



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

CPT Matthew Esposito DO¹, Samuel Kordik BS NRP², Wren Nealy NRP², Zach Dunlap NRP², Levon Vartanian MD²

¹San Antonio Military Medical Center, San Antonio Tx, ²Cypress Creek Emergency Services District, Spring Tx

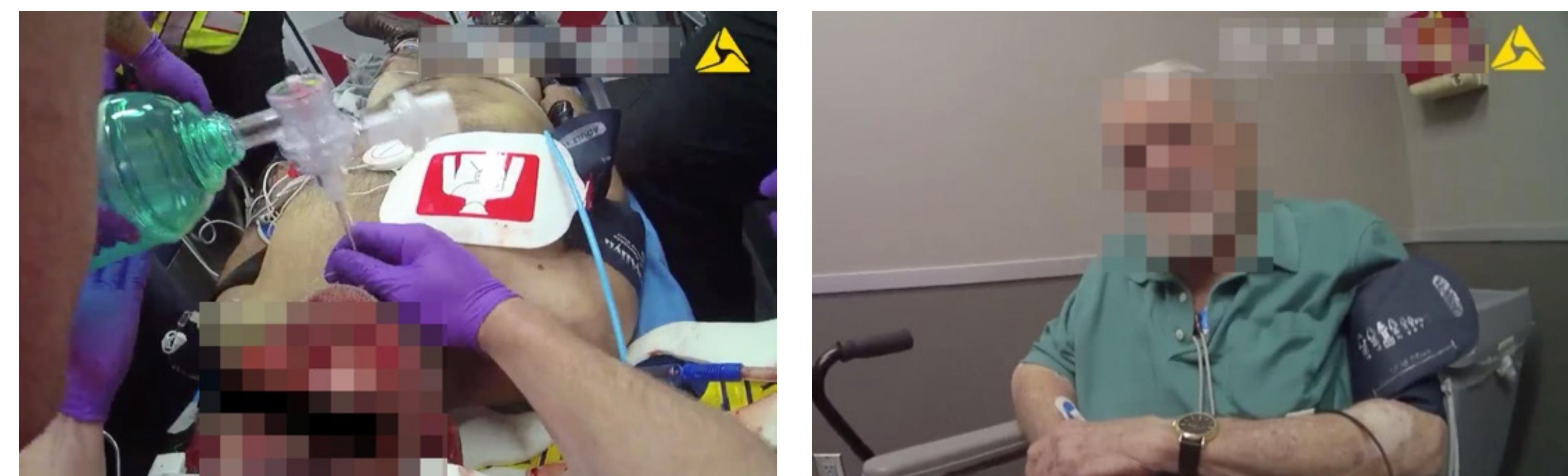


Background:

- 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 (CCEMS) 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.



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. Pose 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.		
Page 2 of 2 This form is strictly confidential as part of the quality assurance/quality improvement program.		
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.		

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

Resources:

- 1) Ho J, Dawes D, McKay E, Taliercio J, White, S, Woodbury B, Sandefur M, MinerL, Effect of Body-Worn Cameras on EMS Documentation Accuracy: A Pilot Study, Prehospital Emergency Care, 21:2, 263-271, (2017)
- 2) Ho J, Hick J, Nyström P, et al. 6 Effect of an EMS body-worn camera, BMJ Open 2019
- 3) Ho J, Joing SA, Nyström 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