



Seeing is Believing: The Incorporation of Body Cameras Into a High Reliability EMS Organization



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Background:

- Body Worn Cameras (BWCs) have been utilized by police departments in England starting in 2005 and the United States starting in 2012.
- There are multiple papers citing the utilization, legality, compliance, accountability, public perception and privacy issues in law enforcement.
- Cypress Creek EMS (CEMS) conducted the first field trial of EMS body cameras between 2013 and 2015 and used the recordings for prospective research comparing video to direct laryngoscopy, video recordings to written documentation, and treatment of excited delirium.
- In January 2019, CCEMS became the first EMS organization to issue and require the Axon Body Camera 2 technology be used by all paramedics in their organization on all 911 calls.
- Recordings are encrypted and stored initially in non-removable internal storage then uploaded using a proprietary dock to a decentralized, HIPPA-compliant storage and management system.

Legal Considerations:

HIPAA and Security

Health Insurance Portability and Accountability Act of 1996) is United States legislation that provides data privacy and security provisions for safeguarding medical information. EMS providers can collect and use PHI (Protected Health Information) via electronic and video technology for treatment and quality improvement practices. CCEMS safeguards all PHI collected in these forms and video recordings are secured with the same standards as patient care records. The Axon system provides for redundant backup, secure encryption, inventory management of all devices, NIST 800-88 compliant removal of all recordings from the device on upload, and audit trails for every recording. The original recording cannot be altered. CCEMS provides regular training, policies that incorporate video recording, and business associate agreements. The Axon system does not use media cards and if a camera was to be lost or stolen, the recordings cannot be removed using conventional methods; the system requires proprietary software to download.

Privacy, Consent, and Right-to-Know

Texas is a “One party consent” state meaning only one party has to know about the recording. Medics are required to record all emergency responses through the transfer of patient care and responsibility. Evidence shows that one of the most important aspects of patient care is the transfer from one provider to another. The Joint Commission has identified ineffective handoff communication as a contributing factor in 80% of serious medical error. CCEMS is not a government entity and therefore, PHI is not subject to the Public Information Act. The recording is **not** part of the official patient record but is treated as a protected quality improvement record.

Data Storage, Access, and Retention

The data is not stored on media cards or local hardware at CCEMS. All data is stored on Axon cloud servers and uploaded recordings can only be accessed through an evidence management system using secure, encrypted, dual authentication with access restricted by IP address to CCEMS network systems. The medics can review their videos to aid them in patient care documentation, and CCEMS Clinical staff can review videos for Quality Improvement (QI). A redaction tool included in the evidence management system can be used to remove all PHI (Video and Audio) from a copy of the recording, which can then be used in education and training. Redaction, download, access, and sharing features are restricted by user profile, and only the program administrator and designated Clinical QI staff have this access. All video is retained for a minimum time period consistent with Texas law unless specifically involved in a legal proceeding, criminal case, sentinel event, subject to a citizen complaint, or is evidence of a crime.



The camera is lightweight and mounts on safety glasses. A cord connects the camera to a small battery pack. A secure app on a smart phone allows for case tagging, review, and annotation prior to upload.



Point-of-view perspective provides better review of prehospital treatments and allows review of a case based on what the paramedic saw. Video recordings capture conversations with patient and bystanders and allow review of high-acuity calls.



CYPRESS CREEK EMS VIDEO DEBRIEFING FORM	
I. INCIDENT & DEBRIEFING INFORMATION	
Incident Number:	Incident Date:
Debriefing Date:	
CCEMS Personnel on scene (* If wearing camera):	
Other agencies on scene:	
Debriefing facilitator:	Debriefing Participants:
Location of debriefing:	
Cravens Room	
II. DEBRIEFING NOTES	
1. Introduction: Explain purpose of debriefing; clarify what facilitator expects from participants, and emphasize that video debriefings are confidential, non-punitive, and intended for clinical development.	
2. Review: Review video of case or section of case. Pause as necessary and encourage active discussion with open-ended questions.	
What did participants observe during the call? What cues were missed?	
What were participants thinking during the call? What were participants feeling ? Identify moments of stress, confusion, or uncertainty; what led to those feelings; and how those feelings impacted the call.	
Identify performance gaps and how participants can improve. Provide concrete feedback tied to specific examples.	
3. Analyzing Clinical Reasoning	
Identify what the primary underlying issues (pathophysiology) were in the patient's condition.	
Discuss the differential diagnosis process and the final diagnosis.	
Analyze why interventions were done, what the desired outcome was, and what the actual outcome ended up being.	
(continued on next page)	
*page 1 of 2	
This form is strictly confidential as part of the quality assurance/quality improvement program. Please refer to the instructions on completing video QA/debriefing.	
4. Analyzing Scene Management & Communication	
Discuss time management, positioning of equipment and personnel, and utilization of personnel.	
Discuss communication with crew, patient, and family/bystander.	
Discuss technical skills performance if pertinent.	
5. Summary	
Summarize the "take-aways". What did the participants learn? What should they do differently on their next patient encounter?	
III. ADDITIONAL COMMENTS	
IV. POST-REVIEW FOLLOW-UP/ACTIONS NEEDED	
Once completed, upload this form to the designated location for tracking debriefing. Report any concerns regarding the debriefing process to the Assistant Director.	
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This form is strictly confidential as part of the quality assurance/quality improvement program.	

An evidence-based facilitated debriefing process focuses case review on identifying opportunities for improvement and learning in a positive environment.

Resources:

- Ho J, Dawes D, McKay E, Taliercio J, White, S, Woodbury B, Sandefur M, Miner L., Effect of Body-Worn Cameras on EMS Documentation Accuracy: A Pilot Study, Prehospital Emergency Care, 21:2, 263-271, (2017)
- Ho J, Hick J, Nystrom P, et al; 6 Effect of an EMS body-worn camera, BMJ Open 2019
- Ho J, Joing SA, Nystrom PC. Point of view video documentation in the emergency department: Feasibility and patient/provider perception. Ann Emerg Med. 2010;56:S119

Implementation Questions:

- Product Brand: Security, ease of use, durability, cost.
- Point of View (POV) vs. Body Mounted: POV provides better view of patient treatment and assessment.
- Device Size, Weight, and Battery Life
- Data Security, Management and Retention
- Software Interface
- Incorporation into Patient Record

Applications for Quality Improvement

- Allows medical director and QI staff to review all high-acuity calls for protocol compliance, procedural competency, and system improvement.
- On Scene and Patient Care footage can be shown to receiving ER physician to aid in continuing patient care.
- Patient Care documentation accuracy is improved.
- Allows a record of high-consequence points in patient care including MIST Report delivery, hospital interactions, patient handoff, and Patient Refusals against medical advice.
- Medics can self-debrief calls using a tracked, guided process.
- An evidence-based facilitated debriefing using a standardized form (left) aids in individual improvement following calls.
- Recordings of low-frequency procedures and patient presentations are redacted and used in education and training to allow others to learn from a case.
- Used to document paramedic competency for credentialing and training.
- Provides evidence for internal investigations, disciplinary actions, and documentation for legal proceedings.

Integrations:

- Ambulance-Based Dashcam and Patient Compartment Recording Systems
- Multiple Camera / Agency Video Syncing
- Simulation Use for Paramedic Education and Training

Future Innovations:

- AI Assisted Patient Care Documentation
- Conversation Transcription
- Live Streaming of On-Scene Care
- Telemedicine and Specialist Consults
- Tactical / Military Medicine

Current Debates:

- Patient Privacy Issues and Recording Policies
- Hospital Camera Policies
- Discoverability as Legal Evidence
- Violence against EMS
- Cost of Program and Data Storage