not to record is included later in this section.

d. Talk

At the commencement of any recording the user should, where practicable, make a verbal announcement to indicate why the recording has been activated. If possible this should include:

- Date, time and location
- Confirmation, where practicable, to those present that the incident is now being recorded using both video and audio

e. Inform

If the recording has commenced prior to arrival at the scene of an incident the user should, as soon as is practicable, announce to those persons present at the incident that recording is taking place and that actions and sounds are being recorded. Specific words for this announcement have not been prescribed in this guidance, but users should use straightforward speech that can be easily understood by those present, such as, "I am wearing and using body worn video."

f. Collateral intrusion

In so far as is practicable, users should restrict recording to areas and persons necessary in order to obtain evidence and intelligence relevant to the incident and should attempt to minimize collateral intrusion to those not involved.

g. Private dwellings

In private dwellings, users may find that one party objects to the recording taking place; for example, where domestic abuse is apparent. In such circumstances, users should continue to record and explain the reasons for recording continuously. These include:

- That an incident has occurred requiring police to attend
- That the officer's presence might be required to prevent a Breach of the Peace or injury to any person
- The requirement to secure best evidence of any offences that have occurred, whether this is in writing or on video and the video evidence will be more accurate and of higher quality and therefore in the interests of all parties
- Continuing to record would safeguard both parties with true and accurate recording of any significant statement made by either party
- An incident having previously taken place may reoccur in the immediate future
- Continuing to record will safeguard the officer against any potential allegations from either party

Appendix B: Body-Worn Camera Policy Template

h. Sensitivities connected with faith.

The filming in domestic circumstances could be an issue with some faiths. An example may be a situation in which the female may not have a face covering within the home. Officers should be aware of this fact and be sensitive to the wishes of those involved in these cases.

i. Do not interrupt filming.

Unless specific circumstances dictate otherwise (see below) recording must continue uninterrupted from commencement of recording until the conclusion of the incident or resumption of general patrolling.

j. Concluding filming.

It is considered advisable that the officer continues to record for a short period after the incident to demonstrate clearly to any subsequent viewer that the incident has concluded and the user has resumed other duties or activities.

Recording may also be concluded when the officer attends another area such as a custody center where other recording devices are able to take over the recording.

Prior to concluding recording the user should make a verbal announcement to indicate the reason for ending the recording this should state:

- Date, time and location
- Reason for concluding recording

k. Don't delete!

Once a recording has been completed this becomes police information and must be retained and handled in accordance with the Code of Practice on the Management of Police Information. **Therefore, any recorded image must not be deleted by the recording user and must be retained as required by the procedures.** Any breach of the procedures may render the user liable to disciplinary action or adverse comment in criminal proceedings.

7.2 Stop & Search

All 'stop and search' encounters should be recorded unless the search is an 'intimate search' or 'strip search' or if the search requires removal of more than outer clothing.

A video recording does not replace the need for a 'record of search' to be completed by the officer.

There is currently no specific power within PACE to take a photographic or video image of a person during a stop search, although such action is not explicitly prohibited.

8 Selective Capture and Bookmarking

8.1 Selective capture does not involve deletion of any images, merely the user making a choice of when to record and when not to record. It also describes the process of temporarily stopping and restarting recording in order to 'bookmark' the recorded footage.

There are no circumstances in which the deletion by the user of any images already recorded can be justified and any such action may result in legal or disciplinary proceedings.

8.2 Selective Capture

In general, the BWV user should record entire encounters from beginning to end without the recording being interrupted. However, the nature of some incidents may make it necessary for the user to consider the rationale for continuing to record throughout entire incidents.

For example, the recording may be stopped in cases of a sensitive nature or if the incident has concluded prior to the arrival of the user. In all cases, the user should exercise their professional judgment in deciding whether to record all or part of an incident.

In cases where the user does interrupt or cease recording at an ongoing incident, they should record their decision in a PNB or similar log including the grounds for making such a decision.

8.3 Bookmarking

In recording an incident, it is likely that BWV users will encounter victims, offenders and witnesses as well as recording the visual evidence at the scene itself. Bookmarking is a means by which users may separate encounters with each of these types of person or occurrence in order to allow for easier disclosure later. For example if a police officer has recorded an encounter with a witness including disclosure of their name and address, this section should not be shown to the suspect or their legal representative.

It is recognized that bookmarking is not always practicable due to the nature of incidents and therefore this should only be attempted if the situation is calm and the operator is easily able to undertake this procedure.

Prior to any temporary suspension for the purpose of bookmarking the user should make a verbal announcement for the recording to clearly state the reason for suspending recording. The user should also announce that they have recommenced recording at the same incident as before.

The bookmarking process will be demonstrated on the final whole recording by a missing section of a few seconds. In creating the master disk exhibit for court the user must include all bookmarked sections for the incident as one complete master recording of the incident.

Appendix B: Body-Worn Camera Policy Template

9 Witness First Accounts

- 9.1 If the BWV user is approached by victims or witnesses who are giving their first account of the crime the user may record the encounter using BWV but this should be considered against the needs of the individual with due sensitivity to the nature of the offence being reported. Any initial disclosure from victims and witnesses recorded by BWV should be treated as an evidential recording and submitted to the investigating officer. This is important to ensure compliance with statutory identification procedures under PACE Code D.
- 9.2 Such recordings do not replace the need for formal written statements from victims or witnesses but they can be used as supporting evidence for the statements and can also be considered as hearsay evidence and used in accordance with the provisions of the Criminal Justice Act 2003.
- 9.3 If this recording amounts to the victim's first notes or initial description of suspects they may refer to the relevant section of the video when making their written statement. Care must be taken to ensure that only the witnesses account is reviewed by the witness and they must not be allowed access to other sections of the recording. The extent of any review by the witness to assist with making their statement must also be recorded in their statement.
- 9.4 Care should be taken to ensure that should a victim or witness provide a 'first description' of the offender on video, that this fact should be recorded and submitted to the investigating officer. This is important to ensure compliance with statutory identification procedures under PACE Code D.
- 9.5 In the case of victims of serious sexual offences the user must consider the guidance in ACPO (2009) Guidance on Investigating and Prosecuting Rape. The victim's explicit permission for video recording of the initial disclosure should be sought and if the victim is in any way unsure of the need for the recording to be made or is uncomfortable with the thought of being recorded then the user should not record using video.
- 9.6 If the victim does not consent to being video recorded the user may consider the option to divert the camera away from the victim, or obscuring the lens and then record the encounter using the audio only facility. Again in these circumstances the explicit consent of the victim must be obtained prior to audio only recording.
- 9.7 Initial accounts from the victim should be limited to asking about:
 - Need for medical assistance
 - Nature of the incident (to ascertain if a Sexual Offences Liaison Officer is required)
 - Identity of the suspect (if known)
 - Location of the suspect (if known)
 - First description of the suspect (for circulation if appropriate)
 - Time of the offence in order to prioritize action

- Location of the crime scene(s)
- Identification of forensic opportunities, including information for forensic medical examinations
- Activities since the offence took place (to establish forensic evidence opportunities)
- Identity of any other person(s) informed of the incident by the victim (to ascertain early complaint)
- Identity or existence of any witness(es) to the offence or to events immediately prior to or after the offence

10 Recording of Interviews

- 10.1 BWV should not be used to record interviews of suspects under caution that occur at a police station. It may be used to record interviews that take place other than at a police station. However, recording of interviews under such circumstances does not negate the need for them to be recorded contemporaneously. There is no provision within the Police and Criminal Evidence Act 1984 for this.
- 10.2 BWV can and should be used to capture hearsay evidence. An example of this is a situation in which a store detective gives his account of a suspected shoplifter's actions to an investigating officer, in the presence and hearing of the suspect.

11 Scene Review

- 11.1 An additional use of BWV is to record the location of objects and evidence at the scene of a crime or incident. This can be particularly beneficial in allowing the Senior Investigating Officer an opportunity to review scenes of serious crime or in effectively recording the positions of vehicles and debris at the scene of a serious road traffic collision.
- 11.2 If reviewing a scene this should be treated as an evidential recording and where possible the officer should provide a running commentary of factual information to assist later viewers.

12 Limitations on Use

- 12.1 BWV is an overt recording medium and can be used across a wide range of policing operations. There are a few examples of situations where the use of BWV is not appropriate. In all cases users and supervisors must use their professional judgment with regard to recording.
- 12.2 The following examples of where the use of BWV is not appropriate are for guidance only and this list is not exhaustive.
- *Intimate searches* – BWV must not be used under any circumstances for video or photographic recording to be made of intimate searches.
 - *Legal privilege* – users must be careful to respect legal privilege and must not record material that is or is likely to be subject of such protections.

Appendix B: Body-Worn Camera Policy Template

- *Private dwellings* – whilst use of video at the scene of domestic violence incidents is covered in other sections, users must consider the right to private and family life, in accordance with Article 8 of the Human Rights Act, and must not record beyond what is necessary for the evidential requirements of the case.
- *Vulnerable Witness interview (VWI)* - the use of BWV is not a replacement for VWI and vulnerable victims must be dealt with in accordance with force policy 1130/2012 - Investigative Interviewing Policy.
- *Explosive devices* - like many electrical items, BWV cameras could cause electrostatic interference, which may trigger explosive devices. Therefore, BWV equipment **MUST NOT** be used in an area where it is believed that explosive devices may be present.

13 Audit Trail

13.1 An audit trail is covered by use of the *X software*.

14 Production of Exhibits

14.1 All footage recorded to the BWV unit will be downloaded at the end of the officer's tour of duty. Officers should return the units to their home station.

14.2 Evidential footage downloaded will be saved on the relevant stand-alone BWV computer as per the approved procedure. It will be identified by exhibit number, incident type, name(s) of any accused person(s) and the Storm reference, if appropriate.

14.3 Evidential footage will be considered any data that is:

- Evidence of an offence
- Supporting evidence for any process (e.g., charge, Fixed Penalty Notice, Penalty Notice for Disorder)
- Footage that is required for a relevant and proportionate policing purpose - i.e. footage taken of an overcrowded town center taxi-rank to highlight the need for an extended facility to Local Authority partners
- Footage that is revealable under The Criminal Procedure and Investigations Act of 1997

14.4 Data will not be downloaded to any device other than the dedicated stand-alone BWV computer provided.

14.5 *X software* will be used to book out BWV units.

- 14.6 Data downloaded as **non-evidential** will be stored on DEMS for 31 days. During that time it is searchable and can be retrieved and marked as evidential. After this period it will be automatically deleted.
- 14.7 As soon as reasonably practical, the user will make two DVD copies. The first will be a master copy, which will be sealed, labeled, and entered into the G83. The second will be a 'working copy' for investigation and file preparation purposes. DVDs should be retained in line with force policy 610/2012 - Audio and Video Unit Procedures Policy.
- 14.8 If the 'working' copy contains any sensitive information, i.e. witness details, and has not been sanitized, clearly mark it '**Do not disclose.**'
- 14.9 BWV is supporting evidence and officers will be required to provide written statements, which must include the audit trail for the capture of the footage and the subsequent production of the master disc/DVD. This can be complied with through *X software*. A separate statement evidencing arrests or evidence not captured on BWV should be supplied to the investigation.
- 14.10 For details of what to include in a statement refer to the File Preparation Guidance on the Force intranet.
- 14.11 In order that the recorded evidence can be presented in court the master copy must be preserved as an exhibit. It is recommended for reasons of security that this takes place as soon as practicable after the footage is recorded and that users do not start duty with a recording device that contains evidence of cases from a previous duty or day.
- 14.12 Where more than one BWV device is present at the scene of an incident or the area of the incident is also covered by a CCTV system the officer in the case (OIC) must ensure that all available footage of the incident is secured as exhibits in consideration of any defense arguments that may be presented.

About the Author

Michael D. White is a professor in the School of Criminology and Criminal Justice at Arizona State University (ASU) and is associate director of ASU's Center for Violence Prevention and Community Safety. He is also a subject matter expert for the Bureau of Justice Assistance Smart Policing Initiative and a senior diagnostic specialist for the Office of Justice Programs Diagnostic Center.

Body-worn cameras represent the latest technological innovation for law enforcement. The perceived benefits of these cameras are far-ranging and touch on core elements of the police mission, including enhanced police legitimacy, reduced use of force, and fewer citizen complaints. Criticism of the technology centers on equally important issues, such as violations of citizen and officer privacy, and on enormous investments in terms of cost and resources. Unfortunately, there have been few balanced discussions of body-worn cameras and even fewer empirical studies of the technology in the field. As such, *Police Officer Body-Worn Cameras: Assessing the Evidence* provides a thorough review of the merits and drawbacks regarding the technology and assesses the available empirical evidence on each of those claims. Overall, this publication articulates the key questions surrounding the technology and provides a framework for informed decision-making regarding adoption and empirical evaluation of body-worn cameras.



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