

**GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF THE INSPECTOR GENERAL**

**SUMMARY OF
SPECIAL REPORT**

**Review of Fire and Emergency Medical
Services Department December 2, 2008,
No-Transport Response**

June 2011



**CHARLES J. WILLOUGHBY
INSPECTOR GENERAL**

This Summary describes the D.C. Office of the Inspector General's review of emergency response efforts provided by the D.C. Fire and Emergency Medical Services Department (FEMS) on December 2, 2008, in light of applicable policies and procedures. This summary is provided in lieu of the full report in order to protect the privacy interests of the individuals mentioned in the full report. In addition, in accordance with D.C. Code § 44-804, the two reports issued by FEMS involving this incident have been omitted.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of the Inspector General

Inspector General



June 2, 2011

The Honorable Vincent C. Gray
Mayor
District of Columbia
Mayor's Correspondence Unit, Suite 316
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

Dear Mayor Gray:

During his tenure as Chief of the D.C. Fire and Emergency Medical Services Department (FEMS), Dennis Rubin asked the Office of the Inspector General (OIG) to assess FEMS's internal reviews that he directed following the death of a patient who was evaluated by FEMS personnel on the night of December 2, 2008. Please find enclosed our final report of special evaluation, entitled *Review of Fire and Emergency Medical Services Department December 2, 2008, No-Transport Response*.

The two primary purposes of the OIG's special evaluation were to evaluate the assessment of and care provided to the patient on December 2, 2008, and the thoroughness and conclusions of the Medical Quality Review and Operational Review conducted by FEMS. The OIG's complete report of special evaluation was delivered to FEMS Chief Kenneth Ellerbe on May 25, 2011, but due to privacy provisions contained in District law, the OIG may not release elements of the full report to the public, most notably, the results and OIG's analysis of FEMS's medical quality and operational reviews of the incident. Therefore, in order to comply with D.C. Code § 44-804, the OIG is distributing this summary report, and will make it available to the public on our website, www.oig.dc.gov.

With regard to the patient care delivered and assessment conducted on December 2, 2008, the OIG focused on:

- 1) whether FEMS responders followed established protocols;
- 2) whether FEMS responders properly documented the details of the assessment and care they provided; and
- 3) the clarity and sufficiency of FEMS protocols regarding patient assessment and transport.

The enclosed report addresses five primary issues pertaining to patient evaluation, communication between FEMS providers, and event documentation. The report also presents conclusions and recommendations regarding an important facet of patient assessment and care that warrants further scrutiny, clarification, and standardization by FEMS leadership: what responders say to patients regarding transport to the hospital.

The issues and concerns resulting from this special evaluation will necessitate OIG follow-up to our recommendations. To aid in this process, I asked Chief Ellerbe to provide information and periodic updates to my Office regarding any corrective actions that he directs and enhancements to FEMS protocols and operations that he implements.

If you have questions about this report or if we can be of further assistance, please feel free to contact me on (202) 727-2540.

Sincerely,



Charles J. Willoughby
Inspector General

CJW/ef

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Letter to Vincent Gray

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**ACRONYMS AND
ABBREVIATIONS**

Acronyms and Abbreviations

151	FEMS Form 151
902	1 st Responder Report Form 902 EMS
ACA	Ambulance Crewmember Assistant
ACIC	Ambulance Crewmember in Charge
AFC	Assistant Fire Chief
ALS	Advanced Life Support
BLS	Basic Life Support
CO	Company Officer
CPR	Cardiopulmonary Resuscitation
CQI	Clinical Quality Investigation
DOT	Department of Transportation
EKG	Electrocardiogram
ELO	Emergency Liaison Officer
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
ePCR	Electronic Patient Care Report
FEMS	Fire and Emergency Medical Services Department
FF	Firefighter
GO	General Order
IG	Inspector General
IV	Intravenous
MFCU	Medicaid Fraud Control Unit
MI	Myocardial Infarction

Acronyms and Abbreviations

MQR	Medical Quality Review
NHTSA	National Highway Traffic Safety Administration
OIC	Officer in Charge
OIG	Office of the Inspector General
OUC	Office of Unified Communications
PEC	Paramedic Engine Company
SAMPLE	Signs and Symptoms; Allergies; Medications; Pertinent History; Last Oral Intake; and Events Prior
SO	Special Order
STEMI	ST-Elevation Acute Myocardial Infarction

Acronyms and Abbreviations

EXECUTIVE SUMMARY

Executive Summary

Chronology of Events

December 2, 2008

- 11:40 p.m. Witness #1 (patient's mother) called 911 and reported to the Office of Unified Communications (OUC) that her son was having trouble breathing.
- 11:42 p.m. OUC dispatched Ambulance 30 (A-30), which was staffed by two Firefighter/Emergency Medical Technicians-Basic (FF/EMT-B), to the caller's house. OUC also dispatched Paramedic Engine Company 30 (PEC-30), a fire truck that was staffed by one Firefighter/EMT-Paramedic (Paramedic) and four FF/EMTs, one of whom was a probationary employee.
- 11:46 p.m. A-30 arrived at the caller's house, and the two FF/EMTs-B entered the house. PEC-30, according to OUC data, arrived less than 1 minute after the ambulance. The Paramedic, along with three of the FF/EMTs assigned to PEC-30, entered the house; the FF/EMT who drove PEC-30 remained outside.
- 11:49 p.m. PEC-30's Lifepak 12 cardiac monitor recorded "Power On."
- 11:53 p.m. PEC-30's Lifepak 12 cardiac monitor recorded the printing of a paper EKG strip.
- 11:56 p.m. PEC-30's Lifepak 12 cardiac monitor recorded "Power Off."
- 11:58 p.m. PEC-30 electronically marked as available for service, i.e., ready to respond to another call.
- 12:09 a.m. A-30 electronically marked as available for service.

December 3, 2008

- 6:35 a.m. Witness #1 called 911 to report that her son was unresponsive. OUC dispatched A-30 and PEC-30.¹
- 6:40 a.m. A-30 and PEC-30 arrived at the caller's house.
- 6:44 a.m. PEC-30's Lifepak 12 cardiac monitor recorded the printing of an EKG strip that confirmed the patient's asystolic² condition.

¹ None of the employees from Engine Company 30 who responded to the house on December 2, 2008, responded to the house on the morning of December 3, 2008.

² Absence of a heartbeat

Executive Summary

December 3, 2008 – (Continued)

- 6:46 a.m. Emergency Medical Services (EMS) Supervisor arrived at the house.
- 6:57 a.m. PEC-30 electronically marked that it was available for service and returned to the firehouse.
- 7:12 a.m. A-30 electronically marked that it was available for service.

At approximately this same time, the EMS Supervisor left the Patient's residence and drove to Engine Company 30's firehouse, where he and another FEMS employee printed a code summary from the Lifepak 12 cardiac monitor pertaining to the previous night's call. Later in the day, the EMS Supervisor submitted a "Clinical Incident Report Form" to the Deputy Chief of EMS Operations, citing "Clinical Judgment" as an issue pertaining to FEMS employees' response to the December 2 call. Senior Fire and Emergency Medical Services (FEMS) managers initiated a Medical Quality Review and an Operational Review, which were completed on March 3, 2009, and March 6, 2009, respectively.

Overview

On December 2, 2008, the mother of a 39 year-old D.C. citizen, the Patient,³ called 911 around 11:40 p.m. because her son was having difficulty breathing and experiencing chest pain. Seven FEMS responders from Engine Company 30, two in an ambulance and five on a fire truck, arrived at the family's home at approximately 11:46 p.m. Six of the seven responders entered the house, the first two of whom found the Patient lying on the floor. Two of the responders, a FF/EMT-Basic and a FF/EMT-Paramedic (Paramedic) performed various tasks in order to assess the Patient's condition. The Paramedic, the most senior of the FEMS responders in terms of EMS training and certification, advised the Patient that he could be experiencing "acid reflux," recommended an over-the-counter treatment (Pepto-Bismol), and offered several times to transport the Patient to a hospital. The Patient refused the Paramedic's offers, stating he would have his family transport him if he decided later to go. The Paramedic instructed the Patient to call 911 again if he changed his mind, and exited the house. Soon thereafter, the fire truck left the scene. The Patient signed an electronic form on the FF/EMT-Basic's "Toughbook" computer to acknowledge that he was refusing further services from FEMS (i.e., transport to a hospital), and the ambulance left the scene.

The next morning, the Patient's family found him unresponsive and called 911 at 6:35 a.m. OUC again dispatched FEMS employees assigned to Engine Company 30 (none of whom had responded to the patient's home the night before), as well as an EMS Supervisor. The Metropolitan Police Department was also notified. The first FEMS employees arrived at approximately 6:40 a.m. The Patient was not resuscitated and was pronounced deceased at the scene at 7:12 a.m.⁴ The EMS supervisor submitted a "Clinical Incident Report Form" to the Deputy Chief of EMS Operations, citing "Clinical Judgment" and "Other" as issues pertaining to FEMS's response on December 2. Senior FEMS managers initiated a Medical Quality Review and an Operational Review, and interviewed 5 of the 7 members of Engine Company 30 who responded to the first call from the Patient's residence. Over the following 2 weeks, senior FEMS managers conducted interviews with the other two employees who responded on December 2, as well as the EMS supervisor and the six members of Engine Company 30 who responded to the patient's home the morning of December 3.

In a letter dated December 16, 2008, the Chief of FEMS asked the Office of the Inspector General (OIG) to "conduct an independent assessment of operational and emergency medical service reviews that [he had] directed be conducted in response to patient care and service delivery provided on December 2, 2008 to an adult male.... [I]n an effort to ensure that this process is open, transparent and impartial, I am respectfully requesting that your office undertake an independent review of our findings and make recommendations as appropriate." FEMS completed its Medical Quality Review and Operational Review on March 3 and March 6, 2009, respectively. Then Attorney General for the District of Columbia Peter Nickles sent the OIG the two reviews, along with notes of interviews FEMS conducted as part of its reviews and other documentation.

³ Initials and pseudonyms are used throughout this report to protect the privacy of those involved.

⁴ The District of Columbia Office of the Chief Medical Examiner conducted an autopsy on December 3, 2008.

Purpose, Scope, and Methodology

The two primary purposes of the OIG's special evaluation were to evaluate: (1) the assessment of and care provided to the Patient on December 2, 2008; and (2) the thoroughness and conclusions of FEMS's Medical Quality Review and Operational Review. With regard to the patient care delivered and assessment conducted on December 2, the OIG focused on: (1) whether FEMS responders followed established protocols; (2) whether FEMS responders properly documented the details of the assessment and care they provided; and (3) the clarity and sufficiency of FEMS protocols regarding patient assessment and transport. (The OIG did not attempt to independently assess the Patient's health condition and, more specifically, whether he was experiencing or had experienced a cardiac emergency when FEMS responders arrived on the night of December 2, 2008.)

The OIG assembled a team of inspectors and investigators with training and experience in law enforcement, inspections, and healthcare. The team reviewed policies, procedures, protocols, FEMS General Orders (GOs) and Special Orders (SOs), patient care standards, and the reports issued by FEMS and their supporting documentation. The team interviewed, under oath, FEMS personnel who entered the house on December 2, 2008. The OIG additionally interviewed the Patient's family members and their friend who also was present that night.

Issues and Findings

This report addresses five primary issues and findings pertaining to patient evaluation, communication between FEMS providers, and event documentation.

Conclusions

Additional Language May Improve Transport Protocol

The December 2, 2008, incident highlights an important facet of patient assessment and care that warrants further scrutiny, clarification, and standardization by FEMS leadership: what responders say to patients regarding transport to the hospital. FEMS protocols do not instruct responders to *offer* transport or *ask* patients if they want to go to the hospital as was done in the Patient's case. The transport decision cited in the protocols is not about *whether* to transport but *where* to transport. In addition, when a patient refuses transport to a hospital, the protocol instructs responders, "Encourage the patient to reconsider transport to a hospital." This appears to mean that responders should attempt to *convince* patients resisting transport to change their minds and be transported to the hospital. This emphasis in the protocols on transport indicates a high expectation or possibly even an assumption by FEMS that one of the main purposes of an FEMS emergency medical response is to transport a patient to a hospital. However, the protocols suggest no specific language for responders to use, either to initiate transport of a patient or to "encourage" patients who are resisting or refusing transport to change their minds.

Executive Summary

Consequently, after a medical assessment has been done and after other factors about the patient's condition have been evaluated,⁵ an example of a clear, declarative statement made by responders to a patient whose condition is questionable or ambiguous might be: "Mr. Jones, we are ready [or "We are going to ..."] to transport you to the hospital." And, after such a statement, if the patient indicates an unwillingness to be transported, responders should follow the existing FEMS protocol and emphasize their inability to provide a more thorough and conclusive evaluation or to make a diagnosis while at the scene, and strongly encourage him to consent to transport to a hospital for a complete check-up by physicians for his own well-being and to assuage the concerns of any loved ones. In the Patient's case, however, as reflected in their interviews, FEMS responders gave no expressions of encouragement to the patient to allow transport to a hospital for a more thorough evaluation. In fact, their interview statements, as shown below, reflect (in some respects) a detached attitude toward the Patient's refusal of transport, as they simply *offered* to take him *if* he wanted to go:

- "[T]he patient was offered transport to the hospital multiple times...."
- "The patient was advised that we would transport him to the hospital if he desired to be checked out."
- "He asked, 'Do you think I need to go?' That's up to you; if you want to go we will take you."
- "Then, he made the decision not to go even though we asked him on multiple occasions."
- "[Patient] refuses transport after multiple offers."
- "We've got no problem taking you to the hospital."
- "We offered more than once to take the patient to the hospital."
- "[FEMS #3] asked him do you want to go to the hospital and the patient said 'no.' I know [FEMS #3] ask[ed] him about 4 times. The mother asked why is he shaking and [FEMS #3] said probably because he is nervous."
- "All Fire & EMS personnel on the scene...report that the patient was asked multiple times if he wished to go to the hospital, and he did not want to do so."

Given that the first FEMS responders found the Patient lying on the floor, an indication that he may have experienced something more serious than what was later described as simple acid reflux, their actions would have been more in line with the protocols had they actually "encouraged" and attempted to persuade the Patient to consent to transport, rather than make mere offers of transport and statements such as, "That's up to you."

⁵ For example, the responders found the Patient lying on the floor and had to help him to a chair, but apparently never asked what caused him to fall or lie down on the floor. The Patient's mother asked the Paramedic why he "fell out" on the floor. The Paramedic responded, "I have no idea.... The only thing I can address is right here, right now, so I am trying to figure out what is going on with him."

Executive Summary

Responders Exhibited Operational Deficiencies

According to statements made by responders during interviews, there was significant deviation from and lack of awareness of fundamental procedures detailed in the FEMS protocols.

Unilateral transfer of accountability. The FF/EMT-Basic who drove Ambulance 30 on the night of December 2, 2008, was the more senior of the two ambulance crew members, and by FEMS policy, should have been the Ambulance Crewmember in Charge (ACIC). Yet, he described his role that night as Ambulance Crewmember Assistant because he was driving, and stated that in general the ambulance crewmember who completed the patient care report was considered the ACIC. When asked how those two roles are determined, he told the OIG: “Sometimes we switch up. Some people want to be ACIC and do the reports. Some people didn’t.” Furthermore, the officer in charge of Engine Company 30 should have assigned these roles at the start of the shift and documented them in the company journal.

Lack of operational coherence. Upon arrival at the scene, one of the two FF/EMTs-Basic on A-30 assisted the Patient from the floor to a chair and began to take a SAMPLE⁶ history, at which point the Paramedic from PEC-30 entered the house. As required by FEMS policy, the Paramedic took over as lead care provider after a brief “rundown” of the information collected by the FF/EMT-Basic, who said to the OIG team, “At this point, I wasn’t in charge of the call. I took a passive role.... I wasn’t paying attention to all the questions [the Paramedic] was asking.” Yet, the same FF/EMT-Basic completed the only ePCR pertaining to this call and gave it to his partner, who signed it without reviewing it. As the partner noted to the OIG team, “the documentation could have been better.” Also, the officer in charge on PEC-30 failed to ensure that the Paramedic completed his own ePCR.

Significant Changes to FEMS Operations Since December 2008

Implementation of STEMI Transport Program

Effective January 15, 2009, Memorandum 2009-12 (Appendix 1) implements FEMS’s STEMI Transport Program, which was developed “to improve service to patients who present with ST-elevation acute myocardial infarction (STEMI), by taking the patient to the appropriate hospital for rapid intervention in the District of Columbia.” *Id.* at 2. In conjunction with the rollout of the STEMI program, the FEMS Training Academy held day-long training “refresher” classes on interpreting 12-lead EKGs that were mandatory for all Advanced Life Support (ALS) providers (EMT-Intermediates and EMT-Paramedics).

Other Changes

In September 2010, prior to the completion of this report, the OIG team interviewed an Assistant Fire Chief (AFC) at FEMS who asked to meet with the team to provide information regarding changes in FEMS protocols made subsequent to the December 2008 incident. These changes included detailing eight EMS Liaison Officers (ELOs), who are assigned to four shifts daily, to work on the operations floor at OUC. The ELOs are FEMS supervisors who are

⁶ Signs and Symptoms; Allergies; Medications; Pertinent History; Last Oral Intake; and Events Prior.

Executive Summary

responsible for overseeing daily operations and interacting with providers on all calls for service. In addition, there are new protocols related to non-transport decisions, patient care documentation, and staffing. The AFC provided the team with copies of the new protocols that reflect these changes:

- In October 2009, FEMS implemented a new hospital transport protocol that requires ALS and Basic Life Support (BLS) providers to communicate transport decisions to the ELO. The ELO then reviews a list of decision-making criteria with the FEMS provider to determine whether a proposed decision is appropriate and approves the decision or overrides it. The ELO provides the FEMS provider with the name of a hospital available to accept the patient based on the patient's needs and the hospital's status related to Emergency Department availability. FEMS providers then transport the patient to the identified hospital.
- Effective March 2010, SO-2010-06 (Appendix 2) requires that “[a]ll non-transport must be approved by a supervisor prior to any unit on the scene leaving the patient and returning to service.”⁷
- Effective March 2010, each FEMS first responder unit is required to complete an ePCR on the Toughbook.⁸
- FEMS is placing new, full-time staff at the FEMS training academy. The academy staff will teach and reinforce new protocols to all FEMS personnel. The AFC stated that all BLS and ALS first responders are required to participate in 8 hours (BLS) and 16 hours (ALS) of training for new protocols and 72 hours over 2 years for all other re-certifications.

Recommendations

The team made recommendations (page 33) that aim to clarify the requirements for FEMS responders' speech and actions in no-transport situations; provide no-transport documentation to patients, family, and caregivers; improve protocol instructions regarding chest pain and EKG equipment use and documentation; ensure that responder roles are identified at the beginning of each shift; rigidly enforce rules on Toughbook use and full documentation of all actions and events; require written statements of those who are parties or witnesses to incidents or actions under review by FEMS leadership; and give consideration to updating the full set of protocols more frequently.

⁷ *Id.* at 1 (emphasis omitted).

⁸ Computer that FEMS employees use to document those calls to which they respond and their actions on the scene.

OVERVIEW OF FEMS OPERATIONS AND PROTOCOLS

General Operations and Personnel

FEMS provides fire protection and response and pre-hospital emergency medical services (EMS)⁹ to residents and visitors in the District of Columbia. Fire stations have engine companies and/or truck companies,¹⁰ and may have one or more ambulances. From 2002 until 2010, three EMS certification levels existed within FEMS: EMT-Basic (EMT-B), EMT-Intermediate (EMT-I), and EMT-Paramedic (EMT-P).¹¹

In 2008, FEMS staffed its transport units (ambulances) using EMT-Bs, EMT-Is, and EMT-Ps. Basic Life Support (BLS) ambulances were staffed, at a minimum, by two EMT-Bs. Minimum staffing requirements for Advanced Life Support (ALS) ambulances, also referred to as medic units, called for one EMT-I or EMT-P, and one EMT-B. There are two positions in an ambulance: the Ambulance Crewmember in Charge (ACIC) and the Ambulance Crewmember Attendant (ACA). The EMS provider with the highest certification is designated the ACIC. When both personnel have equal certifications, “the member possessing the greatest seniority at that certification level shall be designated the ACIC.” GO-2006-14, Art. XXIV, Sec. 3(2)(emphasis omitted).

The Officer in Charge (OIC) of an engine company, also referred to as the company officer (CO), is responsible for identifying the roles of FEMS responders before they go out on calls. Deputy Fire Chief Memorandum Number 42, Series 2006 states: “When company officers report for duty, they will assign the most advanced trained Firefighter EMT...to be the ‘Lead Emergency Medical Care Provider’ and be guided by the emergency medical decisions made by the ‘Lead Provider’ for emergency care, i.e. protocols, transport priority, etc.” *Id.* at 2. FEMS’s Company Officer Daily Checklist (GO-2006-18) further requires that the CO “[a]ssign ACIC and ACA to all ambulance/medic units” and note all these assignments in the company journal.

Training

The National Highway Traffic Safety Administration (NHTSA) under the federal Department of Transportation (DOT) sets practice standards, guidelines, and training curricula for the nation’s Emergency Medical Services (EMS) providers. Various NHTSA documents specify what knowledge and skills EMS providers should possess; how tasks should be performed; which provider level will perform specific skills; and how the requisite knowledge and skills should be taught to each provider level.¹²

⁹ All EMS providers and uniformed FFs hired on or after January 1, 1987, are required to maintain EMT certification.

¹⁰ A truck company has a large hook-and-ladder fire truck and an engine company has a smaller truck with hoses.

¹¹ An EMT-Basic is a first responder trained to provide basic emergency pre-hospital care and transport patients by ambulance to a hospital. EMT-Paramedics provide the most extensive pre-hospital care, and have advanced training that allows them to perform complicated treatments such as administering IV fluids and drugs, interpreting EKGs, and performing endotracheal intubations. A new national certification level, EMT-Advanced, will replace the EMT-I designation.

¹² NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, NATIONAL EMS CORE CONTENT, 4 (JUL. 2005)

Overview of FEMS Operations and Protocols

Basic training for FEMS recruits consists of a 600-hour firefighting course that is held at FEMS's Training Academy; 240 hours of EMT-B instruction provided through programs offered by D.C. area hospitals; 80 hours of instruction on adult and pediatric medical protocols; and 4 hours of cardiopulmonary resuscitation (CPR) training.

Patient Care Protocols

FEMS protocols are based on NHTSA guidelines, state protocols, DOT training curricula, and other reference materials.¹³ According to the foreword in FEMS's Pre-Hospital State Medical Protocols (Rev. 1.7, eff. Apr. 30, 2010), protocols are "to be used as guidelines for operation during EMS responses that require medical direction ... and to ensure that personnel are trained in proper patient care." As of September 2006, engine companies are required to drill on EMS protocols for 1 hour on Mondays, Tuesdays, Wednesdays, and Thursdays.

FEMS General Orders and Special Orders are another significant source of operational criteria, while Deputy Fire Chief Memoranda and other issuances inform personnel of special issues or changes of note. All FEMS personnel can access the General Orders, Special Orders, and memoranda online, and hard copies are kept in binders at each firehouse.

The Adult Pre-Hospital State Medical Protocols in place in December 2008 were approved in May 2002.¹⁴ The protocol entitled "EMT-Basic Scope of Practice" outlines what certified EMT-Bs are authorized to do: evaluate the ill and injured; render basic life support, rescue and first aid; obtain diagnostic signs (temperature, blood pressure, pulse and respiration, level of consciousness, and pupil status); perform CPR; use airway breathing aids; use stretchers and body immobilization devices; provide initial pre-hospital emergency trauma care; perform basic field triage; perform blood glucose testing; initiate IV lines for saline; administer oxygen, glucose, and selected medications; assist EMT-Intermediates and EMT-Paramedics; manage patients within their scope of practice;¹⁵ and transport patients.

Basic Patient Care

The protocol for General Patient Care, Section A 1 states that after assuring safety for the EMT and patient, and employing precautions to prevent contact with body fluids, the EMT performs an initial assessment "on every patient to form a general impression of needs and priorities." The initial assessment includes an evaluation of:

- mental status;¹⁶
- airway status;
- breathing;

¹³ Includes Prehospital Emergency Care ("the Brady Book") and Mosby's Paramedic Textbook. The "Brady Book" provides a comprehensive approach to EMT-Basic education.

¹⁴ Several protocols were revised in subsequent years, but none of the protocols cited in this report were revised after the original effective date. FEMS's Pre-Hospital State Medical Protocols were fully revised in 2010; version 1.7 went into effect on April 30, 2010.

¹⁵ Performing blood glucose tests, initiating IV lines for saline, and administering oxygen and medications are Advanced Life Support skills.

¹⁶ Status levels are: alert, responds to verbal stimuli, responds to painful stimuli, and unresponsive.

Overview of FEMS Operations and Protocols

- circulation;
- disability, which includes performance of neurological assessment, and
- injuries, which includes removal of clothing, if needed.

Upon completion of the assessment, a clinical priority is assigned as follows: Priority 1 is Unstable; Priority 2 is Potentially Unstable; and Priority 3 is Stable. This section of the protocol includes a detailed chart that addresses the “Appropriate Focused History and Physical Examination” for the unresponsive and responsive patient, which includes the detailed examination and ongoing assessment to be performed. A “Note Well”¹⁷ area in the patient care protocol states: “The provider with the highest level of pre-hospital training and seniority will be in charge of patient care.”

Specific Illnesses/Complaints/Injuries

The FEMS protocols also address specific medical issues encountered by EMTs in the community. The illness-specific protocols start by referring the caregiver to the General Patient Care protocol cited above, then continue with illness-specific details for care.

Adult Cardiac Emergencies – The protocol for Adult Cardiac Emergencies: “Chest Pain (Suspected MI¹⁸/Angina)” (Appendix 3) recommends the responder follow basic patient care protocol and then follow steps such as providing oxygen, establishing an IV, and placing the patient in a position of comfort. The protocol for ALS providers (EMTs-I and EMTs-P) is to attach the patient to an EKG¹⁹ monitor and interpret the rhythm; consider obtaining a 12-lead EKG, if possible; and administer medication depending on the nature of the chest pain and patient’s blood pressure. Regarding the transport decision, the protocol states, “Transport to the closest appropriate open facility.” *Id.* at B8.3

Transport

General Patient Care Protocols Section VI, I states:

Patients should be transported as soon as appropriate to the proper medical facility. Immediate transport with treatment en route is recommended for patients with significant trauma or unstable airway.

Patient Release

Release at the Scene – The intent of FEMS’s protocol entitled “Patient Released On Scene” is as follows:

To allow a patient an alternative to transport by ambulance to an acute care hospital that is medically appropriate and respects the rights of a competent adult to make prudent decisions. (*Id.* at N11.1.)

¹⁷ The highlighted “Note Well” areas call attention to issues of special importance.

¹⁸ Myocardial Infarction

¹⁹ Electrocardiography (ECG or EKG) is a non-invasive procedure that interprets the electrical activity of the heart over time via electrodes placed on the skin.

Overview of FEMS Operations and Protocols

The Note Well section for this policy provides mandatory criteria for patients who are released at the scene by a paramedic. The criteria are listed as follows:

1. The patient **must have** a clearly articulated plan for medical evaluation and/or follow-up that relies on previously established medical providers or the use of recognized acute care/urgent care providers and facilities.
2. This plan **must have** a reasonable and prudent transportation plan to reach follow-up medical care.
3. After complete evaluation the paramedic **must concur** with the appropriateness of scene release and the medical appropriateness of the follow-up plan.
4. The EMS Supervisor **must concur** with the overall appropriateness of the follow-up plan.
5. Patients with minor traumatic injuries **must not** meet critical trauma criteria.
6. Medical complaints **must not** be of new onset (first time symptoms).
7. The patient **must sign** an appropriate release form stating that emergency evaluation has been rendered, transportation offered, and that the patient chooses an alternative evaluation plan.
8. The CQI Office **will audit 100% of scene releases** under this policy, based on available data, for medical appropriateness, compliance with department policy, and compliance with Department of Health regulatory policies.
- . . .
9. Patients requesting ambulance transport **shall not** be denied transport under this policy.
10. **Any new onset** medical complaints such as seizures, headache, hypoglycemia, respiratory distress, etc. will not be released at the scene under this policy.
11. Paramedics may not knowingly release a patient under this policy **more than once** in a 24-hour period.
12. **Children under 1 year of age** or **the elderly** (where assessment is difficult) shall not be released under this policy.
13. **Minors under 18** shall not be released under this policy except at the request of parent or guardian, and only when there are no life threatening signs or symptoms.
14. A complete patient care report must be accomplished, including two sets of vital[] signs and results of the physical exam. (*Id.* at N11.1-2 (emphasis in the original).)

Patient Initiated Refusal of Treatment – This policy (Appendix 4) provides guidance for situations in which patients do not wish to be transported to a hospital. For basic and advanced providers, Section N7, I. requires the following procedures:

1. On those incidents where there is no patient, no one has any obvious

Overview of FEMS Operations and Protocols

- injury, or no one appears to be in medical distress and everyone is alert and oriented to person, place, and time, with a glasgow coma score²⁰ of 15, the provider shall make the appropriate documentation on the ambulance incident report and return promptly back to service.
2. Should the patient be stable and not suffering from any life threatening or potentially life threatening emergency condition, and the patient does not wish to be transported to the hospital, the provider shall[:]
 - A. Provide a thorough initial and detailed physical exam.
 - B. Document all findings, including two (2) sets of vital signs.
 - C. Explain the risks and possible consequences of not seeking medical care and treatment.
 - D. Encourage the patient to reconsider transport to a hospital.
 - E. Let the patient and others with the patient know that if the patient's condition should get worse they should call 9-1-1 again for emergency treatment and transportation.
 - F. Have the patient sign the refusal section of the ambulance incident report and have a disinterested third party witness the signature (when possible).
 - i. Should the patient be stable and not wish treatment or transportation to the hospital but refuses to sign the ambulance reporting form and there is no disinterested third party to affirm the refusal, the provider shall complete all necessary documentation, including the patient care report, and immediately notify a supervisor of the situation before leaving the patient and await direction of the supervisor.
 - ii. Should the patient have a life threatening or potentially life threatening emergency and does not wish transportation to the hospital after the provider has explained the possible risks and consequences (including the possibility of death) to the patient, the provider shall notify a supervisor and contact Medical Control to speak with an Emergency Room Physician. Explain the situation to the doctor and have the doctor speak with the patient. If the patient still chooses not to go to the hospital the crew will advise the supervisor of the situation and await direction, documenting all findings.
- . . .
3. All providers should forward copies of the patient care report to the CQI office prior to the conclusion of the shift. (*Id.* at N7.1-2.)

²⁰ Scale that assesses the response to stimuli in patients with head injuries or other neurological deficits. The areas of assessment are eye-opening, motor response, and verbal response.

The Note Well area for this subsection states: “All providers are reminded that all patients, especially refusals, require complete documentation of the incident on the patient care form.” *Id.* at N7.2 At the end of the section, there is another Note Well reminder, which provides: “**When In Doubt, Request a Metropolitan Police Officer, a Supervisor and/or Contact Medical Control.**” (Emphasis in the original.)

Patient Care Reports²¹

Documentation of all FEMS calls is required. An electronic patient care report known as an ePCR is documented on a computer called a Toughbook, which uses an electronic program upon which all data are transcribed for each FEMS call. Pursuant to SO-2007-53 (eff. Jul. 17, 2007), after a user is authorized to use the Toughbook, the user may not use the paper form, the FEMS Form 151 (151), unless the Toughbook is broken or otherwise unavailable. FEMS GO-2006-14, Article XXIV, Sec. 6(1) requires that “[a]ll equipment and supply levels will be thoroughly checked at the beginning of each shift, and maintained at acceptable levels and ready for immediate use throughout the day.” According to SO-2007-53, when a Toughbook fails to operate or requires repair, a series of steps are to be taken including: contacting the technical support hotline; calling a supervisor; or contacting the FEMS staff member assigned to monitor, maintain, and distribute Toughbooks.

Prior to March 2010, in instances when an FEMS fire truck arrived at a scene and patient care was provided before an ambulance arrived, the FF/EMTs on the fire truck were required to complete a “1st Responder Report – Form 902 EMS” (902) to communicate their findings to the FEMS responders in the ambulance, who might then transport the patient. The 902 was a two-page form with the following sections:

- | | |
|---------|---|
| Page 1: | Transport Unit Arrival (Est.)
Patient Position
Airway and Breathing
Circulation
Disability – Neurological
Vitals (two sections)
Patient History
Narrative
Disposition |
| Page 2: | Release When Patient Refuses Service Against Medical Advice
Spanish Release
Narrative (continued from first page) |

The form would then be given to the ACIC on the ambulance, who would then give it to a staff member at the medical facility to which the patient was transported. SO-2006-53 further instructed, “You are required to complete the form only for those incidents where patient contact has been established, *including all patients refusing services.*” (Emphasis in original.) The form was intended to “facilitate information gathering” for transport crews and provide “[m]edical / legal documentation of providers’ discoveries, actions, assessments, and treatments,

²¹ Reporting system in use at the time of the incident reported herein

Overview of FEMS Operations and Protocols

prior to transport (or when services were refused).” *Id.* Company officers (COs) were required to ensure that blank forms were stored on their apparatus.

**REVIEW OF EVENTS:
DECEMBER 2 AND DECEMBER 3, 2008**

Review of Events

Events of December 2, 2008

Persons at the Scene

- Patient:** 39-year-old male
- FEMS #1:** Firefighter/EMT-Basic; FEMS employee since 2003; assigned to A-30
- FEMS #2:** Firefighter/EMT-Basic; FEMS employee since 2007; assigned to A-30
- FEMS #3:** Firefighter/EMT-Paramedic; FEMS employee since 1991; assigned to PEC-30
- FEMS #4:** Firefighter/EMT-Basic; FEMS employee since 1996; CO, assigned to PEC-30
- FEMS #5:** Firefighter/EMT-Basic; probationary employee, 2008; assigned to PEC-30
- FEMS #6:** Firefighter/EMT-Basic; FEMS employee since 2002; assigned to PEC-30
- FEMS #7:** Firefighter/EMT-(Unknown); FEMS employee since 2000; assigned to PEC-30; did not enter residence
- Witness #1:** The Patient's mother
- Witness #2:** The Patient's brother
- Witness #3:** Family friend

In an effort to understand the events of December 2 and December 3, 2008, the OIG team conducted an exhaustive review of multiple types of information. OUC's event chronologies recorded precise data such as the times of the 911 call for assistance and the dispatch and arrival of FEMS vehicles/responders. A hardcopy of the FEMS ePCR created that night provided limited insight. Some information presented in FEMS's operational review, such as details pertaining to the times of and data provided by FEMS employees' use of a Lifepak cardiac monitor, was clearly documented, assumed accurate, and, therefore, incorporated into this review. The OIG's primary source of information, however, was in-person interviews conducted by the OIG team with FEMS employees, the Patient's relatives, and the family's friend, each of whom had a somewhat unique recollection of the incident. In many regards, interviewees' recollections did not vary significantly. In those areas where their accounts were corroborated, the OIG team accepted the information as an accurate depiction of events. In other areas, interviewees' recollections of what they saw and heard that night clearly differed. These areas of disagreement are highlighted in a number of places in this report, including the source of information as well as the specific, relevant contradictions in witness accounts and event documentation.

911 Call for Assistance

On the night of December 2, 2008, Witness #1 was awakened by the sound of her son, the Patient, calling out in distress and instructing her to dial "911." Witness #1 called 911 and reported to OUC that her son was complaining of chest pain and shortness of breath.

Review of Events

OUC Response

According to the OUC Event Chronology (Event Number F080156515), Witness #1 called 911 at 11:40 p.m., identified herself, and described her son's condition, which the call taker entered into the CAD²² system. Other entries note:

- At 11:42 p.m., units E30P (PEC-30) and A-30 were dispatched;
- At 11:43 p.m., A-30 was en route;
- At 11:44 p.m., E30P radioed to report it was en route.

FEMS Response

Arrival and Patient Assessment

The Event Chronology shows that at approximately 11:46 p.m. (within less than a minute of each other) A-30 and then PEC-30 arrived at the Patient's residence. FEMS #1 and FEMS #2 took equipment from the ambulance and went to the door. FEMS #1 and FEMS #2 entered the home and found the Patient lying on his back on the floor. According to FEMS #2, the Patient was not "exhibiting any signs of severe respiratory distress;" "he looked okay;" and was "just complaining of some pain." Several FEMS responders confirmed that the Patient was experiencing pain in his chest and was having trouble breathing. FEMS #2 helped the Patient sit up and assessed his appearance and breathing. FEMS #2 helped the Patient to his feet, began to obtain a SAMPLE history,²³ and walked him to a chair. When asked by the OIG team whether he obtained a family health history, FEMS #2 said that the Patient did not mention that he had a cardiac condition. FEMS #2 could not remember if he asked questions to determine whether any the Patient's family members had a history of cardiac arrest. FEMS #2, according to FEMS interview notes, said the Patient reported his pain intensity on a 10-point scale.²⁴

Around this time, four of the five FEMS employees who rode to the scene on PEC-30 entered the house. FEMS #2 said he gave FEMS #3 a "brief rundown" of the Patient's SAMPLE history. FEMS #3, a FF/EMT-Paramedic and therefore the responder on the scene with the highest level of EMS training/certification, took over patient assessment and care from FEMS #2, an EMT-Basic. According to FEMS #3, the Patient was reclining in the chair, with a grimace on his face, and "looked to be agitated," which FEMS #3 defined as "like something was bothering him," and "in discomfort."²⁵

²² Computer Assisted Dispatch

²³ The SAMPLE History process is part of the Focused History and Physical Examination required for a responsive, medical patient pursuant to General Patient Care Protocols: Patient Care at Section IV, Page A1.4 of the *District of Columbia 2002 Adult Pre-Hospital State Medical Protocols*. SAMPLE refers to: Signs & Symptoms; Allergies; Medications; Pertinent History; Last Oral Intake; and Events Prior.

²⁴ As part of its operational review, FEMS managers interviewed FEMS #2 on December 3, 2008. When interviewed by the OIG team in May 2009, FEMS #2 was asked, "Did you ever ask the patient his pain level on a scale of one to ten?" He replied, "Not that I can recall."

²⁵ FEMS #4 and FEMS #6 remembered the Patient saying that his chest hurt, but could not recall his exact words.

Review of Events

FEMS #3 placed himself at eye level with the Patient, who was rubbing his epigastrium.²⁶ FEMS #3 began to ask the Patient about his medical history, allergies, onset of his symptoms, and recent activities. The Patient explained that earlier that day, he smoked some marijuana, played basketball, and ate a hamburger. FEMS #3 told the OIG team that he attempted “to relate” to the Patient for a moment, telling him: “Man, you know, you are in the same age group as I am. You can’t be doing all the stuff we used to be able to do when we were in our 20s. You know, all the heavy, greasy fast stuff.” FEMS #3 also asked the Patient about the source of the marijuana he said he had smoked, to determine whether there was any possibility that something had been added to it (e.g., other illicit drugs) without his knowledge, which could have been contributing to how he was feeling. Witness #3 reportedly confirmed, “it was just weed.”

FEMS #3 and/or a colleague²⁷ took the Patient’s vital signs, specifically blood pressure, heart rate, respiratory rate, and oxygen saturation, and listened to the Patient’s lungs.²⁸ FEMS #3 said he attached the Patient to the Lifepak cardiac monitor and conducted a 3-lead EKG to assess the Patient’s heart rate.²⁹ According to FEMS #3, he used the monitor not because the Patient had pointed to his epigastric area, but to assess his heart rate, which FEMS #3 stated looked within normal limits. He left the monitor on for awhile and watched the Patient’s pulse rate to see if there were abnormalities and changes in his cardiac presentation on the monitor’s screen. During an interview with the OIG team, FEMS #3 said he looked at the Patient and the monitor closely but did not print a paper cardiac monitoring, (i.e., EKG strip).³⁰ FEMS #2 told the OIG that FEMS #3 was not concerned with the EKG results.

FEMS #2 could not remember whether an EKG strip was printed, but added, “usually we do print it out.” FEMS #4 said that FEMS #3 reviewed a paper monitoring strip. And, the Office of the Attorney General provided the OIG with a copy of an EKG paper monitoring strip, attributed to device “PEC 30” and date/time stamped “02 Dec 08 23:49:18,” which apparently is the time that the Lifepak monitor was powered on. However, the “Patient ID” and “Incident” fields on the paper monitoring strip are blank.

²⁶ The epigastrium (or epigastric region) is the upper central region of the abdomen. It is the spot where the Heimlich maneuver is able to produce a rapid and forceful exhalation of breath.

²⁷ FEMS #2 said that he assisted FEMS #3 with taking vital signs. FEMS #2 also said that he took the Patient’s blood pressure manually and “hooked him up to the cardiac monitor.” FEMS #3 could not remember which responder took each vital sign.

²⁸ In medicine, oxygen saturation refers to when oxygen molecules (O₂) enter the tissues of the body. Blood is oxygenated in the lungs, where oxygen molecules travel from the air and into the blood. As a result of this oxygenation, the color of the blood changes from dark purple to red. Oxygen saturation stats, or O₂ stats, measure the percentage of hemoglobin-binding sites in the bloodstream occupied by oxygen.

²⁹ The monitor referred to was a Lifepak 12, a device that monitors and records a patient’s pulse rate, respiratory cycle, blood pressure, and cardiac activity. It can produce a 3-lead EKG when wired electrodes are attached to the patient’s arms and legs, and a 12-lead EKG when the electrodes are attached to the patient’s chest, arms, and legs. FEMS #2 told the team that while he is trained to attach the device’s monitoring leads to a patient, he did not know how to interpret the cardiac rhythms. One of the other FEMS employees in the room said that FEMS #3 (the paramedic) attached the monitoring leads to the Patient.

³⁰ It is important to note that the FEMS cardiac protocol that was in effect in December 2008 (Appendix 3) says nothing about when or how a paper EKG monitoring strip should be obtained, interpreted, or documented in a patient care report.

Review of Events

FEMS #3 determined that the Patient's vitals were within normal limits; there was nothing abnormal about his heart rate, blood pressure, and respiratory rate; and his oxygen saturation was "well within normal limits." The Patient's lungs were "absolutely clear." One of the possibilities FEMS #3 considered was acid reflux, and he recalled mentioning it as one of the illnesses they would be unable to detect. According to Witness #1, FEMS #3 said that the Patient's vitals were good, he just needed some over-the-counter Pepto-Bismol.³¹ Witness #1 went into the hall bathroom and then her master bathroom to find Pepto-Bismol. She returned several minutes later and gave her son two medicine bottle cupfuls of the medication.³²

Patient's Refusal of Offers to Transport

FEMS #5 recalled that after the Patient's vital signs were taken, he was "pretty adamant about not going to the hospital," but he was calm, not angry or yelling. Witness #2 said when responders set the Patient in the chair and were telling him he was fine, he asked the Patient if he wanted to go to the hospital, and the Patient said "Yeah; I wanna go." Later, the Patient said he thought FEMS #3 might be correct in his assessment, and he should let the Pepto-Bismol work.

During an interview with the OIG, FEMS #3 said he told the Patient that his vitals fell within normal limits and everything looked fine; and then asked him, "Do you want to go to the hospital?" The Patient said that he did not want to go, and declined transport several more times when FEMS #3 apparently said, "You sure? We are here to take you to the hospital if you want to go. Would you like to go to the hospital?" and "We have the ambulance outside. If you wanna go, it's your option. We are here to take you to the hospital." The Patient stated he would get a family member to take him if he wanted to go later, to which FEMS #3 responded that the Patient did not have to get family members to take him, he could call FEMS back. At this point, according to FEMS #3, Witness #1 said, "I think he needs to go to the hospital," and the Patient said, "Mom, I'm alright." It appears that at about this point in the conversation, the FEMS responders began to leave the house until only FEMS #3 remained. (As noted previously, Witness #1 stated that when she returned to give her son the Pepto-Bismol, only FEMS #3 was still in the house.) FEMS #3 exited the house, and at 11:58 p.m. (12 minutes after arriving), PEC-30 personnel electronically marked themselves as available for service. FEMS #2 and his partner on the ambulance remained on the scene to document the call.

FEMS #3 told the OIG team that when a patient makes a decision not to be transported, the protocol or procedure that must be followed "depends on the patient." FEMS #3 described the Patient as alert and lucid; oriented to person, place, and time; and able to answer all questions and follow directions. Although the Patient said he smoked marijuana earlier in the day, FEMS #3 did not consider him in an altered mental state, and he did not doubt the Patient's ability to make an informed decision about being transported. FEMS #3 said that he did not form a judgment as to whether it was necessary for the Patient to go to a hospital because he is not the

³¹ When interviewed by the OIG, FEMS #3 did not recall mentioning Pepto-Bismol. Pepto-Bismol is used to treat minor digestive system upset. Its active ingredient is bismuth subsalicylate. The primary symptoms aided by Pepto-Bismol are nausea, heartburn, indigestion, diarrhea, and other temporary discomforts of the stomach and gastrointestinal tract.

³² Witness #1 said that when she returned with the medicine, FEMS #3 was the only FEMS responder still in the house. FEMS #3 told the OIG he was not present when the Patient's mother gave him the medication.

Review of Events

one who determines the necessity. FEMS #3 said at no time did he say that there was no need for the Patient to go to the hospital. According to him, the message he conveyed was, “We’ll take you to the hospital even though your vitals fall within normal limits.”

Documentation of Responders’ Actions

FEMS #2, the FF/EMT-Basic who first assisted the Patient and handed off patient care and assessment to FEMS #3, and the other FEMS responders left the house after advising the Patient to call 911 again if his symptoms persisted or worsened or if he changed his mind. FEMS #4, the CO on PEC-30, instructed FEMS #3 to complete the ePCR on the Toughbook and obtain the patient’s signature. FEMS #4, in his OIG interview, said: “I wanted to make sure we had a refusal [the patient’s signature to acknowledge refusal of transport.] That’s what we’re supposed to do on every run.” As FEMS #3 told the OIG team, however:

I didn’t have my Toughbook – my ePCR, I didn’t have that. It was being charged at the firehouse. I was having some problems with it earlier. And, we didn’t have any 902s, the documentation forms in the firehouse. So, I instructed the ambulance, I said, “Look, go ahead and get the signed release and that will be that.”³³

FEMS #2 retrieved a Toughbook from the ambulance, and went back inside after FEMS #3 exited the house. FEMS #2 spoke to the Patient, who was still sitting in the chair. FEMS #2 told the Patient that by signing the Toughbook, the Patient was refusing treatment and transport to the hospital, but that if the symptoms persisted or worsened, or if he changed his mind, he should call 911 again. The Patient signed the Toughbook with the stylus.³⁴ FEMS #2 said he offered again to transport the Patient to a hospital, and advised the Patient’s family that if they wanted to, they could take him to the hospital later by car. FEMS #2 said he told the Patient the risk of not going to the hospital but did not explain the risks to the Patient’s family.

FEMS #2 went outside and while sitting in the ambulance, worked on the Toughbook to complete the ePCR. FEMS #2 entered the complaint and the time of onset of the Patient’s pain. FEMS #2 told the team that his entries indicated that the Patient suddenly started having pain, which was still present when FEMS responders left, meaning the “complaint was unresolved. It was still going on.” The quality of the Patient’s pain was entered. FEMS #2 said he took two sets of vital signs as required by the “Patient Initiated Refusal of Treatment” protocol, but only recorded one in the ePCR because they were the same both times and did not concern him. FEMS #2 admitted to the team that he did not pay attention to all of the questions that FEMS #3 asked the Patient, nor did he discuss FEMS #3’s findings with him before completing the ePCR. FEMS #1, the more senior of the two ambulance crew members, signed the ePCR in the ambulance. He admitted to the OIG team that “the documentation could have been better.”

³³ During a December 3, 2008, interview with FEMS managers, FEMS #3 said: “We have problems with the Toughbook. We only have one charger. It’s not going through all the prompts. When I first discovered – I notified help desk. I don’t use the Toughbook unless I transport.” As noted previously in this report, no unit should be without a Toughbook and there are procedures in place to have one replaced.

³⁴ When OIG interviewers asked him to describe what the Patient signed, Witness #3 said it was a piece of paper on a clipboard.

Review of Events

FEMS #3, the EMT-Paramedic on PEC-30, said that he and FEMS #2 (an EMT-Basic on A-30) never coordinated or communicated regarding how the specifics of the call would be documented. FEMS #3 told the OIG that he did not know how the vitals were documented, and did not know if they were written down or were “just remembered.” FEMS #3 stated that he did not document the patient care and vital signs. He did not document the EKG because he “didn’t find anything abnormal.” He acknowledged that he is required to document patient care he provides, but did not in this instance because “all we did was assess him.” He admitted, however, that he “should have documented it.”

Events of December 3, 2008

At 6:35 a.m., OUC answered a 911 call regarding the Patient that was placed from the same Washington, D.C. residence. Less than 2 minutes later, A-30 and PEC-30 were enroute, and arrived at approximately 6:41 a.m.³⁵ According to FEMS interview notes, employees on PEC-30 entered the house and found the Patient lying on the floor. A FF/EMT checked the Patient for responsiveness. He and another FF/EMT from PEC-30 used the cardiac monitor to confirm that the Patient had no pulse and printed an EKG monitoring strip at 6:44 a.m. that confirmed an asystolic condition.

An EMS supervisor arrived on the scene at 6:46 a.m. and observed the Patient and the EKG strip that confirmed he was asystolic. Witness #2 and Witness #3 told the EMS supervisor that a fire truck had been at the house around 11:30 p.m. the night before, so the supervisor instructed the FF/EMT to “pull the archives,” i.e., retrieve information pertaining to the previous call from the Lifepak monitor. The FF/EMT noted a call at “2300-something” and attempted to print a “summary strip.” Reportedly, only half of the strip printed before the monitor ran out of paper. The FF/EMT handed the print-out to the FEMS supervisor.

PEC-30 placed itself back in service at 6:57 a.m. and returned to the firehouse. At 7:12 a.m., A-30 indicated electronically that it was available for service. Around that same time, the EMS supervisor left the Patient’s residence and drove to Engine Company 30’s firehouse, where he and the FF/EMT put a new role of EKG paper into the Lifepak and printed one, “3 to 4 feet long” code summary pertaining to the previous night’s call.

The EMS supervisor told FEMS interviewers that “at [the Deputy Chief of EMS Operations’s] office we couldn’t get A-30’s ePCR – it was caught up in the Toughbook. [We] had to go out of service... [performing investigative activities] until approximately 1300 hours, going back and forth driving and calling.”

³⁵ None of the employees from Engine Company 30 who responded to the house on December 2 responded to the house on the morning of December 3.

Review of Events

Issues and Findings

Issues and Findings

Despite a reasonably clear set of FEMS protocols and policies and procedures in place, the OIG team found numerous operational deficiencies and significant knowledge gaps among the emergency responders involved in this event.

1. The responders did not know or did not follow numerous FEMS protocols, policies, and procedures relevant to this event.

- FEMS responders did not follow policy for assigning the role of Ambulance Crewmember in Charge (ACIC). FEMS #1 and FEMS #2, who were EMT-Bs, both stated they were the Ambulance Crewmember Assistant (ACA). FEMS #1 stated that as long as responders' training was the same, it did not matter who was ACIC or ACA. FEMS GO-2006-14 required that when both crewmembers have equal certifications, the member possessing the greatest seniority shall be designated the ACIC. The Company Officer (CO) was responsible for assigning these roles at the company line up held at the beginning of the shift.
- FEMS #2 apparently did not know that both the ambulance responders and the EMT-Paramedic on PEC-30 were required to document details of the service provided on the Toughbook, in accordance with SO-2007-53.
- FEMS #4, the CO on PEC-30, did not think that he was required to fill out Form 902EMS. He told the OIG team, "The instructions say it is done on every incident. I don't know what the purpose would be of filling it out if we got there after the [ambulance.] I guess it is a backup of documentation."³⁶
- FEMS #4, the CO, told the OIG team that he had never read the Patient Release and Patient Refusal policies before, and did not know the difference between the two.
- The responders did not comply with the "Patient Released on the Scene" protocol: (1) there is no evidence that they determined if the Patient's complaints were of "new onset;" (2) there is no evidence that they determined that a clearly articulated follow-up plan was in place; (3) only one set of vital signs was recorded; (4) they did not contact a supervisor for concurrence on a follow-up plan; and (5) a patient care report was not completed.

³⁶ The OIG team was unable to determine whether the CO should have completed a Form 902 or 151 for the December 2, 2008, response. A draft Form 902B was implemented in June 2006 and FEMS personnel were informed that while the final version of the form would contain a section that could be used to document "patient refusals," in the interim, they should continue to use the 151 to document such releases. A September 2006 Special Order introduced a new version of the form, that instructed providers who arrived before a transport unit to use it to document incidents where patient contact has been established, "*including all patients refusing services.*" In July 2007, FEMS responders were ordered to begin using the Toughbook and ePCR to document patient contacts including non-transports, and use the paper PCR Form 151 only when "technical failures" prevent their use of the Toughbook. FEMS #3 said that he had neither a Toughbook nor any 902s to document his actions, but it is unclear to the OIG which of the two paper forms, the 902 or the 151, should have been used given the absence of a Toughbook on PEC-30.

2. FEMS responders failed to implement the chest pain protocol despite indications that the Patient was having chest pain.

- According to several FEMS responders interviewed, the Patient was experiencing chest pain. Despite this information, FEMS responders did not implement FEMS protocol for “Chest Pain (Suspected MI/Angina)” as follows:
 - The chest pain protocol requires responders at all levels to provide 100% oxygen and establish an IV of Normal Saline, neither of which was done.
 - For chest pain appearing to be cardiac in nature, the policy calls for administering baby aspirin. This was not done.
 - For chest pain of a cardiac nature when systolic blood pressure is above 110, the policy requires administration of nitroglycerin. Even though the Patient’s systolic blood pressure was recorded in the ePCR as above the 110 threshold, there was no attempt to administer nitroglycerin or to ascertain if he had the drug in his home.
 - FEMS #2 documented that the Patient’s pain was still present when FEMS responders left the residence. According to the chest pain protocol, if chest pain persists, the responders should obtain a 12-lead EKG, apply nitroglycerin paste, reassess the patient, and transport the patient to the nearest facility. None of these actions were taken for the Patient.

3. FEMS cardiac protocols that were in effect in December 2008 provided virtually no guidance regarding the interpretation and documentation of patient information obtained through the use of the Lifepak 12 monitor. A protocol introduced in April 2010 offers no instruction on the use and documentation of paper EKG monitoring strips.

- On page B8.1, the “Chest Pain (Suspected MI/Angina)” protocol states that advanced life support providers shall “1. Attach EKG monitor and interpret rhythm. 2. Consider obtaining a 12 lead EKG if possible.” There is no instruction regarding whether the provider should use the monitor’s screen and/or a paper EKG strip to view and interpret information, nor is there any discussion of specific interpretations and/or information that should prompt the provider to consider a 12-lead EKG. The protocol contains no instruction regarding how the provider’s interpretation of a cardiac rhythm should be documented in an ePCR; whether/when a paper EKG monitoring strip should be printed at the scene of a response; and how such a strip, if one is printed, should be incorporated into the patient care record.
- The following fields on the Lifepak monitor “critical event record” pertaining to the December 2, 2008, response are blank: Name, Patient ID, Incident, Age, Sex, and Comments. The only information that links this event record are the time stamp and the “device” identifier “PEC 30.”
- In April 2010, FEMS implemented a new cardiac management protocol that pertains specifically to the use of a 12-lead EKG (Appendix 5). Step 10 of the procedure

Issues and Findings

states: “Document the procedure, time, and interpretation on the patient care report (PCR).” While step 9 of the protocol instructs providers to “transmit the EKG to an interventional cardiology facility if possible,” the protocol is silent on the acquisition, documentation, and preservation of paper EKG strips, steps that the OIG believes could ultimately enhance the quality of patient care by strengthening FEMS’s ability to regularly review and assess the performance of its EMS providers and provide targeted refresher training.

4. ***It appears that the responders did not communicate sufficiently with each other so that all relevant information was known and available to support the decisions made by FEMS #3, the EMT-Paramedic.***

- FEMS #2, who was assisting FEMS #3 in the assessment of the Patient, reported the Patient’s pain level on a scale of 1-to-10. However, FEMS #3, who was in charge of the assessment, stated that he was unaware of the Patient’s pain or that it was quantified as a specific level.
- FEMS #2 and FEMS #3 never discussed their patient assessment findings with each other.
- FEMS #2 admitted to the team that he did not pay attention to all of the questions that FEMS #3 asked the Patient after he yielded to FEMS #3’s role as lead provider; yet, he said he relied on information elicited by FEMS #3 in order to complete the ePCR.

5. ***The responders and FEMS did not sufficiently document and maintain standard, required reports.***

- FEMS #3 stated that his Toughbook was broken and the fire truck had no 902s; therefore, he did not complete any documentation for the Patient call. This means that prior to going on duty, FEMS #3 failed to secure a replacement Toughbook and ensure that 902s would be available for documentation in the event a Toughbook was not. In addition, it does not appear that FEMS #3 attempted to acquire a 902 once at the scene in order to document his actions on the call. Consequently, the Patient’s vital signs, patient assessment information, patient history, and interactions with the Patient’s family were not recorded by FEMS #3, who was primarily responsible for documenting this information.
- FEMS #2 completed the ePCR in the Toughbook, but omitted numerous fields of fundamental information. The patient name is entered only as “[family surname].” No first name is entered; fields for sex, date of birth, age, and weight are blank. The dispatch time appears as “23:28 12/03/2008;” yet, OUC dispatched A-30 at 23:42 on December 2, 2008. The ePCR contains insufficient information about the Patient’s condition: no past medical history; no family medical history; nothing about allergies, medications, or pre-existing conditions; and no information regarding the assessment, treatment, care, or recommendations. For the ePCR entry “Findings,” there is only a one-word description, with no explanation. Furthermore, there is no

Issues and Findings

mention that FEMS #3 attached the patient to the Lifepak 12 monitor, conducted a 3-lead EKG, and interpreted the information presented on the monitor. A paper EKG strip was printed on the scene, but that action is not documented in the ePCR.

- FEMS #2 stated that even though two sets of vitals were performed, he recorded only one. He stated that he knew there was a requirement to document both sets, but said he did not do so because “they didn’t concern me, really.” He stated the two sets were the same and “there wasn’t really any change.”

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Additional Language May Improve Transport Protocol

The December 2, 2008, incident highlights an important facet of patient assessment and care that warrants further scrutiny, clarification, and standardization by FEMS leadership: what responders say to patients regarding transport to the hospital. FEMS protocols do not instruct responders to *offer* transport or *ask* patients if they want to go to the hospital as was done in the Patient's case. The transport decision cited in the protocols is not about *whether* to transport but *where* to transport. In addition, when a patient refuses transport to a hospital, the protocols instruct responders, "Encourage the patient to reconsider transport to a hospital." This appears to mean that responders should attempt to *convince* patients resisting transport to change their minds and be transported to the hospital. The emphasis in the transport protocols indicates a high expectation or possibly even an assumption by FEMS that an emergency medical services call will likely result in a patient being transported to the hospital. However, the protocols suggest no specific language for responders to use, either to initiate transport of a patient or to "encourage" patients who are resisting or refusing transport to change their minds.

Consequently, after a medical assessment has been done and after all other factors about the patient's condition have been evaluated,³⁷ an example of a clear, declarative statement made by responders to a patient whose condition is questionable or ambiguous might be: "Mr. Jones, we are ready [or "We are going to. . ."] to transport you to the hospital." And, after such a statement, if the patient indicates an unwillingness to be transported, responders should follow the existing FEMS protocol and emphasize their inability to provide a more thorough and conclusive evaluation or to make a diagnosis while at the scene, and strongly encourage him to consent to transport to a hospital for a complete check-up by physicians for his own well-being and to assuage the concerns of any loved ones. In the Patient's case, however, as reflected in their interviews, FEMS responders gave no expressions of encouragement to the patient to allow transport to a hospital for a more thorough evaluation. In fact, their statements, as shown below, reflect (in some respects) a detached attitude toward the Patient's refusal of transport, as they simply *offered* to take him *if* he wanted to go:

- "[T]he patient was offered transport to the hospital multiple times...."
- "The patient was advised that we would transport him to the hospital if he desired to be checked out."
- "He asked, "Do you think I need to go?" That's up to you; if you want to go we will take you."
- "Then, he made the decision not to go even though we asked him on multiple occasions."
- "[Patient] refuses transport after multiple offers."
- "We've got no problem taking you to the hospital."
- "We offered more than once to take the patient to the hospital."

³⁷ For example, the responders found the Patient lying on the floor and had to help him to a chair, but apparently never asked what caused him to fall or lie down on the floor.

Conclusions and Recommendations

- “[FEMS #3] asked him do you want to go to the hospital and the patient said ‘no.’ I know [FEMS #3] ask[ed] him about 4 times. The mother asked why is he shaking and [FEMS #3] said probably because he is nervous.”
- “All Fire & EMS personnel on the scene...report that the patient was asked multiple times if he wished to go to the hospital, and he did not want to do so.”

Given that the first FEMS responders found the Patient lying on the floor, an indication that he may have experienced something more serious than what was later described as simple acid reflux, their actions would have been more in line with the protocols had they actually “encouraged” and attempted to persuade the Patient to consent to transport, rather than make mere offers of transport and statements, such as “That’s up to you.”

Responders Exhibited Operational Deficiencies

According to statements made by responders during interviews, there was significant deviation from and lack of awareness of fundamental procedures detailed in the FEMS protocols.

Unilateral transfer of accountability. The FF/EMT-Basic who drove Ambulance 30 on the night of December 2, 2008, was the more senior of the two ambulance crew members, and by FEMS policy, should have been the Ambulance Crewmember in Charge (ACIC). Yet, he described his role that night as Ambulance Crewmember Assistant because he was driving, and stated that in general the ambulance crewmember who completed the patient care report was considered the ACIC. When asked how those two roles are determined, he told the OIG: “Sometimes we switch up. Some people want to be ACIC and do the reports. Some people didn’t.” Furthermore, the CO of Engine Company 30 should have assigned these roles at the start of the shift and documented them in the company journal.

Lack of operational coherence. The FF/EMT-Basic on A-30 who assisted the Patient from the floor to a chair began to take a SAMPLE history, at which point the Paramedic from PEC-30 entered the house. As required by FEMS policy, the Paramedic took over as lead care provider after a brief “rundown” of the information collected by the FF/EMT-Basic, who said to the OIG team, “At this point, I wasn’t in charge of the call. I took a passive role.... I wasn’t paying attention to all the questions [the Paramedic] was asking.” Yet, the same FF/EMT-Basic completed the only ePCR pertaining to this call and gave it to his partner, who signed it without reviewing it. As the partner noted to the OIG team, “the documentation could have been better.” Also, the CO on PEC-30 failed to ensure that the Paramedic completed his own ePCR.

Recommendations

1. That FEMS amend its protocol on “Patient Initiated Refusal of Treatment” to include explicit guidance on how FEMS responders should communicate to patients: (1) FEMS leadership’s philosophy and expectations regarding patient transport; and (2) that transport to a hospital is not an “offer” but rather the action FEMS is expecting and prepared to take to ensure that the patient receives a more thorough medical assessment than can be provided in the field.

Conclusions and Recommendations

2. That FEMS develop a means of providing each patient, family, or caregiver in a no-transport event with a document explaining the details related to the on-scene care and non-transport decision. This information should include the reason for the call to FEMS; the physical assessment and findings; recommendations for follow up; risks and consequences of non-transport; and procedures to follow if further FEMS involvement is required.
3. That FEMS revise its April 2010 “Chest Pain” and “12 Lead EKG” protocols to include explicit instructions regarding: (1) how providers should use the features of the cardiac monitor (e.g., the screen and capability to print a paper EKG strip) to assess a patient; and (2) the acquisition and preservation of paper EKG strips for both event documentation and quality assurance purposes.
4. That FEMS take steps to ensure that at the start of each shift, the position (e.g., ACIC or ACA), role, and reporting responsibilities of each responder are assigned and documented as required by GO-2006-18.
5. That FEMS rigidly enforce its rules regarding Toughbook training, availability, use, and maintenance, and ensure that a reliable alternative for documentation is always available and used at each emergency scene. The team also suggests considering the addition of key emergency protocols to the Toughbook (or some other device) for quick reference.
6. That FEMS implement and/or more rigidly enforce quality assurance procedures to ensure that all relevant, documented information concerning each emergency call – whether documented electronically or in hardcopy – is retained and retrievable in accordance with District laws and regulations, and FEMS regulations, policies and procedures, and national best practices.
7. That FEMS implement a policy to require every employee who either was party to or witnessed an incident or action that is under review by FEMS leadership, to submit a thorough, written statement that documents his/her observations and recollections of the event.
8. That FEMS consider reviewing, updating, and promulgating its full set of protocols on a more frequent basis. While there were several updates of particular sections, the entire set of 2002 protocols was not updated completely until 2010.

APPENDICES

Appendices

- Appendix 1** “STEMI Transport Program” and “12 Lead ECG Interpretation Class”
Memoranda (January 2009)
- Appendix 2** “Non-Transport Policy Trial,” SO-2010-06 (March 2010)
- Appendix 3** “Chest Pain (Suspected MI/Angina)” Protocol (May 2002)
- Appendix 4** “Patient Initiated Refusal of Treatment” Protocol (May 2002)
- Appendix 5** “EKG 12 Lead” Protocol (rev. June 2010)

Appendix 1

Appendices



MEMORANDUM



Series	Number	Originating Unit	Effective Date	Expiration Date
2009	12	OFC	January 15, 2009	N/A

Subject:

DC Fire and EMS STEMI Transport Program

The DC Fire and EMS Department has developed a program to improve service to patients who present with ST-elevation acute myocardial infarction (STEMI), by taking the patient to the appropriate hospital for rapid intervention in the District of Columbia.

Shortening the time interval between onset of pain and restoration of coronary blood flow (reperfusion) reduces mortality. DC Fire and EMS can contribute to a good patient outcome by timely recognition of symptoms, use of a 12-lead EKG, appropriate medications, and timely transport to a hospital that offers interventional therapy. This program will be initiated to provide that service.

The Date of Implementation will be January 18, 2009

The Medical Director James J. Augustine MD is available for questions regarding this program at any time.


Dennis L. Rubin
Fire & EMS Chief

Attachment(s):

District of Columbia Fire and EMS STEMI Transport Program
Date of Implementation January 18, 2009

Purpose

To improve service to patients who present with ST-elevation acute myocardial infarction (STEMI), by taking the patient to the appropriate hospital for rapid intervention in the District of Columbia. Shortening the time interval between onset of pain and restoration of coronary blood flow (reperfusion) reduces mortality. DC FEMS can contribute to a good patient outcome by timely recognition of symptoms, use of a 12-lead EKG, appropriate medications, and timely transport to a hospital that offers interventional therapy. This program will be initiated to provide that service.

Clinical Rationale

In the District of Columbia, DC Fire and EMS will transport patients with (likely or definite) STEMI to the nearest or most appropriate hospital with the capability to provide definitive therapy, known as "percutaneous coronary intervention" or abbreviated "PCI". Primary PCI to restore flow in occluded coronary arteries is well established as the preferred treatment strategy for patients with ST elevation myocardial infarction (STEMI). Shortening the time interval between onset of pain and restoration of infarct artery flow (reperfusion) reduces mortality. Across the United States networks have been organized to facilitate rapid transport of STEMI patients directly to PCI capable hospitals.

Clinical Elements of the STEMI care system

Complaints will result in a patient being evaluated for an acute MI

Includes patients presenting over age 21 with chest discomfort that is not traumatic in origin; and/or with shortness of breath that is not asthma; syncope; unusual and non-traumatic pain in the upper abdomen, upper flank, upper or mid-back, neck, jaw or throat; unexplained diaphoresis; palpitations, sensation of heart beating or unexplained cardiac rhythm abnormality; or patients over age 60 with complaints of profound weakness, dizziness, or altered level of consciousness. The most common prodromal symptoms identified by women also include indigestion, and unusual fatigue.

A history must be obtained for any history of cardiac diseases, diabetes and hypertension, prior abnormalities known to the patient, and whether he/she has had an EKG performed in the past.

In the medical history, it is critical to determine whether patient has used Viagra (sildenafil citrate), Cialis (tadalafil) in the last 24 hours. The use of those medicines precludes the use of nitroglycerine. The medication history also must include whether the patient is allergic to aspirin, or has taken a dose in the last 6 or so hours.

Perform a 12-lead EKG

As with any procedure that involves potential exposure of the patient and physical contact, care should be taken to explain the procedure to the patient and obtain their permission to remove or displace clothing as necessary and to apply the electrodes. When possible, perform the procedure with the assistance of a second provider so that a witness is present to verify the appropriateness of physical contact. Respect the modesty of our patients but do not delay life-saving treatment when it is needed.

Patients with a computer ECG interpretation with *ACUTE MI*** or similar language like ***POSSIBLE ACUTE MI*** will be transported directly by DC FEMS to the nearest PCI center (bypassing, if necessary, a nearer, non-PCI facility).**

The machine interpretation needs to be shared with Medical Direction, along with the past medical history. A few situations will allow the hospital to immediately activate the intervention system. These are: very high risk clinical history, absence of factors that would make another diagnosis likely, an EKG that reads out ACUTE MI, and an appropriate transport time. Negative interpretive findings of the 12-lead EKG are not definitive; always err in favor of the patient.

Some results of the 12-lead EKG need to be interpreted in light of the patient's past medical history and his/her chief complaint. The machine interpretation needs to be reviewed with the patient, so he/she can tell whether the condition found is one that has been present in the past (LBBB, WPW, Atrial Fib, etc). If so, this information would need to be passed to the ED in the report. A few patients may need to have old EKGs pulled by the hospital, so it may be necessary and beneficial in these rare situations to communicate the patient's name and another identifier to the ED staff to allow them to pull an old EKG up in the system rapidly.

Medical Protocol Treatment

The treatment will be according to DC FEMS chest pain medical protocols, and include continuous cardiac monitoring, and aspirin, oxygen, and nitroglycerine, unless there are contraindications. If Erectile Dysfunction (ED) drugs Viagra (sildenafil citrate), Cialis (tadalafil) has been used in the last 24 hours, NTG should NOT be given. There is an absolute contraindication to using NTG in these patients. When available, morphine can be given by medical protocol with input from Medical Direction.

Patient Transport Directive

A patient with a suspected or definitive MI will be managed and transported using these directives:

- Transport to George Washington University Hospital (GWU) or Washington Hospital Center (WHC) or Howard University Hospital (HUH) by transport timeliness, or geographic proximity. **At this time, the program at HUH is suspended until its cardiac catheterization lab is at full capacity after a recent fire. The suspension will be removed at that time.**
- Transport the patient to Walter Reed Army Medical Center (WRAMC) or Veterans Administration Medical Center (VAMC) if the patient is integrated in one of their health care systems, and transport to those facilities is timely.
- Transport into the ED, with the ED staff directing care from that point. If a patient is PCI-ready, the patient may be transported to the cardiac lab on our stretcher, with guidance from the hospital staff. In some situations, the patient may pause in the ED to have a portable chest xray, registration and patient ID applied, drawing of blood, and evaluation by emergency physician and nurse.

Documentation of Care

This program will have a QI system that will be initiated with the assistance of the hospitals and cardiology groups. The input elements required from DC FEMS personnel are in the ePCR program. These elements can be found under "Impression" then "STEMI" in the SafetyPAD Reporting tool.

Important elements for documentation include:

- Time of onset of symptoms
- Types of symptoms (pain, short of breath, diaphoresis, etc)
- Time of EMS activation
- On scene time
- Time for transportation
- Medications administered pre-hospital

Performance Elements for PCI Centers that will serve the District

These Centers will provide:

- Primary PCI for all appropriate STEMI patients 24 hours/day, 365 days a year
- Primary PCI routinely with door-to-balloon times < 90 minutes and not to exceed 120 minutes for 80 percent of patients.
- Care consistent with the standards contained in the ACC/AHA Guidelines for Management of Patients with Acute Myocardial Infarctions and Guidelines for Percutaneous Coronary Intervention.
- Universal acceptance of definite and possible STEMI patients without diversions
- The PCI center participates in a data collection registry.

Rollout

This program is initiated by order of the Medical Director as of January 18, 2009. The timing of initiation of this program is based on the needs of the community as we address the needs of the population that will be in the Region for the inauguration-related activities. The program is based on existing skills and knowledge of DC FEMS providers, and involves a change in patient decision-making, communication to the patient and the hospital, and transportation to an appropriate site of care.

As with all decisions related to choice of receiving facility, providers are encouraged to contact their on-duty EMS Battalion Supervisors and/or the EMS Liaison Officers (ELOs) for guidance in the field.

This program will be supported by continuing medical education and training conducted through the Training Division in the coming months. This training will include refresher on the application of 12-lead EKG, interpretation of the 12-lead EKG, and communication of results of the 12-lead EKG.

The Medical Director is available for questions regarding this program at any time.

James J. Augustine MD
Medical Director and Assistant Fire Chief
DC Fire and EMS



MEMORANDUM



Series	Number	Originating Unit	Effective Date	Expiration Date
2009	16	TA	January 23, 2009	April 4, 2009

Subject:

12 LEAD ECG Interpretation Class

The D.C. Fire and EMS Department is committed to providing information regarding training programs to educate our pre-hospital providers in the fundamental principles of Emergency Medical Services. In order to deliver the best care possible, the Training Academy is offering a 12-Lead ECG Interpretation Refresher Continuing Education Class for all Advance Life Support Providers to highlight the new STEMI Protocol.

This **Mandatory** 12-Lead ECG Interpretation class will be held from February 14th to March 29th at the Training Academy Annex- DC General Hospital. This class will provide eight (8) hours of continuing education needed for the National Registry of Emergency Medical Technician recertification requirements.

TOPIC: 12-LEAD ECG REFRESHER
DATES: February 14th, 15th, 28th
 March 1st, 14th, 15th, 28th, 29th
TIMES: 0800 – 1600
LOCATION: D.C. Fire and EMS Training Academy Annex DC General Hospital
OTHER: CLASSES ARE MANDATORY FOR ALL EMT-INTERMEDIATES AND PARAMEDICS

HOW TO REGISTER:

Providers **must** submit the attached registration form, **along with all certifications, and training certificates*** received outside of the agency, including college courses related to NREMT requirements. All documentation must be turned in by **Friday, January 30th** to the Training Academy Annex - D.C. General Hospital, Preceptor's Office, on the 2nd floor. The office will be open Monday thru Friday between the hours of 0800 – 1600. Upon submission of registration forms, class objectives and study guide will be provided to all participants.

Each class will have a maximum of thirty-two (32) students. Therefore, providers will have an option of choosing three (3) dates that they are on "day Off" to complete the mandatory 12-LEAD ECG Refresher. DC Fire and EMS uniform is mandatory. Because of the amount of information to be covered, a working lunch format will be utilized. All students should bring their lunch; and no provision will be made to be excused for this purpose.

For more information, please contact EMT-I Melissa Peterson, EMT-I Darlene Nelson or EMT-P Keisa Hill on 202-673-7088.

SO-2009-16

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If any provider is unsure about mandatory core content needed and additional EMS related continuing education hours required for NREMT recertification, please visit www.nremt.org, click on EMS Professionals, Certified EMT Services or Recertification to download all documents pertaining to your level of certification.

We will continue to strive to promote the latest trends in pre-hospital care that broadens existing knowledge and ensures a commitment to learning.

We will continue to add and update training course information as it becomes available.

*The Training Academy is up-dating its ALS providers database.



Dennis L. Rubin
Fire & EMS Chief

Appendix 2



SPECIAL ORDER



Series	Number	Originating Unit	Effective Date	Expiration Date
2010	6	OMD	March 12, 2010	N/A

Subject:

Non-Transport Policy Trial

The following trial operational policy change will become effective at 0700 hrs on Friday, March 19, 2010 and will be utilized until further notice:

All non-transports must be approved by a supervisor prior to any unit on the scene leaving the patient and returning to service.

This policy shall apply to all calls where patient contact is established, regardless of whether the patient initiated the request for service, with the exception of field termination of resuscitation, PDOA, Mass Casualty Incidents (9 or more patients), or Comfort Care scenarios.

The following procedure shall apply:

For any call where patient contact is established and the patient is refusing transportation to the hospital, the ACIC of the transport unit and/or the officer of the first-response unit shall contact ELO-1 on Channel 0-14.

The ACIC or officer will provide the following report on each patient refusing to be transported:

1. Competency assessment (legal, mental, and situational).
2. Results of thorough patient assessment to include vital signs, EKG if applicable, blood glucose reading, etc. If unable to conduct thorough patient assessment, explain why.
3. Description of efforts taken to persuade the patient to accept transportation, including any contact with Medical Control.
4. Description of information provided to the patient informing them of the potential risks of their refusal of treatment/transport.
5. Confirmation that the patient understands and has acknowledged the risk of his/her choice to refuse.
6. Confirmation that the patient has been instructed to call 911 if symptoms persist or worsen or if any other danger signs appear.
7. Confirmation that patient, providers' signatures have been completed on the Patient Care Report. Witness signatures should be obtained whenever possible.

SO-2010-06

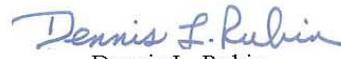
Page 2

Anytime the unit or the ELO has further questions/concerns regarding the patient's decision, a supervisor (EMS Supervisor or BFC) will be dispatched to the incident.

If a unit is unable to establish contact with the ELO on Channel 0-14 after two attempts, they may attempt to contact the ELO on channel 0-13 or any field supervisor by radio to complete the procedure described above.

If an EMS Supervisor (Captain or higher) is physically present on the scene, they may supervise completion of the procedure listed above without requiring radio guidance from the ELO, but they shall still be required to contact the ELO on channel 0-14 and report that the procedure has been completed before the units may return to service.

For further guidance on management and documentation of situations where patients refuse treatment or transportation, see the DC Fire & EMS Department 2010 Pre-Hospital Treatment Protocols.


Dennis L. Rubin
Fire & EMS Chief

Appendix 3

Adult Cardiac Emergencies: Chest Pain (Suspected MI/Angina)

I. All Provider Levels

1. Refer to the Patient Care protocol.
2. Provide 100% oxygen via NRB.
 - A. If respiratory effort is inadequate assist ventilations utilizing BVM with 100% oxygen.
3. Place the patient in position of comfort. If evidence of poor perfusion is present place the patient in shock position.
4. Initiate advanced airway management with Combi-tube if respiratory effort is inadequate.



Note Well: EMT-I and EMT-P should use ET intubation.



5. Establish an IV of Normal Saline KVO or Saline lock.

Note Well: An ALS Unit must be en route or on scene.



II. Advanced Life Support Providers

1. Attach EKG monitor and interpret rhythm.
2. Consider obtaining a 12 lead EKG if possible.

Effective Date: 1 May 2002
Revision Date: N/A

Revision Number: N/A
Page B8.1

Adult Cardiac Emergencies: Chest Pain (Suspected MI/Angina)

II. Advanced Life Support Providers (continued)

3. If chest pain appears cardiac in nature administer up to 4 Baby Aspirin (324 mg) chewed (unless hypersensitive).

A. Reassess patient.



Note Well: *The EMT can administer one 81 mg baby aspirin to the patient provided they meet the criteria outlined above.*

4. If chest pain appears cardiac in nature and systolic blood pressure is above 110 mm/Hg, administer Nitroglycerin 0.4 mg SL (tablet or spray)



Note Well: *If the patient is prescribed nitroglycerin tablets and has them available, the EMT should assist the patient in taking their nitroglycerin provided they meet the criteria outlined above.*



Note Well: *The administration of nitroglycerin is contraindicated in any patient having taken Viagra within 24-hours of ingestion*

5. If chest pain persists, 1 additional Nitroglycerin 0.4 mg SL (tablet or spray) may be administered as long as the patient's systolic blood pressure is above 110 mm/Hg. Reassess patient

Note Well: *Additional doses of Nitroglycerin 0.4 mg SL may be administered every 5 minutes, **not to exceed 3 doses without Medical Control order.** Include any nitroglycerin taken by the patient prior to arrival provided that nitroglycerin has not expired*

Effective Date: **1 May 2002**
Revision Date: **N/A**

Revision Number: **N/A**
Page **B8.2**

Adult Cardiac Emergencies: Chest Pain (Suspected MI/Angina)

II. Advanced Life Support Providers (continued)

6. If chest pain persist,
 - A. Obtain 12 lead EKG and interpretation
 - B. Apply Nitroglycerin paste, 1.0 inch, if no indication of an inferior/posterior wall MI
 - C. Reassess patient.



III. Transport Decision

1. Transport to the closest appropriate open facility



IV. The Following Options are Available by Medical Control Only

1. Additional doses of Nitroglycerin 0.4 mg SL every 5 minutes.
2. Morphine Sulfate 2 - 5 mg slow IV push to a maximum dosage of 10 mg (Reassess every 3 - 5 minutes after administration).

Appendix 4

DC Fire & EMS Patient Care Policies: Patient Initiated Refusal of Treatment

I. All Provider Levels

1. On those incidents where there is no patient, no one has any obvious injury, or no one appears to be in medical distress and everyone is alert and oriented to person, place, and time, with a glasgow coma score of 15, the provider shall make the appropriate documentation on the ambulance incident report and return promptly back to service.
2. Should the patient be stable and not suffering from any life threatening or potentially life threatening emergency condition, and the patient does not wish to be transported to the hospital, the provider shall
 - A. Provide a thorough initial and detailed physical exam.
 - B. Document all findings, including two (2) sets of vital signs.
 - C. Explain the risks and possible consequences of not seeking medical care and treatment.
 - D. Encourage the patient to reconsider transport to a hospital.
 - E. Let the patient and others with the patient know that if the patient's condition should get worse they should call 9-1-1 again for emergency treatment and transportation.
 - F. Have the patient sign the refusal section of the ambulance incident report and have a disinterested third party witness the signature (when possible).
 - i. Should the patient be stable and not wish treatment or transportation to the hospital but refuses to sign the ambulance reporting form and there is no disinterested third party to affirm the refusal, the provider shall complete all necessary documentation, including the patient care report, and immediately notify a supervisor of the situation before leaving the patient and await direction of the supervisor.

Effective Date: 1 May 2002
Revision Date: N/A

Revision Number: N/A
Page N7.1

DC Fire & EMS Patient Care Policies: Patient Initiated Refusal of Treatment

I. All Provider Levels (continued)



- ii. Should the patient have a life threatening or potentially life threatening emergency and does not wish transportation to the hospital after the provider has explained the possible risks and consequences (including the possibility of death) to the patient, the provider shall notify a supervisor and contact Medical Control to speak with an Emergency Room Physician. Explain the situation to the doctor and have the doctor speak with the patient. If the patient still chooses not to go to the hospital the crew will advise the supervisor of the situation and await direction, documenting all findings.

Note Well: *All providers are reminded that all patients, especially refusals, require complete documentation of the incident on the patient care form.*

3. All providers should forward copies of the patient care report to the CQI office prior to the conclusion of the shift.



II. Advanced Life Support Providers

1. If the patient has received advanced life support to correct the mental status of the patient, the patient is stable and has no other medical or trauma complaints or illness after a thorough initial and secondary exam with two (2) sets of vital signs and elects not to be transported to the hospital, the crew may obtain a written refusal after documenting all findings.

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Revision Date: *N/A*

Revision Number: *N/A*
Page N7.2

DC Fire & EMS Patient Care Policies: Patient Initiated Refusal of Treatment

II. Advanced Life Support Providers (continued)

2. If the patient is alert and oriented to person, place and time, has a glasgow coma score of 15, is not psychotic, is not a risk to themselves and has received a thorough initial and secondary exam, including two sets of vital signs, advance life support treatment for any other condition, and still does not wish to be transported to the after hospital after the provider has explained the possible risks and consequences (including the possibility of death) to the patient, the provider shall notify a supervisor and contact Medical Control to speak with an Emergency Room Physician. Explain the situation to the doctor and have the doctor speak with the patient. If the patient still chooses not to go to the hospital the crew will advise the supervisor of the situation and await direction, documenting all findings.

3. If the patient is alert and oriented to person, place and time, has a glasgow coma score of 15, and they choose not to receive any treatment and/or transportation to the hospital, follow the guidelines in Section II, subsection 2.



Note Well: *Should the patient be a child (less than 18 years old), and the parent or guardian is present they may refuse care and transport of the child provided the above procedures are adhered to.*



Note Well: *If a residence is the subject of more than two responses in a 24-hour period, it is recommended that the Metropolitan Police Department be requested to respond.*



Note Well: *When In Doubt, Request a Metropolitan Police Officer, a Supervisor and/or Contact Medical Control.*

Appendix 5

**District of Columbia
Fire and EMS Protocols
Cardiac Management**

**EKG
12 LEAD**

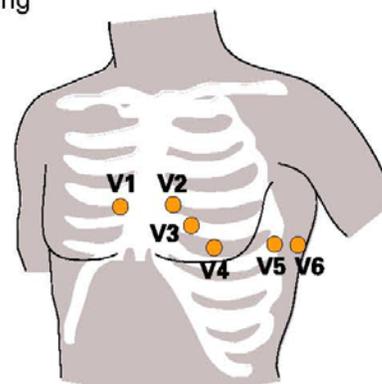
ALS

Clinical Indications:

- Suspected cardiac event.
- Suspected tricyclic overdose.
- Electrical injuries.
- Syncope.
- CHF.

Procedure:

1. Assess patient and monitor cardiac status.
2. If patient is unstable, definitive treatment is the priority. If patient is stable or stabilized after treatment, perform a 12 Lead EKG.
3. Prepare EKG monitor and connect patient cable with electrodes.
4. Expose chest and prep as necessary. Modesty of the patient should be respected.
5. Apply chest leads and extremity leads using the following landmarks:
 - RA -Right arm.
 - LA -Left arm.
 - RL -Right leg.
 - LL -Left leg.
 - V1 -4th intercostal space at right sternal border.
 - V2 -4th intercostal space at left sternal border.
 - V3 -Directly between V2 and V4.
 - V4 -5th intercostal space at left mid-clavicular line.
 - V5 -Level with V4 at left anterior axillary line.
 - V6 -Level with V5 at left mid-axillary line.
6. When performing a right sided EKG in patients with a suspected inferior wall MI with possible right ventricular involvement (RV1):
 - V4R - 5th intercostal space at right mid-clavicular line.
7. Instruct patient to remain still.
8. Press the appropriate button to acquire the 12 Lead EKG.
9. Interpret the EKG and if STEMI is suspected, transmit the EKG to an interventional cardiology facility if possible.
10. Document the procedure, time, and interpretation on the patient care report (PCR).



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Appendices

**District of Columbia
Fire and EMS Protocols
Cardiac Management**

**EKG
12 LEAD**

Wall affected	Leads	Artery(s) involved	Reciprocal changes
Anterior	V ₂ – V ₄	Left coronary artery, Left anterior descending (LAD)	II, III, AVF
Anterolateral	I, AVL, V ₃ – V ₆	Left anterior descending (LAD) and diagonal branches, circumflex and marginal branches	II, III, AVF
Anteroseptal	V ₁ – V ₄	Left anterior descending (LAD)	
Inferior	II, III, AVF	Right coronary artery (RCA)	I, AVL
Lateral	I, AVL, V ₅ , V ₆	Circumflex branch or left coronary artery	II, III, AVF
Posterior	V ₈ , V ₉	Right coronary artery (RCA) or circumflex artery	V ₁ – V ₄ ST segment depression (R > S in V ₁ and V ₂).
Right ventricular	V ₄ R	Right coronary artery (RCA)	-----

Certification Requirements:

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure. Assessment of this knowledge may be accomplished via quality assurance mechanisms, classroom demonstrations, skills stations, or other mechanisms as deemed appropriate by the Medical Director or designee.

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