

Mobile Video Camera Deployment: A cost model to evaluate the impact on criminal justice system agencies

Estimations for the Metropolitan Government of Nashville and Davidson County

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Background

In November of 2016 the Mayor of Nashville announced her decision to have the Police Department deploy body-worn and new vehicle-mounted cameras for an estimated total of 3,240 cameras. As in most cities, the focus was placed on hardware and storage for the police but there was never a full evaluation of the impact across the entire criminal justice system. When we tried to find a cost model that had been used in other jurisdictions to evaluate the needs, and costs, for all the agencies we discovered that one did not appear to exist. In anticipation of this becoming an issue in every judicial district, I asked the Tennessee District Attorneys General Conference to fund a study. The goals were to have experts conduct research, interview representatives from all the agencies in a large criminal justice system and develop a cost model that could be used in any jurisdiction to help make decisions about projected costs beyond the police departments. The Conference agreed to enter into such a contract.

The consultants selected have many years of experience and expertise in broad areas of criminal justice including digital evidence, prosecution and criminal justice information systems. They were tasked to determine the requirements, processing practices and problems related to the review, analysis and handling of video/audio evidence, help agencies to begin to develop budget estimates for staffing plans and prepare a cost model that would allow the use of various scenarios in order to assess the true cost of any program.

With these project objectives in mind, the experts conducted literature reviews, interviewed prosecutors in multiple jurisdictions of similar size or with similar size mobile video camera programs, collected best practices and policies from multiple jurisdictions including state prosecutor best practices committees, and analyzed the required work effort and tasks after interviews with the criminal justice agencies. Statistics were gathered from the Metro Justice Information System and the police record management system. This information was used to spur discussion among the agencies and allowed for the development of a cost model.

*Glenn R. Funk
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Consultants:

Kay Chopard Cohen

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Biography:

Kay Chopard Cohen is the President of Chopard Consulting, Inc. She provides executive management professional services, executive coaching, and action planning training and technical assistance, business development and nonprofit business operations guidance. She excels at collaborative partnerships, relationship development, and bridge building between government, public sector and private sector. Additionally, Ms. Chopard specializes in prosecution including trial advocacy training and enhancement of management of prosecutor programs and offices.

Ms. Chopard has provided executive leadership to the Identity Ecosystem Steering Group (IDESG) and helped guide their merger with another nonprofit, the California District Attorneys Association (CDAA), the Law Enforcement Alliance for Digital Evidence Response (LEADER), the start-up of the Distributed Ledger Technology Foundation (DLF), the Justice Research and Statistics Association (JRSA), and federal agencies including the Department of Justice and National Highway Traffic Safety Administration (NHTSA).

Previously Ms. Chopard Cohen served as Executive Director of the National District Attorneys Association. She became the first female Executive Director and led the organization from financial challenges to a balanced national membership organization. She also served as the Deputy Executive Director for the National Criminal Justice Association (NCJA) for 13 years where she directed several projects including training and technical assistance to state administering agencies (SAAs) in strategic planning and state-tribal government collaborations. She directed the Sex Offender Management Assessment and Planning Initiative (SOMAPI) while at NCJA in collaboration with DOJ's SMART office along with many other national training and technical assistance programs.

Prior to her work at NCJA, she was responsible for expanding the federal training and technical assistance for state and local prosecution and adjudication programs at the National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation. It was in this role in the 1990's that she developed first-of-its-kind training curricula and delivered important trial advocacy training programs to thousands of state and local prosecutors across the U.S. These training programs including trial advocacy ranging from beginning to advanced levels and train-the-trainer courses continue to be offered to state prosecutors and judges.

Ms. Chopard Cohen headed the Iowa Prosecuting Attorneys Coordinating Council and served as an Iowa prosecutor in both the Johnson and Muscatine County Attorney's offices. She is a member of the U.S. Supreme Court Bar since 1993 and the Iowa Bar since 1983. Ms. Chopard Cohen received her Juris Doctorate from the University of Iowa College of Law and her B.A.

degree from Simpson College in Education, American Studies, and German with a minor in Minority and Women's Studies.

Paul K. Wormeli

President and CEO, Wormeli Consulting

Biography:

Paul Wormeli is an innovator and entrepreneur who has focused his career on the application of information technology to public safety, law enforcement, criminal justice, and homeland security. He has introduced innovative programs in public policy, as well as innovations in the use of technology. He has been active in the development of software products, has managed system implementation for dozens of agencies throughout the world, and has managed national programs in support of law enforcement and criminal justice agencies.

Mr. Wormeli was the first national project director of Project SEARCH and was subsequently appointed by President Ford as Deputy Administrator of the Law Enforcement Assistance Administration (LEAA) in the U.S. Department of Justice (DOJ). Mr. Wormeli helped design the first mobile computing equipment sold in this country to law enforcement agencies. At Project SEARCH, he led the development of a common protocol for interconnecting diverse proprietary protocols to enable the nationwide sharing of criminal history information. Mr. Wormeli managed the staff work and wrote much of the report for the Information Systems section in the report of the National Advisory Commission on Standards and Goals for Criminal Justice. He was the project manager for the development of the first crime analysis handbook published by the National Institute of Justice (NIJ). He has been an advisor to the White House on security and privacy, participated in the drafting of a Federal law on this topic, and was responsible for the development of numerous state plans to implement the Federal and state laws on information system security and privacy. During his tenure in the Justice Department, he served on the President's Committee on Drug Enforcement.

Mr. Wormeli created and was the first Chairman of the Integrated Justice Information Systems Industry Working Group (IWG), a consortium of over 100 companies, which was formed in 1999 at the request of the DOJ to help improve information sharing in the justice and public safety field. After the IJIS Institute was created as a non-profit follow-on to the IWG, he became the first full-time executive director of the IJIS Institute and served in this capacity until January 2011, while the membership grew to nearly 200 companies. During this time, he was the first Chairman of the National Information Exchange Model (NIEM) Communications and Outreach Committee. He has served on the technical advisory committee for the Harvard School of Government Innovator's Network program for law enforcement and justice and on the National Association of State CIOs (NASCIO) Information System Architecture Working Group.

In 2009, Mr. Wormeli was appointed to serve on the Committee on Law and Justice (CLAJ) of the National Academy of Sciences, which was created to provide a more scientific understanding

of issues pertaining to crime and justice, identifying new areas of research, and participating in resolving scientific controversies.

In 2011, Mr. Wormeli was named by *Government Technology* magazine as one of the 'Top 25 Doers, Dreamers & Drivers in Public Sector Innovation in the U.S.', one of "an eclectic group of individuals...who share a willingness to challenge convention and find new answers to long-standing issues."

At the 2011 Annual Conference of National Association for Justice Information Systems (NAJIS), Mr. Wormeli was presented the Kelly Bacon award for "Outstanding Service to the Justice Information Technology Community." The award, which is made periodically, recognizes individuals who have made long, sustained contributions to NAJIS and its mission to foster overall improvement of justice information systems nationwide. In 2012, Mr. Wormeli was named as a Senior Fellow at the Homeland Security Policy Institute of the George Washington University.

In 2013, Mr. Wormeli was appointed to serve as the liaison from the National Academy of Sciences Committee on Law and Justice to a panel appointed by the Academies to deliberate on the topic of "Modernizing Crime Statistics in the U.S." The panel is jointly sponsored by the FBI and the U.S. Bureau of Justice Statistics.

In 2016, Mr. Wormeli was awarded the status of Fellow in the Public Technology Institute, (PTI), in recognition of his contributions to information sharing in public safety and justice.

In 2017, after having served on the Board of Directors of the Stewards of Change Institute, a nonprofit focused on improving interoperability between health and human services and also with other relevant domains, Mr. Wormeli was awarded the 2017 Interoperability Award by the Stewards of Change Institute in recognition of his years of service involving improving information sharing and interoperability between health and human services fields.

In 2018, Mr. Wormeli was named to the Advisory Board of the National Interoperability Collaborative, which works toward information sharing across the domains of health, human services, health IT, justice and education.

Mr. Wormeli has been a founder of three companies in the law enforcement information systems field, providing computer-aided dispatch (CAD) and police records management system (RMS) software applications to law enforcement agencies. Software developed and implemented by his companies has been used by hundreds of agencies throughout the U.S. and Australia.

Mr. Wormeli is also an author and lecturer on law enforcement and justice technology. While at the IJIS Institute, Mr. Wormeli wrote a blog, which was named by *FedTech* as one of the "50 'Must Read' blogs on federal information technology". He is the author of [*Mitigating Risks in the Application of Cloud Computing in Law Enforcement*](#), published by the IBM Center for the Business of Government in 2012. He is a co-author of [*CIO Leadership for Public Safety Communications: Emerging Trends and Practices*](#) (Alan Shark, ed., Public Technology Institute, August 2012).

Mr. Wormeli has also been appointed as a lecturer in Police Science at the George Washington University and teaches *PSSL 6255 Information Management for Justice and Public Safety Professionals*.

He holds a B.S. in Electronics Engineering from the University of New Mexico, and an M.S. in Engineering Administration from the George Washington University. He undertook courses in the honors program for industry as a part of the doctoral program in Engineering Economic Systems at Stanford University. He received a certificate in Cross-Boundary Transformation from the John F. Kennedy School of Government Executive Education program at Harvard University.

Introduction

Policing agencies throughout the United States have deployed mobile vehicle-mounted and body-worn video cameras to provide documentary evidence regarding encounters between the police and the public. This trend has been driven by allegations that police have used excessive force and by the police desire to document the rationale for the response to dangerous conduct. Regardless of the motivation, the trend is gaining wide acceptance in cities and counties throughout the U.S. The result of these deployments is that thousands of hours of recorded video can be generated each day. Some portion of the recorded video becomes evidence when it is associated with arrests and investigations, and is thereby subject to rules in statutes, caselaw, policies and procedures for the protection of evidence.

While municipal agencies have noted the challenges in handling video imagery, including the need for policies governing use and disclosure, within the confines of the police agency, there is a serious resource impact on those agencies engaged in the administration of justice that is often not considered in the original deployment decisions. The requirements for reviewing the video evidence, making necessary redactions to protect the privacy of victims, witnesses and bystanders, extracting sections of video for use in court, fulfilling obligations for discovery and other obligations under law, create a workload for prosecutors and court officers that goes beyond the effort required to process cases without such evidence. The work varies as a function of the amount of video collected, stored and deemed to be of evidentiary value. Simple, single officer encounters for minor crimes may generate only an hour of video evidence but a high-profile crime of violence with a responding team of officers and multiple victims and offenders could generate hundreds of hours of video to be reviewed and processed.

The Metro Police Department in Nashville plans to eventually deploy over 3,000 mobile video cameras, both dash-mounted and body worn. The potential video generated by these cameras could exceed 12,000 hours each day, and it is estimated that between 10 and 20 percent of this video imagery is evidentiary, leading to an estimate of between 1,200 and 2,400 hours of video to be examined each day. The resulting workload calls for an assessment of the staffing and other resources that would be required to handle this additional case material.

This report is aimed at creating a process for estimating the resources required by the criminal justice agencies in Davidson County as they cope with the substantial collection of video imagery that will result from the anticipated deployment. The proposed process is based on providing a formula-based estimating process whereby initial and ongoing resource needs can be forecast for the purpose of budgeting and organizing the response to a video evidence-based approach to adjudication. By

identifying the work processes involved in each criminal justice agency, and finding a basis for estimating the parameters that drive actual working hours, the formulas and parameters provide a logical basis for projecting resources and costs to the criminal justice system for fulfilling the legal and policy requirements associated with this imagery.

Methodology

The study of resource needs began with a literature search to discover any prior research that would lead to the development of cost models that had been found to be useful in other jurisdictions. Unfortunately, there are few studies of the impact of mobile video on the criminal justice system. A few studies such as the work of the Virginia Commonwealth Attorneys have documented findings that help establish values for the key parameters that will be needed in any work force estimation cost model.

The next and more useful step was to interview several key agencies that are close to the size of Nashville/Davidson County agencies or larger. The interviews were more productive in reporting the basis for estimating workload and the organizational responses to managing this additional evidence-handling challenge. Interviews were conducted with the following jurisdictions:

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| San Diego County DA's Office | Detroit DA's office |
| Boulder County DA | Alexandria Commonwealth Attorney |
| Manhattan DA's Office | Virginia Beach Commonwealth Attorney |

The design of a cost model to estimate resource requirements began with an analysis of the work processes that are required to satisfy Tennessee law and policy. A set of specific work activities were defined and reviewed with representative agencies to ensure that the activities were a complete representation of what had to be done with respect to video evidence. The proposed activities were confirmed in discussions with the Davidson County agencies. Formulas were created as appropriate to estimate the resources required in terms of labor and technology for each activity. A set of assumptions was developed to construct best possible estimates of the values of the parameters in each equation used to construct the resource estimates.

Interviews were conducted with each criminal justice agency in Davidson County that will be impacted by the introduction of mobile video cameras and the resulting imagery. In each case, the discussion

was focused on the activities that would be required and the resources that would be needed to carry out the prescribed activities.

Finally, the data collected from Nashville/Davidson County estimates was combined with external data and follow-up calls to other jurisdictions to make the best possible estimates of the values for the independent variables in the cost models.

The impact of evidentiary video

While the body worn camera (BWC) video evidence is only one piece of evidence in a case, it can be extremely powerful.¹ It can be incorporated in various parts of a trial including opening and closing arguments, trial presentation software, slideshow presentations, and as an exhibit entered into evidence. Video evidence may provide a recording of a defendant's confession, corroboration of witness testimony, and even impeachment of defense witness testimony.² Mobile video may help accelerate some investigations, or at least provide evidence that leads to a successful investigative outcome.³ Mobile video evidence may allow prosecutors to prosecute and try cases when victims no longer wish to cooperate, e.g., in domestic violence or assault cases. It increases the number of recorded statements by defendants and aids in documenting crime scenes.⁴

In addition to its evidentiary use, it may also encourage accountability and transparency by law enforcement agencies and in their officers, enhance community relations, improve behavior by the public and officers when they know they are being videotaped, and allow the police department to monitor the work of their officers for training purposes and performance reviews.⁵ In broad terms, mobile video evidence provides the potential benefits of better transparency, increased civility, quicker resolutions, evidence corroboration, and training opportunities.⁶ Ultimately mobile video evidence

¹ Bureau of Justice Assistance, Global Justice Information Sharing Initiative: *Video Evidence: A Primer for Prosecutors*, October 2016.

² *Id.*

³ BJA BWC-TTA, BWC Cost and Storage Estimator Guidebook, (June 2019).

⁴ Memo from Michaela Mathews to Nashville District Attorney General's office Leadership, February 2019

⁵ Colorado Best Practices Committee for Prosecutors, *Body-Worn Cameras: A Report for Law Enforcement*, 2015.

⁶ Chapman, B., NIJ Journal, *Body-Worn Cameras: What the Evidence Tells Us*, Issue No. 280, January 2019.

holds the possibility of reducing litigation in the criminal justice system⁷ by both implicating and exonerating defendants⁸ in new and highly visible ways.

These positive benefits combined with a significant capacity to gather and use mobile video evidence are in many cases compelling reasons for the adoption of this technology. However, in assessing the impact of mobile video on the full criminal justice system, there are also negative consequences that are worth consideration in determining whether to implement mobile video or at a minimum to be used to guide development of policies on how to do so. It is important to evaluate some of these consequences in greater depth.

Financial Investment

The most frequently cited negative consequence of deploying body worn cameras, for any jurisdiction, is the large and continuing financial investment to support the program - throughout the criminal justice system.⁹ The required investment in hardware (beyond the cameras themselves), software, training and personnel are ongoing and unlikely to decrease. In fact, many jurisdictions report that their costs to maintain the body worn camera program increased exponentially beyond the 5-year planning they had done prior to the start of the program.¹⁰ Likewise, the tasks of managing, storing, copying, redacting, and responding to public information requests are all ongoing, unlikely to experience any reduction in volume, and more likely to increase with time and experience by the component agencies and the community at large. Therefore, the commitment to deploy a body worn camera program is a long-term commitment of financial and human resources, which are critical to the proper functioning of the program and the ability of the justice system stakeholders to meet all legal obligations.

Mobile video can be useful in documenting evidence at crime scenes, but it cannot take the place of established evidence collection procedures.¹¹ While the use of the video may accelerate some investigations and lead to successful prosecutions, those benefits are moderated by the substantial

⁷ California District Attorneys Association Foundation, *Model Police Policy Body Worn Cameras An Aid for Prosecutors*, June 2016.

⁸ White, M.D., et al, Implicate or Exonerate? The Impact of Police Body-Worn Cameras on the Adjudication of Drug and Alcohol Cases, *Policing, Volume 0*, Number 0, pp1-11 (2019).

⁹ B. Porter, Alexandria (VA) Commonwealth Attorney, personal interview, May 28, 2019; P. Muscat, Assistant Wayne County Prosecutor (Detroit, MI), personal interview, May 31, 2019; M. Dougherty, (Boulder County District Attorney (CO), personal interview, June 3, 2019; J. Wolfstaetter, Assistant New York County District Attorney (NY), personal interview, June 25, 2019; D. Mosler, Assistant San Diego County District Attorney (CA), personal interviews, July 2 and 17, 2019.

¹⁰ P. Muscat, personal interview, May 31, 2019; J. Wolfstaetter, personal interview, June 25, 2019.

¹¹ *Need to Know...Body-Worn Cameras*, (International Association of Chiefs of Police (IACP), April 2019).

impacts on budget and resource costs for prosecutors in the complex process of transferring, storing, redacting, disclosing, and preparing video evidence for evidentiary purposes.¹²

Time and Personnel Resources

Commensurate with the financial investment must be investment in personnel to comply with Tennessee law regarding protection of personal identifying information and the prosecutor's constitutional duties. (TCA 10-7-503 and -504 Public Records; TCA 68-11-1502 and 68-11-1503; 42 U.S.C. 1320(d) HIPPA; TN RPC 3.8(d)) The challenge is having enough time and resources to review video and redact, where appropriate, while meeting the responsibilities of the prosecutors including providing discovery in a timely manner in the context of the high number of hours of mobile video generated by law enforcement.

While simply viewing mobile video is time consuming, more challenging is the time, effort and expense of critical viewing by prosecuting attorneys (or law-trained personnel) who can conduct a proper, multi-faceted legal analysis. Compounded with the prosecution/evidentiary review, mobile video may need to be redacted for a variety of reasons. (More information on specific areas requiring redaction is provided further in this report.) The redaction process requires significantly more time to conduct beyond the review and legal analysis. Redaction may take an average of four hours per one hour of mobile video but in some felonies or in high profile cases may require 30 hours or more per hour of video.

Possible strategies to reduce the time needed for attorneys to spend in review and redaction are provided in the section on Policy Implications. However, the number of hours of evidentiary video generated each day and the mandatory legal review and analysis required by law, present significant challenges for both the time and personnel necessary to perform these tasks.

Victim and Witness Safety

Another potential negative consequence of the use of BWCs is the real danger that video will create significant safety issues for victims and witnesses. More potent than a police report, the release of a video of a victim or other witness describing a crime may place the witness in extreme danger.¹³

Prosecutors must be vigilant in protecting the safety of victims and witnesses through appropriate redaction and use of protective orders. Protective orders will be necessary in several circumstances:

¹² Chopard Cohen, K., "The Impact of Body-Worn Cameras on a Prosecutor," *National District Attorneys Association (NDAA)*. (2015), <https://bjatta.bja.ojp.gov/media/blog/impact-body-worn-cameras-prosecutor>

¹³ Prosecutors' Center for Excellence (PCE), White & Case, *Police Body-Worn Cameras What Prosecutors Need to Know*, (March 2018), p. 35, <https://pceinc.org/police-body-worn-cameras/>; J. Wolfstaetter, personal interview, June 25, 2019.

- To slow the discovery process in order to protect the safety of witnesses, a prosecutor may seek to delay disclosing the name(s) of witnesses or to redact certain identifying information including contact information.
- To limit the amount or type of disclosure of the mobile video to defendants to protect witnesses from intimidation, especially applicable in gang-related cases and ongoing sensitive investigations.
- To prohibit public release of video by defendants, defense counsel, and police, to the media (or others) – again to limit the possibilities of witness tampering or intimidation. Similarly, in select cases, prosecutors may seek to restrict (or even prevent) disclosure by defense counsel of mobile video to their clients. Or prosecutors may seek to limit the use of recordings to use in proceedings in the instant case.
- To prohibit the video from being copied to any computer program or Internet website, except for computer programs maintained and used specifically for the subject criminal action.
- To require the return of all copies of the video within specified time(s) after final determination of a case by plea, settlement, judgment, dismissal, appeal or otherwise.¹⁴

The vigilance required to properly protect and build trust in domestic violence and sexual assault cases, as well as in gang-related or drug trafficking cases, mandates time and attention to detail along with the capacity to present appropriate motions to the court to protect the safety of witnesses and victims. Therefore, consideration must be given to the personnel resources necessary to meet these obligations and specialized training for prosecutorial staff who implement the requisite motion practice, review and likely redaction. Additionally, Tennessee prosecutors are required to uphold Tennessee Constitution Article I Section 25 Rights of Victims of Crimes.

Duty to Disclose

While a prosecutor has a duty to be vigilant in protecting the safety of victims and witnesses and upholding their Constitutional rights, the prosecutor also has an ethical duty to disclose exculpatory evidence to the defense as required by the U.S. Supreme Court.¹⁵ These separate duties exist independent of one another, each mandating maximum attention by the prosecution team. Consciousness and attentiveness to one does not obviate the need to evaluate the other. And a decision to disclose information under Supreme Court caselaw, may have a negative impact on the prosecution's ability to protect the identity of their victim or witness.

Brady v. Maryland, 373 U.S. 83, 87 (1963) holds that "the suppression by the prosecution of evidence favorable to an accused violates due process where the evidence is material either to guilt or to punishment, irrespective of the good faith or bad faith of the prosecution." The duty to disclose also

¹⁴ *Id.*

¹⁵ *Brady v. Maryland*, 373 U.S. 83 (1963), and See *Giglio v. United States*, 405 U.S. 150 (1972).

applies to evidence that would tend to impeach the credibility of a government witness whose testimony was central to the government's case, *Giglio v. United States*, 405 U.S. 150 (1972). In the context of using mobile video footage, analysis of case-specific facts as evidenced by video footage, considering *Brady* and *Giglio* can be critical. Video evidence that suggests inconsistencies with a government witness's account or statement, could become impeachment material that a prosecutor could be obligated to disclose to the defense. With the backdrop of *Brady/Giglio*, the Supreme Court mandates disclosure of "material" evidence, defining the term, "when there is a reasonable probability that, had the evidence been disclosed, the result of the proceeding would have been different." *Cone v. Bell*, 129 S.Ct. 1769, 1783 (2009). This places an affirmative duty on prosecutors to seek out exculpatory evidence because the State is charged with the duty to disclose exculpatory evidence regardless of any failure by the police to bring favorable evidence to the prosecutor's attention. *Kyles v. Whitley*, 514 U.S. 419 (1995). Further, as the Supreme Court stated in *Kyles v. Whitley*, it is the prosecutor alone, not the police, which must assess the "materiality" of the evidence. These legal requirements are important when contemplating the systemwide use of mobile video, as they require the prosecutor to personally review all footage, not simply request copies from law enforcement officers in hopes that the officers have conducted a proper legal analysis. Prosecutors must not risk a *Brady/Giglio* violation that may cause a continuance, mistrial, reversal of a conviction, or dismissal.¹⁶

The Tennessee Supreme Court recently ruled that ethical considerations for prosecutors under Rule 3.8(d) of the Tennessee Rules of Professional Conduct (RPC) are coextensive in scope with the prosecutor's legal obligations under *Brady* and its progeny. The Court also ruled that "timely" disclosure of the material should be interpreted "as soon as reasonably practicable." Accordingly, the Tennessee Supreme Court filed, on August 23, 2019, an order that vacated Formal Ethics Opinion 2017-F-163 of the Board of Professional Responsibility, which had previously created an additional ethical obligation beyond *Brady* and the cases that followed it. However, prosecutors may still be faced with the conundrum of fulfilling their constitutional and ethical responsibilities in a timely manner while also ensuring the safety of victims and witnesses.¹⁷

Privacy Concerns and Sensitive Situations

Privacy concerns present yet another area of potential risk. While many, if not most, BWC recordings will occur in situations where a person has either a reduced, or no, expectation of privacy - in a place

¹⁶ McCauley, J., "The Brady Rule and the Prosecutor's Ethical Duty to Disclose Exculpatory Evidence," *Report to the General Assembly: Workgroup Study of the Impact of Body Worn Cameras on Workload in Commonwealth's Attorneys' Offices*. (December 2018): pp. 28-29.

¹⁷ *In Re: Petition to Stay the Effectiveness of Formal Ethics Opinion 2017-F-163*, Tennessee Supreme Court, August 23, 2019.

where the officer is legally entitled to be present, there will undoubtedly be a significant percentage of instances where officers record in a residence where there is a heightened degree and expectation of privacy and where an officer may need to inform the resident that they are being recorded. Policies must be established to determine whether such a request by a resident will be cause for the officer to stop recording. This can be complicated further when an officer is entering a dwelling without any consent of the resident, i.e., such as when serving a warrant or under exigent circumstances.¹⁸

As police respond to crime scenes, BWCs will inevitably record sensitive footage of victims, sometimes at an extremely vulnerable point in time. While such recordings may provide excellent evidence of the victim's initial statements and injuries, they may raise other concerns. The recordings may also capture identifying information about the victim, conversations with a victim's advocate, discussions of safety planning, or sensitive medical information that victims may seek to keep private and demand not be released.^{19, 20}

Other sensitive locations are healthcare settings where patient privacy of the defendant, victims, and witnesses is a consideration as well as other patients being treated in those locations. This could include hospitals, mental health treatment facilities, and other clinical settings where a crime has, or has not, been committed. Any valid HIPPA or privacy concerns raised or observed by the prosecutor in these types of locations likely should be redacted before releasing to the court or publicly. However, the use of HIPPA-protected health information is permitted in response to a court order, subpoena, or summons from the court, a grand jury subpoena, or an administrative request authorized under the law.²¹ Officers must still be mindful of the unintentional recording of protected health information of other medical patients outside the scope of the law enforcement purpose.²² Other potentially sensitive locations could include places of worship, shelters such as domestic violence shelters, and government offices.²³

BWC recordings of juveniles may be a challenge depending on the circumstances and the need to maintain juvenile confidentiality or obtain parental or guardian consent to record depending on the case and circumstances, including whether the juvenile is a victim or witness. Similarly, recordings in

¹⁸ *Body-Worn Cameras: Concepts & Issues Paper*, IACP, (April 2019)

¹⁹ PCE, *Police Body Worn Cameras*, 21.

²⁰ *Body-Worn Cameras and Violence Against Women Victim Consideration Brochure* (IACP 2017).

²¹ 45 C.F.R. Section 164.512(f)(1)(ii).

²² PCE, *Police Body Worn Cameras*, pp. 21-22.

²³ *Ibid.*

schools, or on school property, may be sensitive and require review and potential redaction depending on the circumstances.²⁴

BWC recordings are likely to capture sensitive footage of victims, at some of the worst moments of their lives.²⁵ Mobile video may inadvertently intrude on the privacy rights of persons being recorded or the privacy rights of officers. Particular locations and situations may also impact interviews with sensitive witnesses or confidential informants. These situations might include a victim or witness who is partially clothed or nude.²⁶ While it is important to develop policies to address these situations in advance, ultimately the prosecutor must protect the privacy rights and safety of witnesses, victims, and defendants in each investigation.

Law enforcement and prosecutors may also seek to consider broader evidentiary consequences of the use of mobile video -- whether some victims might act in a way that is seemingly stoic or measured which, absent an understanding of the mechanisms of trauma, might negatively impact impressions of a crime. Or, victims could experience difficulty recalling details or might not remember the events in a linear fashion – further complicating the presentation of a case. If recordings are made of these reactions and then used in court proceedings, they could be used to discredit the victim or lead a jury to believe they are less than credible.²⁷ The prosecutor has the responsibility of educating the jury in trauma-informed investigations including the science of the impact of trauma on victims and witnesses.

Technical Capability of the Courts and the “CSI” Effect

The presentation of mobile evidence to a jury and the development of testimony to provide critical insights to the jury have a major impact on the need for courtroom technology that supports and permits the presentation of mobile video evidence. This requirement includes the hardware and software to support the playing of video recordings made by specific equipment but also includes IT professionals who can support and maintain the courtroom technology. This capability must exist whether for jury trial, judicial review, discovery capabilities, or even public record requests from the public or the media.

Public misconceptions about video evidence may carry into jury deliberations. The “CSI effect” may lead jurors to believe that video evidence should exist in every case and that cameras will be able to

²⁴ IACP, *Supra* note 18 at 5.

²⁵ Mathews, Michaela Memo to Deputy District Attorneys General. Body Cameras and Privacy Concerns. 4 Feb 2019.

²⁶ *Ibid.*

²⁷ IACP, *supra* note 18 at 5.

capture everything an officer sees during an ongoing incident or at a crime scene.^{28, 29} In anticipation of such influence on jurors, the prosecutor must work to counter these misunderstandings and provide information on the capability and limitations of mobile video evidence.

Potential Policy Implications

These challenges have potential policy implications, which will directly impact the costs of implementation. Consideration should be given to instituting policies and practices that will mitigate negative consequences while creating efficiencies (i.e., preventing duplication of effort by various stakeholder agencies) and ensuring that Tennessee public records and information laws are uniformly addressed by all agencies. Each agency will have a role and an obligation to coordinate with other agencies in order to reduce the workloads for all the justice system components and uphold the rights of the public, the defendants and the victims in each case.

Condition of Mobile Video Evidence

Since the mobile videos will originate in the police department, it is important that the department adopt policies to safeguard the original mobile video and take steps to prevent alteration (or duplication) of the video. The system used should provide an audit trail showing who has created, viewed, changed, or deleted a recording. Ideally, the police officers and those with access to mobile video recordings will be able to produce copies of the original as needed for analysis and redaction purposes, leaving the original unaltered. These steps protecting original recordings will be necessary in establishing the chain of custody for evidentiary purposes at trial. The audit trail should include review by the prosecutor and the defense attorney however, it should not be used as a method to determine a defense strategy. The prosecutors must understand and know the law enforcement agency's system for documenting who, when, and why a mobile video recording is accessed or copied in order to properly present testimony at trial and conduct an effective direct examination of the officers involved.³⁰

It will not be necessary for prosecutors to view **all** the mobile video generated by the police department because much of the footage will not be associated with misdemeanor or felony charges. Most of the footage will be created during traffic stops, traffic accident investigations and interactions with civilians. Therefore, classifying the videos that are created as part of a criminal investigation will

²⁸ Mathews, *supra note 25*.

²⁹ *Use of Body-Worn Cameras by Law Enforcement Considerations, Issues and Concerns*, Washington Association of Prosecuting Attorneys (WAPA) Best Practices Committee, (2015), p. 1.

³⁰ PCE, *Body Worn Cameras*, at pp. 5-6.

be extremely important and a system of tagging should be agreed upon by the police department and the prosecutor's office.

Tagging is the process by which police officers manually assign certain data to mobile recordings in the form of text "tags." The process of tagging allows an officer to classify and categorize certain mobile recordings that are potentially relevant for a criminal enforcement matter. Tagging may be done while the officer is in the field or it can be done at the end of an officer's shift. The tagging can also be used to determine the retention time of the recording.

Some basic tagging information should include identification by the officer of what portions of a recording are considered evidentiary and should be retained for a prosecutor's review. Some data specific to the officer and the camera such as the camera ID number, officer name and personnel number, the date and time of the recording, GPS coordinates if possible, incident number, incident location, type of incident, type of crime, and any privacy flags can all be initially tagged. If more than one officer responds to an incident and each has a BWC, the number of recordings should be noted, and each recording tagged in order for all the video clips of a single incident to be kept together.^{31, 32}

The system capabilities are also important to the prosecutors and their presentation of the case at trial. The battery life of each camera should last the length of a shift. Some cameras come with night vision and some may have different field of view capabilities. It is important for the prosecutor to know the capabilities of the cameras in use. More and more cameras offer buffering which is the capability of the camera to capture several minutes of video and audio before the officer activates the recording. Buffering is typically 30 seconds up to two minutes of recording with no sound. Buffering provides information about what was happening just before the officer activated the BWC. The average file size of a two-hour BWC recording is about four gigabytes or about the same size as a feature film. Most BWC systems come with a docking station to charge the BWC unit and transfer or upload digital recordings to the server. Some BWC may have the ability to take still photos. If so, the prosecutor should learn how to obtain these photographs in addition to the video recordings.³³ A BWC typically will export video to a standard, accessible video file format such as MPEG-4, AVI or MOV without requiring special plug-ins or software to convert the file to a readable format.³⁴

The prosecutor needs to know if the BWC system integrates the recording with data produced through dispatch, records management, and police cruiser dash-camera systems. If the system has the

³¹ D. Mosler, personal interview, July 17, 2019.

³² PCE, *Body Worn Cameras*, pp. 7-9.

³³ *Ibid.*

³⁴ *See generally*, Sensor, Surveillance and Biometric Center of Excellence (SSB CoE), *Body Worn Cameras*, (March 2014), <https://www.justnet.org/law-enforcement/LE-body-cam.html>

capability to integrate these systems, it may reduce the need to manually tag a file or relevant recording. Ideally the system should also have a robust search capability so that recordings can be searched by officer, incident number, date, time, and location. If there are multiple officers recording the same event at the same time, there should be a way to synchronize the recordings so they can be viewed together following the same timeline.³⁵

The time spent by the prosecutor doing review and redaction is impacted by several policy decisions. The length of time can be positively lessened by some agreed upon procedures in advance of videotaping.³⁶ In addition to tagging the videos to specific incidents, removing personally identifying information as required by Tennessee public records law will reduce review and redaction time for the prosecutor's office. For example, the police department could adopt a policy whereby the BWC is turned off when the officer is obtaining personal information including contact information from victims and witnesses.³⁷ Alternatively, the Department could redact those sections of the video containing the personal identifying information prior to giving it to the prosecutor's office. Decisions about the efficiency of each of these options, should be discussed and decided by both the police department and the prosecutor's office to determine the best approach for any particular jurisdiction.

Different Handling of Specific Types of Cases

Some types of cases will need to be treated differently and certain circumstances will require attention to review and redaction early upon receipt by the prosecutor's office. For example, cases involving undercover officers and/or confidential informants will likely require early redaction. Other examples may include highly dangerous and violent defendants, threat and relocation situations, information relating to ongoing investigations, and instances where BWCs have recorded police discussions of tactics and strategy.

Units within the District Attorney General's office or prosecutors handling certain types of cases where witness intimidation and victim safety are more likely, will need to develop their own methods of disclosure.³⁸ Cases with the types of offenses listed above or cases where the victims and witnesses are at greater risk should be exempt from disclosure policies. Instead policies specifically tailored to these types of cases and situations should be implemented.

It is possible to establish a broad policy where officers turn-off the BWC during specific portions of certain investigations – potentially saving time later on review and redaction and preserving privacy

³⁵ *Ibid.*, 3-7.

³⁶ D. Mosler, personal interview, July 17, 2019.

³⁷ IACP, *Considerations Document BWC*, April 2019.

³⁸ D. Mosler, personal interview, July 17, 2019; J. Wolfstaetter, personal interview, June 25, 2019.

rights of victims or witnesses. However, that can also raise areas for questioning later in the investigation and prosecution so that it may not be the preference of the police and prosecutors.

Cases involving domestic violence, sexual assault, intimate settings such as a private home, victims in a state of undress, and victims who do not wish to be videotaped are all cases that will need to be treated differently. Likewise, gang-related cases, which tend to put witnesses at greater risk for intimidation and retaliation, will also need to be handled differently.

These policy decisions must be made in advance and agreed upon by the police and prosecutors. If a broad policy is established to turn off the BWC in certain situations (or at the discretion of the officer), it is important that the officer note either on the video or in the accompanying report, why the BWC was turned off.³⁹ On the other hand, if the policy will be not to turn off the video, then these types of criminal investigations will require redaction prior to release for discovery purposes in order to increase the safety and decrease the risk to victims, witnesses, and confidential informants.

Use of Protective Orders

In order to provide timely discovery of mobile video, many jurisdictions have had to establish procedures to mitigate the lack of time or personnel to review and redact all video prior to release. Several jurisdictions have made use of a protective order, signed by defense counsel, in order to make unredacted video available for viewing more quickly. The responsibility still remains with the prosecutor to assess each case for risk to victims and witnesses, conform to all (Tennessee) public records laws that protect Personal Identifying Information (PII) data, review for *Brady/Giglio* obligations, and redact as necessary in a timely and appropriate manner.⁴⁰

Most jurisdictions interviewed for this study agree that the protective order should state that the defense counsel will not be sharing non-discoverable information with the defendant or other members of the community. Examples of other provisions that might be included in a protective order are:

- Findings by the court that the video footage from the investigating agency is raw, unedited, original footage, and has not been redacted.
- Findings by the court that there are many categories of information in general discovery and/or the video footage from the investigating agency which contain confidential information that according to several statutes (FERPA 1974; HIPPA 1996; TCA Sections 10-7-504, 37-1-409, 37-1-612, 47-18-2101, et seq. & 47-18-2901 et seq.) are not to be disclosed.

³⁹ IACP, *Need to Know...BWC*, April 2019.

⁴⁰ Internal Legal and Policy Guidance, San Diego County District Attorney's Office

- That such confidential information may include, but is not limited to, any person’s identifying information (such as social security number, date of birth, residential and work address, phone number, email address, driver’s license number, vehicle license plate and VIN numbers, passport number), medical and educational records, the faces of and interactions with minors, recordings inside hospitals or mental health facilities and footage from inside homes where no crime occurred.⁴¹
- Orders by the court that the BWC video shall not be used in any proceeding other than the instant case, and that:
 - The BWC video shall not be downloaded or inputted into any computer program or internet website subsequent to the issuance of the order. This does not apply to any computer program maintained and used specifically for this criminal action.
 - The Protective Order shall not prevent authorized individuals from having access to the video to which they would have had access in the normal course of their duties.
 - No copy can ever be provided to the defendant or a witness. A copy may be provided to investigators, experts, or consultants retained by any party to work on this case. Any such copies shall be destroyed by the investigator, expert or consultant upon the final termination of the case. Confirmation of the destruction will be provided to the defense counsel.
 - Disclosure of the video recording shall be limited to the following persons: Counsel, party, defendant, or witness in this case; investigators, experts or consultants retained by any party to work on the case.
 - Counsel for any party to this action shall advise those individuals to whom disclosure of the video is made of the terms of the Protective Order and obtain the consent of any such individual that he/she will be bound by the Protective Order. In the event such individual does not consent to be bound by the Protective Order, no disclosure of the recording or its contents will be made.
 - Defense counsel shall not provide to the Defendant or a witness, either orally or in writing, any personal identifying information as defined by TCA 10-7-503 and -504 (Public Records), except names, of any person identified within the video.
 - A signature on the Protective Order by a representative of the Public Defender’s Office or a law firm at any stage in the proceeding is binding on the entire office or firm.
 - The Protective Order and the obligations of all persons subject to it, shall survive the final termination of the case, whether such termination is by settlement, judgment, dismissal, appeal, or otherwise. The Court retains jurisdiction to modify the order and to make further orders regarding the custody, control and use of the video.
- If defense counsel changes, then the new counsel must sign a new protective order.⁴²⁴³

In instances where defendants represent themselves, it is probably a better procedure to review and redact the video prior to providing in discovery without relying on protective orders. In such cases, a court order may grant access to the redacted mobile video evidence, but not permanent custody of the

⁴¹ Sample Protective Order, Criminal Court of Tennessee Thirtieth Judicial District at Memphis, 2019.

⁴² Sample Protective Order, Superior Court of California, County of San Diego, 2019.

⁴³ Sample Protective Order Preventing Dissemination of Confidential Information Provided in Discovery, In the Criminal Court of the Tennessee Thirtieth Judicial District at Memphis

evidence. For an in-custody, pro se defendant, provision for review of redacted video will need to be coordinated with the jail.⁴⁴

As with all forms of discovery, prosecutors have the legal and ethical obligation to prevent disclosure of privileged information in mobile video, such as non-discoverable victim or witness information or other privileged information. Use of a protective order will accomplish these goals in many cases. However, the responsibility still lies with the prosecutor to assess cases for risk and redact in a timely and appropriate manner.

Other jurisdictions in Tennessee have relied on Tennessee Attorney General Opinion No. 18-01, 2018 Tenn. AG LEXIS 1, to provide unredacted mobile video evidence in discovery without prosecutor liability for providing information that would otherwise be protected from disclosure. The question posed in the opinion is whether a court order that requires a district attorney to provide copies of all information in his or her possession to defense counsel sufficient to protect the district attorney from liability if the information disseminated as a result of the order contains data that is otherwise legally protect from disclosure.

The Attorney General Opinion states that generally, yes, the prosecutor is protected from liability. However, the opinion does go on to say that in the abstract it is impossible to determine if the district attorney is immune from liability in all circumstances. The opinion states that some confidentiality obligations require an individual to make reasonable efforts to protect information but does not specify what are the confidentiality obligations that require specific efforts or what would constitute reasonable efforts to protect information. It offers an example where, in a given circumstance, a district attorney may have failed to make reasonable efforts by neglecting to inform the court of the potential disclosure of information that is privileged or confidential without further elaboration.⁴⁵

All prosecution offices require the individual prosecutor to review written reports, information, and evidence, including mobile video in their own cases. In cases where the written reports or other information identify or raise a prosecutor's concerns that potential *Brady* material may be contained or corroborated in mobile video, the prosecutor should review the mobile video as soon as possible. If the review by the prosecutor confirms existence of *Brady* material, the prosecutor should follow office protocol for handling of such matters, including seeking input from supervisors and following disclosure policies.

⁴⁴ Internal Legal and Policy Guidance, San Diego County District Attorney's Office

⁴⁵ 2018 Tenn. AG LEXIS 1

However, if after review of written reports, the prosecutor finds no concerns regarding mobile video, the use of protective orders may allow for faster discovery and timely resolution of cases. Keep in mind that the Attorney General Opinion No. 18-01 does not provide for complete immunity for the prosecutor for release of privileged or confidential information. In light of this qualified AG opinion and specific prohibitions for release of PII data by Tennessee law even with the use of protective orders, it may be prudent to obtain professional liability insurance for all assistant district attorneys in the event of an inadvertent release of PII data.

Conduct a Privacy Impact Assessment

A Privacy Impact Assessment (PIA) allows agencies to adequately assess privacy risks in their information sharing systems and processes. It lays the groundwork for comprehensive and effective privacy, civil rights, and civil liberties policies to be written to protect information and its use while maximizing technological infrastructure and data sharing mechanisms. Through the assessment process, privacy policies emerge as a result of the identification and analysis that occurs during the PIA process, generating discussion and decision making on how to address and mitigate, if necessary, the identified privacy vulnerabilities.

Protecting information privacy and associated legal rights is a foundational concept. Information systems used by prosecutors, law enforcement, and other justice disciplines are more closely scrutinized than other government or privately-operated information systems; therefore, they are held to a higher standard. Higher standards are expected for information that can deprive individuals of their personal freedom or that can put individuals such as victims and witnesses at risk. Greater diligence in data handling is crucial for safeguarding the interests of individuals who have little or no choice about becoming involved in the criminal justice system.

A Guide to Conducting PIAs for State, Local and Tribal Justice Entities has been written by the Global Justice Information Sharing Initiative (Global), which is supported by the U.S. Department of Justice. It is available online at <https://it.ojp.gov/PrivacyLiberty/guides/impact> and includes descriptions, templates, and sample policies.

Special Circumstances – Officer-Involved Shooting

Experienced agencies advise that prosecutors and police should consider in advance how their BWC and mobile video policy will address officer-involved shootings, to include, but not be limited to how mobile recordings of involved officer(s) should be handled and who should collect such recordings.⁴⁶

⁴⁶ See IACP Policy Center documents on Investigation of Officer-Involved Shootings and other Serious Incidents available at <https://www.theiacp.org/resources/policy-center-resource/officer-involved-shootings>.

There is divergent opinion as to when officers should be allowed to review recordings when there has been an officer-involved shooting or any use of force resulting in serious injury. Some departments prohibit officers from reviewing such footage until after they have given an initial statement. It is recommended that the department have a transparent policy on the viewing of an officer's mobile recording.⁴⁷

The dissemination to the media of recordings from mobile video can play a vital role in reassuring the public after a controversial enforcement action. Great care must be taken to ensure that recordings are not released prematurely in a manner that could jeopardize ongoing investigations and prosecutions. However, agencies must have a consistent policy so that they are not accused of only releasing the recordings that they deem helpful.⁴⁸

In general, all data associated with a criminal or civil case should only be disseminated in a manner consistent with existing policy on the dissemination of evidence. In some cases, an agency may wish to disseminate footage from a mobile video to the general public in order to confirm or dispel public concern about a police action. An agency should consider a policy of when, and if, it will release footage in non-criminal cases.⁴⁹

Officer-involved use of force cases are a special circumstance. When these circumstances arise, however rare, policy decisions must be made before the BWC video program is deployed to ensure consistency and fairness and avoid any appearance of bias or impropriety.

Personnel Conducting Redaction

Once it has been determined that mobile video needs to be redacted because it will be used as evidence at trial, or to protect victim and witness safety, or contains sensitive information such as confidential informants, or privileged information restricted by Tennessee law, the choice of personnel to do that redaction has policy implications. While prosecutors in most offices are still required to do a legal review and analysis, some prosecutor's offices have chosen to hire special technology-trained media specialists to do redaction and prepare video for dissemination to the defense and for eventual presentation at trial. Media services technicians are hired specifically for this type of work with the job expectation that it is their sole role, in contrast to lawyers who may not possess technology skills or anticipate learning those skills as part of the prosecutor's duties. Generally, these technicians are more adept in redaction and handling of mobile video evidence from all sources including BWC, store videos,

⁴⁷ *Model Police Policy Body Worn Cameras An Aid for Prosecutors*, California District Attorneys Association (CDAA), June 2016, p. 6.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*

cell phone videos, audio tapes, etc., allowing them to be more proficient and accomplish more review and redaction in a regular workday. This policy decision regarding staffing, can result in timelier and more accurate video preparation.

Prosecutor offices using media services technicians or other types of technology-savvy professionals still require the legal review of videos to be done by law-trained staff. Law-trained staff direct the technology experts as to what must be redacted including specific points on the video. Offices who employ technicians generally require them to be certified by the Law Enforcement Video Association (LEVA) at levels 1, 2 or 3 and to maintain their certification. In the event issues arise at trial regarding the video and digital evidence, these technicians are better able to testify regarding their training and certification specific to the handling of all digital evidence. This also keeps the prosecutors out of the chain of custody. However, these skills are generally more advanced than administrative staff. Typically, media services technicians will be hired at lower pay rates than lawyers, which is a cost-savings for many offices.⁵⁰

Importance of Data Collection

The importance of collecting data on arrests and caseloads including felony versus misdemeanor matters cannot be understated. To determine a staffing standard, additional data regarding video footage and hours to be viewed by prosecutors needs to be consistently collected and available for decision-making. No one is currently collecting this information nationally, therefore, it becomes more important for the jurisdiction to collect its own data and use that data to inform decisions on staffing, budget, and future investments in hardware, software, and infrastructure to sustain the mobile video program. This data can also be used to refine or create policy that is targeted to and appropriate for the jurisdiction.⁵¹

Building a Cost Model

There are three components of cost that criminal justice agencies will encounter in dealing with the evidence that will be created—the labor for reviewing and handling the imagery, the technology for doing so, and the facilities required to support the work. Each of these cost factors requires different cost models as a basis for estimation.

⁵⁰ J. Wolfstaetter, personal interview, June 25, 2019.

⁵¹ *Report to the General Assembly: Workgroup Study of the Impact of Body Worn Cameras on Workload in Commonwealth's Attorneys' Offices*. Virginia State Compensation Board (December 2018).

Labor costs

The basic formula for estimating the cost of labor associated with handling video evidence can be expressed through a formula. The marginal increase in cost to an organization is estimated by determining the cost of each of the principal activities that must be undertaken in order to deal with the totality of video evidence provided as a result of police video recordings. For each such activity, the general formula for estimating cost is:

$$C_i = (V \times A_i \times S) / L$$

where:

C_i = annual cost for activity i

V = Hours of video per year submitted by police

A_i = Hours of work required for activity i

S_i = Annual cost of a person at the skill level required for activity i (including fringe)

L = Productive hours per year of an individual skilled appropriately

The total cost to an organization for the marginal increase in work is then computed by:

$$\sum_{i=1}^n C_i = (V \times A_i \times S_i) / L$$

where $i=1$ to n activities

The formula can be simplified by assuming a standard of labor productive hours of work per year. Research shows that in a 7.5 to 8-hour workday, productive work can be done for approximately 6

hours, allowing time for training, staff meetings, breaks, conferences, court appearances, etc. Assuming 48 weeks per year, allowing for leave and holidays, the 6 hours per day times 5 days times 48 working weeks reveals an annual number of productive work hours of 1,728 which could be used as a standard for L in the above equation.

Each organization impacted by the need to engage with video evidence from body worn or mobile cameras then needs to determine the activities that the organization must perform in support of its mission. For the purposes of determining the cost impact on the criminal justice agencies in Davidson County, the following activities are required of at least some of the agencies so engaged:

| |
|------------------------------|
| Police Department Liaison |
| Digital video administration |
| Technical Support |
| Staff training |
| Video Review |
| Redaction |
| Copying and Distribution |
| Trial Preparation |
| Transcription |
| Translation services |
| Response to FOIA requests |

It is important to define a workflow model of how each of these activities are a part of the work processes in each of the affected and engaged agencies in the criminal justice system. By developing this process model, the impact analysis can then be based on the estimated work effort required by these processes in each agency.

Once the labor cost model is developed for each agency, the workflow model can be used to construct a table for each agency showing the estimates from the model as defined above. Then the results will be presented in a table (matrix) showing the cost component across the participating agencies to generate a total impact analysis for the criminal justice system.

The parameters that are included in the above formula are given values based on assumptions drawn from the experiences of various Metro agencies. Meetings were held with representatives of the

District Attorney, the Criminal Court Clerk, the Public Defender, Justice Information Services, General Sessions and State Trial Courts, Metro Legal, the Office of Family Safety, the Sheriff's Office and the Police Department. In the future there would be a need to meet with the Tennessee Administrative Office of the Courts in order to assess the cost to the indigent defense fund.

The model is fundamentally driven by the hours of evidentiary video that will be generated by police cameras and by the extent to which preliminary review and redaction work is done at the police level before video imagery is submitted as evidence to the prosecutor. Since the evidence generation varies greatly as a function of the type of crime, NIBRS statistics were used to estimate annual rates of arrest for various levels of crime severity. Assumptions of the amount of video evidence generated are made from the experiences of other agencies.

The parameters that constitute assumptions that are the basis for the cost model also come from the experiences of other agencies. The assumptions used for the purpose of constructing the cost model are as follows:

Assumptions:

Function

| | |
|------------------------------|--|
| Police Department Liaison | 10 hours per week |
| Digital video administration | full time position |
| Technical Support | included in administration |
| Staff training | included in administration |
| Video Review | 1.5 hours of review for each hour of video |
| Redaction | 4 hours per hour of video reviewed |
| Copying and Distribution | requires 20% of video hours |
| Trial Preparation | 2 hours per trial required |
| Transcription | \$250 per transcription |
| Translation services | \$500 per event |
| Response to FOIA requests | 2 hours per request |

Assumptions: The review and redaction times are based on average times gleaned from multiple interviews in the field with jurisdictions who have been using BWC video for a lengthy period of time.

These redaction times can be shortened or lengthened depending on specific circumstances. For example, misdemeanor investigations generally take less time than felony investigations so the time of the videos for those offenses will likely be less and may reduce time for review and redaction. Misdemeanor offenses will generally have fewer officers in the investigation. Felony investigations often deploy multiple officers dramatically increasing the number of hours of video to review. Impaired driving offenses are generally misdemeanors but likely include two officers and dash cameras in police vehicles which increases the video evidence for those particular offenses. Some jurisdictions have chosen to use media services technicians trained in the redaction technology to prepare digital evidence for discovery or trial after a legal review by prosecutors or other legally trained staff, whose expertise in the technology can shorten redaction times and productive hours in a workday.

The condition of the video when it is received by the prosecutors' office will also impact the length of time needed to review and redact. As discussed in the Policy Implications section, it is important that the officer or designated police department personnel tag the video specific to an incident so that it is easily identifiable. It will also expedite review and redaction if the police department either establishes a policy to turn off the BWC when obtaining personal identifying information from victims and witnesses or redacts the personal identifying information prior to giving the video to the prosecutor's office.

Technology Costs

The technology costs include the means for viewing video evidence, software and hardware for redacting the video, for distribution and copying, and for required storage of video evidence beyond what is provided for original storage under the police video storage and access capabilities.

The technology costs can be estimated using a cost per person factor multiplied by the number of FTEs that will be required to perform the work as described. The figure currently developed for Davidson County is \$7,125 per person.

This does not include the cost to create and maintain the network capacity needed to allow large numbers of users to simultaneously watch the video evidence in all the government buildings and ensure that connectivity meets performance expectations.

Facilities and Administrative Costs

The cost of office space and related administrative costs have been estimated to be \$4,467 per person for an information systems advisor 1.

Cost estimation models for each agency are presented in Appendix A.

Conclusions

The best predictor of success of a BWC program is the existence of careful and thoughtful policy decisions, made cooperatively with all relevant parties (police, prosecutors, defense, and courts) in advance of implementation of the program. Effective and meaningful policy developments require police and prosecutors to be fully engaged and committed to the success of the overall program. With thoughtful and careful analysis of the issues identified, policies and procedures can be developed and put in to place to ensure that Constitutional and statutory obligations and duties are honored, victims', witness' and bystanders' safety will **not** be compromised, and video evidence will be handled in a timely fashion. The full consideration of privacy challenges is often addressed by the creation of a **Privacy Impact Assessment** covering the policies that are developed.

The introduction of BWC video evidence into police investigations dramatically increases burdens on many parties within the justice system - not the least of which is to the complexity of the prosecutor caseload, creating new areas of responsibility and legal analysis. Very little research has been done illustrating the positive or negative impacts of BWC evidence. That said, it is hard to suggest a rationale where video evidence showing real-time actions would be detrimental to the justice system's fact-finding process. But a jurisdiction should engage in a realistic cost/benefit analysis to assess the impact of the creation of this type of program to the entire budget of a city, county or state.

The cost models presented in Appendix A present an estimate of costs for each agency that is directly based on the estimates of video imagery that must be handled by the criminal justice community. Policies governing when review, redaction, and disclosure happens will strongly impact the cost estimates. However, there are significant costs for the organizations that comprise the criminal justice system to deal with the reality of video evidence. The workload created by this innovation in the administration of justice is substantial, and additional resources are required over and above the resources to process and manage other evidence.

As with any new work process, there will be a learning curve that will result in efficiencies not currently contained in the estimations that will reduce the time required to accomplish the work related to handling video imagery.

The cost models developed in this study are all parameter driven, and the authors contend that this form of cost estimating is a rational approach. However, the values required for the various parameters in the equations proposed herein are highly dependent on having a sufficient amount of data to establish actual values based on practical experience. For example, the formulas depend heavily on having an accurate measure of how many hours of video are generated that are potential evidence that must be therefore reviewed, redacted, and packaged for distribution. In order to make these estimates useful, and to validate the cost model so as to accurately forecast costs, there needs to be a set of data collected that may not now be a part of the records management systems in place in either the police systems or the criminal justice systems.

Regardless of the form of model chosen for estimating costs and thus budget requests, the nature and extent of the workload should become a native part of the data collected on the workload to which the police and criminal justice agencies must respond. For these purposes, data should be collected on the various parameters that are a part of these or any equations, including the following:

- Number of hours of video captured by law enforcement per camera
- Number of arrests by various categories of crime severity
- Number of hours of video evidence per hour of video captured
- Number of hours to review video evidence per hour of video submitted
- Number of hours to redact video evidence per hour of video submitted

These data need not be recorded for each and every video collected, as a sampling approach would suffice to generate reliable estimates of the parameters that are useful in making the estimates as accurate as possible.

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Appendix A. Cost Models for criminal justice agencies

The following pages present examples of the proposed cost models and estimates for each criminal justice agency in Davidson county that may be impacted by the introduction of video evidence. The estimates provided here are dependent on the policies that are ultimately adopted for determining the extent to which video evidence must be reviewed and redacted for selected offense categories and severity, and the extent to which required redaction is done by police, and the policies for review and redaction prior to fulfilling discovery obligations.

Example cost estimations are provided for:

- District Attorney General, 20th Judicial District, Nashville, Tennessee.
- Criminal Court Clerk, Davidson County
- Public Defender, Davidson County

Other criminal justice agencies will need equipment and appropriate support for presentation and viewing of video evidence as they are engaged in its use for trial or other proceedings. Equipment assessments are needed for:

General Sessions Courts, Davidson County

State Trial Courts, Davidson County

Sheriff, Davidson County

Metropolitan Department of Law (Civil)

Circuit Court Clerk, Davidson County (Civil)

In addition, there may be economies that can be provided by enabling the common application of networking and storage facilities by the Justice Integration Services (JIS), Davidson County

The need for possible expansion of the information technology network to accommodate the viewing and management of the video evidence has not be quantified.

For the District Attorney General example:

One example of a policy to review and redact as necessary all evidence generated from arrests could be based on the total number of arrests. Using Compstat data from 12/29/2018 for a 52 week total the numbers are:

| | | | |
|----------------|------------------------|---------------|---------------------------|
| | | Assumptions: | |
| Felony arrests | 8,297 | 2 | hours of video per arrest |
| Misdemeanor | 20,530 | 0.8 | hour of video per arrest |
| Citation | 26,108 | 0.8 | hour of video per arrest |
| | Estimated hours | 53,904 | |

Using this estimate of the hours of evidence to be reviewed and redacted, the cost model appears on the following page.

Wormeli Consulting, LLC

Impact of Video Initiative on Resources

Organization: District Attorney General

Annual Video Evidence Hours Submitted: 53,904 Annual FOIA Requests: 150

Number of Trials: 300 Indictments: 3,000

Staffing

| Function | Annual Hours or Items | FTEs | Average Burdened Cost | Total Cost | Assumptions: |
|------------------------------|--------------------------|--------|-----------------------------|--------------|-----------------------------|
| Police Department Liaison | 520 | 0.30 | \$155,183 | \$46,699 | 1728 Labor hours available |
| Digital Video Administration | 1,728 | 1.00 | \$155,183 | \$155,183 | 10 Hours per Week |
| Technical Support | | 0.00 | \$106,013 | \$0 | Full-time Position |
| Staff Training | | 0.00 | \$106,013 | \$0 | Included in Administration |
| Video Review | 80,856 | 46.79 | \$155,183 | \$7,261,271 | Included in Administration |
| Redaction | 323,424 | 187.17 | \$106,013 | \$19,842,100 | 1.5 Hours of Review |
| Copying and Distribution | 16,171 | 9.36 | \$106,013 | \$992,105 | 4 Hours per Hour |
| | | | | | 20% Requires % of Video Hou |

| | | | | | | |
|---------------------------|-------|------|-----------|---------------------|-------|----------------------|
| Trial Preparation | 6,000 | 3.47 | \$155,183 | \$538,830 | 2 | Hours per Indictment |
| Transcription | 300 | | | \$75,000 | \$250 | per Transcription |
| Translation Services | 60 | | | \$30,000 | \$500 | per Event |
| Response to FOIA Requests | 300 | 0.17 | \$118,828 | \$20,630 | 2 | Hours per Request |
| Staffing Total | | | | \$28,961,817 | | |

Technology

| | <i>Initial</i> | <i>Annual</i> |
|---------------------------------|----------------|--------------------------------|
| Computer, etc. Equipment | \$1,781,290 | \$7,175 per Person |
| Network Capacity | | |
| Digital Storage | \$600,000 | Storage Area Network |
| Redaction Software | \$149,733 | \$4,000 per Concurrent License |
| Displays/Presentation Equipment | | |

Facilities

| | | |
|-------------------------------------|-------------|-----------------------------|
| Office Space and Telecommunications | \$1,108,993 | \$4,467 Administrative Cost |
|-------------------------------------|-------------|-----------------------------|

| | | | |
|-------------------------|---------------|--------------------|---------------------|
| TOTAL FOR AGENCY | 248.26 | \$2,531,023 | \$30,100,757 |
|-------------------------|---------------|--------------------|---------------------|

Public Defender Workload Example

The budget estimate is based on the following assumptions:

1. The public defender handles 25% of the cases emanating from arrests.
2. The public defender attorneys will most likely need to review video evidence twice, once to determine content and a second time with their client.
3. All necessary redactions have been made by the District Attorney General staff.

Variations in the policy regarding the requirement to review all case video will affect this estimate.

Impact of Video initiative on resources

Organization: Public Defender

Annual Video Evidence hours submitted: 13,476

FOIA Requests 150

Number of trials 300

Staffing

| Function | Annual hours or items | FTEs | Avg. burdened cost | Total cost | Assumptions: |
|------------------------------|-----------------------|-------|--------------------|------------|--------------------------------------|
| Police Department Liaison | 520 | 0.30 | 155,183 | 46,699 | 1728 Labor hours ; 10 hours per week |
| Digital video administration | 1,728 | 1.00 | 155,183 | 155,183 | full time position |
| Technical Support | | 0.00 | 106,013 | 0 | included in administration |
| Staff training | | 0.00 | 106,013 | 0 | included in administration |
| Video Review | 40,428 | 23.40 | 155,183 | 3,630,636 | 3.0 hours of review |
| Redaction | 0 | 0.00 | 106,013 | 0 | done by DA |
| Copying and Distribution | 0 | 0.00 | 106,013 | 0 | done by DA |
| Trial Preparation | 600 | 0.35 | 155,183 | 53,883 | 2 hours per trial prep |
| Transcription | 0 | | | 0 | court or DA |
| Translation services | 0 | | | 0 | court or DA |
| Response to FOIA requests | 0 | 0.00 | 118,828 | 0 | court or DA |

Total 25.04 \$3,886,400

Technology

| |
|---------------------------------|
| Computer, etc. equipment |
| Network Capacity |
| Digital Storage |
| redaction software |
| Displays/presentation equipment |

Initial *annual*

179,691 7,175 per person

storage area provided

0 0

Facilities

| |
|-------------------------------------|
| Office space and telecommunications |
|-------------------------------------|

111,871 \$4,467 administrative cost

179,691 3,998,272

TOTAL FOR AGENCY

Criminal Court Workload Example

The assumptions underlying the estimation of costs for the criminal court include the following:

1. The video hours are determined by the number of discovery filings made by the district attorney (2,589 in FY 2019).
2. The court may need to perform additional redaction to ensure that all legal protections for the video are provided.

Variations in the policy regarding the requirement to review all case video will affect this estimate.

Impact of Video initiative on resources

Organization: Criminal Court

Annual Video Evidence hours submitted:

3,366

150 annual number of FOIA requests

Number of trials

300

Staffing

| Function | Annual hours or items | FTEs | Avg. burdened cost | Total cost | Assumptions: |
|------------------------------|-----------------------|-----------|--------------------|--------------------|---|
| Police Department Liaison | 520 | 0.33 | 155,183 | 51,728 | 1560 Labor hours available 10 hours per week |
| Digital video administration | 1,560 | 1.00 | 155,183 | 155,183 | full time position |
| Technical Support | | 0.00 | 106,013 | 0 | included in administration |
| Staff training | | 0.00 | 106,013 | 0 | included in administration |
| Video Review | 5,049 | 3.24 | 155,183 | 502,256 | 1.5 hours of review |
| Redaction | 20,196 | 12.95 | 106,013 | 1,372,461 | 4 hours per hour |
| Copying and Distribution | 1,010 | 0.65 | 106,013 | 68,623 | requires 20% of video hours |
| Trial Preparation | 600 | 0.38 | 155,183 | 59,686 | 2 hours per felony trial request |
| Transcription | 300 | | | 75,000 | \$250 per transcription |
| Translation services | 50 | | | 25,000 | \$500 per event |
| Response to FOIA requests | 300 | 0.19 | 118,828 | 22,852 | 2 hours per request |
| Total | | 19 | | \$2,332,787 | |

Technology

| |
|------------------------------------|
| Computer, etc. equipment |
| Network Capacity |
| Digital Storage |
| redaction software |
| Displays/presentation equipment |

Initial

134,461

7,175 per person

600,000

storage area network

10,357

4,000 per concurrent licensi

2,071

Facilities

| |
|--|
| Office space and telecommunications |
|--|

83,713

\$4,467 administrative cost

TOTAL FOR AGENCY

744,818

2,418,571

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