Designation: F1258 – 95 (Reapproved 2022)

Standard Practice for Emergency Medical Dispatch[1]

This standard is issued under the fixed designation F1258; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the definition of responsibilities, knowledge, practices, and organizational support required to implement, perform, and effectively manage the emergency medical dispatch function.

1.2 This practice is useful for planning and evaluating the training, implementation, and organizational support to satisfy the functional needs of emergency medical dispatching.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

F1031 Practice for Training the Emergency Medical Technician (Basic)

F1381 Guide for Planning and Developing 9-1-1 Enhanced Telephone Systems (Withdrawn 2008)[3]

F1552 Practice for Training Instructor Qualification and Certification Eligibility of Emergency Medical Dispatchers

F1560 Practice for Emergency Medical Dispatch Management

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *emergency medical dispatcher (EMD)*—a trained public safety telecommunicator with additional training and specific emergency medical knowledge essential for the efficient management of emergency medical communications.

3.1.2 *emergency medical dispatching*—the reception and management of requests for emergency medical assistance.

3.1.3 *emergency medical dispatch priority reference system (EMDPRS)*—a medically approved system used by a dispatch agency to provide aid to medical emergencies that includes: systematized caller interrogation questions, systematized prearrival instructions, and protocols matching the dispatcher's evaluation of injury or illness severity with vehicle response mode and configuration.

3.1.4 *medical direction*—the management and accountability for the medical care aspects of an emergency medical dispatch (EMD) program including: the medical monitoring oversight of the training of the EMD personnel; approval and medical control of the operational emergency medical dispatch priority reference system (EMDPRS); evaluation of the medical care and prearrival instructions rendered by the EMD personnel; direct participation in the EMD system evaluation, quality assurance, and quality improvement process and mechanisms; and responsibility for the medical decisions and care rendered by the emergency medical dispatcher and emergency medical dispatch program.

3.1.5 *public safety telecommunicator*—an individual trained to communicate remotely with persons seeking emergency assistance and with agencies and individuals providing such assistance.

3.1.6 *telephone aid*—consists of "ad-libbed" telephone instructions provided by either trained or untrained dispatchers and differs from DLS-based prearrival instructions in that the instructions provided to the caller are based on the dispatcher's knowledge or previous training in a procedure or treatment without following a scripted prearrival instruction protocol. They cannot be medically preapproved since they do not exist in written form.

3.1.7 *telephone treatment sequence protocols*—specific treatment strategies designed in a conversational script format that direct the EMD step by step in giving critical prearrival

[1] This practice is under the jurisdiction of ASTM Committee F30 on Emergency Medical Services and is the direct responsibility of Subcommittee F30.04 on Communications.

Current edition approved Sept. 1, 2022. Published September 2022. Originally approved in 1990. Last previous edition approved in 2014 as F1258 – 95 (2014). DOI: 10.1520/F1258-95R22.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] The last approved version of this historical standard is referenced on www.astm.org.

instructions such as CPR, Heimlich maneuver, mouth-to-mouth breathing, and childbirth instruction.

3.1.8 *vehicle response configuration*—the specific vehicle(s) of varied types, capabilities, and numbers responding to render assistance.

3.1.9 *vehicle response mode*—the use of emergency driving techniques, such as warning lights and siren, versus a routine driving response.

4. Summary of Practice

4.1 An emergency medical dispatcher is a trained public safety telecommunicator with additional training and specific emergency medical knowledge essential for assessment of medical emergencies and limited remote treatment and apportionment of medical priorities. The EMD functions under the medical authority of an off-line medical director to receive and manage calls for emergency medical assistance through the systematic interrogation of callers, using procedures established by the off-line medical director who remains responsible for the medical quality assurance of the EMD program.

4.1.1 The EMD's role includes the ability to:

4.1.1.1 Remotely evaluate the patient or incident,

4.1.1.2 Interpret the requirement and need for emergency medical resources,

4.1.1.3 Allocate the appropriate resources,

4.1.1.4 Identify conditions requiring prearrival instructions and provide them to the caller when necessary, possible, and appropriate,

4.1.1.5 Coordinate the response of emergency medical and other public safety resources,

4.1.1.6 Provide information to the responding units regarding the emergency scene and patient, and

4.1.1.7 Record and retrieve emergency medical response records.

4.1.2 There must be continuity in the delivery of EMD care. To provide correct medical care safely and effectively, the EMD that is medically directing, evaluating, and coding must maintain direct access to the calling party and must use a medically approved emergency medical dispatch priority reference system. The person giving the medical instruction to the caller must be the same person that asks the systematic interrogation questions.

4.1.3 To accomplish the above safely and effectively, the EMD must use a medically approved EMDPRS that includes:

4.1.3.1 Systematized caller interrogation questions,

4.1.3.2 Systematized prearrival instructions, and

4.1.3.3 Protocols that determine vehicle response mode and configuration based on the EMD's evaluation of injury or illness severity.

4.2 This practice is intended to be used by agencies as a baseline for establishing a certifying emergency medical dispatch training program that includes the implementation of the emergency medical dispatch priority reference system, under medical direction, and provides a means of evaluating the EMD program.

4.3 This practice will provide a common set of expectations for training, performance, and preplanned response based on understanding of the medical condition, thorough interrogation, caller intervention, safe responses, and prearrival instructions.

4.4 This practice establishes the EMD's role and responsibilities in receiving, managing, and dispatching calls for medical assistance and related agency coordination.

4.5 An organizational structure as defined in Practice F1560 must be in place before implementing the EMD program; therefore, this practice establishes some general recommendations concerning the development of a supportive structure and program content.

4.6 Use of this practice is not intended to protect the EMD or dispatch organization from liability for negligent actions or failure to perform in accordance with established and approved medical practices and protocols.

4.7 The EMD must be certified through either state government processes or by professional medical dispatch standard-setting organizations.

4.7.1 When certification is achieved by recognition of a professional medical dispatch standard-setting organization, it shall clearly demonstrate compliance with all criteria enumerated in this practice and within Practice F1560 and Practice F1552.

5. Significance and Use

5.1 This practice is intended to promote the use of trained telecommunicators in the role of emergency medical dispatcher. It defines the basic skills and medical knowledge to permit understanding and resolution of the problems that constitute their daily routine. To use trained telecommunicators fully as functioning members of the emergency medical team, it is deemed necessary to upgrade the telecommunicators' training by the addition of the concept of emergency medical dispatch priorities.

5.2 All agencies or individuals who routinely accept calls for emergency medical assistance from the public and dispatch emergency medical personnel shall have in effect an emergency medical dispatcher program in accordance with this practice. The program shall include medical direction and oversight and an emergency medical dispatch priority reference system.

5.3 The successful use of the EMD concept depends on the medical community's awareness of the "prearrival" state of EMS affairs and their willingness to provide medical direction in dispatch.

5.4 This practice may assist in overcoming some of the misconceptions regarding emergency medical dispatching. These include the uncontrollable nature of the caller's hysteria, lack of time of the dispatcher, potential danger and liability to the EMD, lack of recognition of the benefits of dispatch prearrival instructions, and misconceptions that red lights, siren, and maximal response are always necessary.

5.5 The EMD is the member of the EMS response team with the broadest view of the entire emergency system's current status and capabilities. The EMD has immediate lifesaving

capability in converting the caller into an effective first responder. This practice recognizes the EMD's role as including:

5.5.1 Interrogation techniques,

5.5.2 Triage decisions,

5.5.3 Information transmission,

5.5.4 Telephone medical intervention, and

5.5.5 Logistics and resource coordination during the event.

5.6 For the EMD, this practice supersedes any other EMSS standards under which an individual may be qualified, such as Practice F1031. It is not the role of the EMD to generate a specific diagnosis but rather to elicit accurately a finite body of information, assign the appropriate response, and to communicate clearly among persons and units involved in the response. The protocols for inquiry, response, and resource coordination are essential and must not be modified based on an individual's possible experiences as a responder.

5.7 As an initial contact with the EMS system, the EMD is subject to questioning of actions as they relate to medical practice. This practice may be used by agencies as a recognized baseline for EMD training, practice, and organization and is intended to supplant *de facto* standards that exist in some areas. This practice will assist in developing sound EMD programs that will reduce the need and potential for legal action and provide a common set of expectations for performance.

5.8 It will bring more accurate information into the dispatch office by way of appropriate understanding of the medical condition and therefore better interrogation, caller intervention, and decision-making. It allows for preplanned responses, safer responses (fewer units responding with lights and siren), fuel and energy savings (smaller units and fewer units used when possible), and may save advanced life-support resources for true advanced life-support emergencies when a tiered-level response is available.

6. System Components

6.1 *Emergency Medical Dispatch Priority Reference System (EMDPRS):*

6.1.1 This system is a written, reproducible document in a uniform format based on medical and administrative protocols. The emergency medical dispatch priority reference system directs the EMD to complete a full, programmed interrogation. The information from the caller is paired with preset problem groups to determine the appropriate response level. It shall include the following:

6.1.1.1 A set of systematized caller interrogation (key) questions. The key questions must obtain the minimum amount of information necessary to:

(1) Adequately establish the correct level of response,

(2) Establish the need for prearrival instructions, and

(3) Provide responders with adequate patient and incident information.

6.1.2 A set of systematized coding and response protocols that include:

6.1.2.1 Protocols that predetermine vehicle response mode and configuration based on the EMD's evaluation of injury and illness severity as determined through key question interrogation. These protocols must reflect a given EMS system's varied ability to respond, ranging from single-unit squads through multiple-level (tiered) response.

6.1.2.2 An established, medically approved, quantitative coding system for quality assurance/improvement and statistical analysis.

6.1.3 A set of systematic prearrival instructions that include:

6.1.3.1 Chief complaint specific caller and EMD advise, and

6.1.3.2 Scripted prearrival instructions.

6.1.4 In addition to the EMDPRS, an emergency medical dispatch system should include:

6.1.4.1 A mass casualty plan for notification and operation in a disaster situation,

6.1.4.2 A directory of emergency response resources and information resources,

6.1.4.3 A written description of the communications system configuration for the service area, and

6.1.4.4 A record-keeping system, including report forms or a computer data management system to permit evaluation of EMD compliance with the EMDPRS, evaluation of protocol effectiveness, and timeliness of interrogation and dispatch.

7. Functions of Emergency Medical Dispatch

7.1 *Receive and Process Calls for Assistance*—The EMD must receive and record calls for emergency medical assistance from various sources. This function includes the establishment of effective communication with the person requesting assistance, using the EMDPRS to evaluate the patient or situation, provide appropriate prearrival instructions, and select the most appropriate EMS system action in response to each call.

7.2 *Dispatch and Coordinate Appropriate, Available Response Resources*—The EMD must select and dispatch the necessary EMS vehicles and personnel to the scene of an emergency in an appropriate time frame. The EMD functions in coordinating the movements of EMS vehicles en route to the scene, en route to the medical facility, and back to the base of operations. This requires that the EMD have current knowledge of the status of all EMS resources in the dispatch area and the geographic constraints that will affect the EMS response. This also requires that the EMD have dispatch-specific medical training and understands the use of systematized interrogation and response assignment protocols.

7.3 *Provide Information and Prearrival Instructions:*

7.3.1 To the caller, the EMD is the contact with the emergency response agency and must be prepared to provide emergency care instructions to callers waiting for an EMS response. These instructions should enable the caller to prevent or reduce further injury to the victim and to do as much as possible under the circumstances to intervene in any life-threatening situation that exists. These instructions should also include appropriate warnings and safety messages regarding potential dangers that can be reasonably foreseen through correct use of the EMDPRS.

7.3.2 All dispatch life-support-based instructions and information should be given directly from the EMDPRS rather than ad lib. Federal Publication NIH No. 94-3287 on Emergency

Medical Dispatching[4] categorizes ad-lib instructions as "telephone aid" which, further defined, "may only ensure that the dispatcher has attempted to provide some sort of care to the patient through the caller but does not ensure that such care is correct, standard, and medically effective or even necessary in the first place. Telephone aid, therefore, is usually considered as inappropriate and an unreliable form of dispatcher-provided medical care."

7.3.3 To the responding unit(s), the EMD must provide accurate information regarding the patient, conditions at the scene of response, other public safety unit responses, and other information regarding the situation. This information always includes the chief complaint, patient's age, status of consciousness, and status of breathing.

7.4 *Coordinate with Other Agencies and Emergency Services*—The EMD must ensure the existence and maintenance of an effective communication link between and among all public safety services (that is, fire, police, rescue, aeromedical, hazardous materials, utility, and so forth) involved in the EMS response to facilitate mutual aid and to coordinate services including such items as traffic control, fire suppression, and extrication.

7.5 *Necessary Skills of the Emergency Medical Dispatcher:*

7.5.1 Ability to read and write English proficiently and other language or communications skills necessary to function in given area,

7.5.2 Ability to speak clearly and distinctly on radio and telephone,

7.5.3 Ability to remain calm, use reasoned judgment, and communicate effectively in stressful or crisis situations,

7.5.4 Ability to use established interrogation and response assignment protocols,

7.5.5 Ability to provide prearrival instructions appropriate for the emergency situation to both the caller and responders, and

7.5.6 Ability to retain a professional attitude with the caller specifically regarding courtesy and empathy for the situation encountered.

7.5.7 *Inappropriate EMD Activities:*

7.5.7.1 Display of hostility toward or arguing with the caller,

7.5.7.2 Judgment of a situation based on past experience with the caller,

7.5.7.3 Judgment of a situation severity based on previous personal experiences,

7.5.7.4 Unreasonably refusing to dispatch available units in accordance with the approved dispatch protocol,

7.5.7.5 Premature termination of call for assistance, and

7.5.7.6 Failure to act or to dispatch in accordance with protocol.

[4] U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute. NIH Publication No. 94-3287, *Emergency Medical Dispatching: Rapid Identification and Treatment of Acute Myocardial Infarction*, July 1994.

8. Medical Dispatch Practice

8.1 The role of the EMD is to obtain specific medical information to prioritize accurately each medical response as listed in the emergency medical dispatch priority reference system (EMDPRS). Using this system, the EMD asks key questions about patient condition and incident types, determines the necessity for and gives prearrival instructions, and selects predetermined response levels based on the medical significance of the information obtained. To accomplish this, the EMD must:

8.1.1 Understand the basic philosophy of medical interrogation. Medical dispatch experts have shown that through the use of proper techniques and interrogation protocols significantly more vital information can be obtained. While it may seem the emotional, and at times, hysterical caller's behavior is random and unpredictable, there are some very predictable, generic components present in most cases. Some of these are noted in Appendix X1.

8.1.2 Understand the difference between key questions asked in medical as opposed to trauma cases:

8.1.2.1 Medical case questions are generally based on symptoms such as chest pain, breathing, level of consciousness, and so forth. The caller usually is with the victim or is personally familiar with the patient or their problem.

8.1.2.2 Trauma case questions are generally based on the type of incident rather than specific symptoms, since the caller usually is a third-party observer not directly associated with the patient. The question "How far did the patient fall?" as opposed to "What are the patient's injuries?" is more appropriate to successful, useful information gathering.

8.1.3 Understand the third-party caller limitation in regards to the difficulty of obtaining useful information when the caller is not with the patient and does not know the patient.

8.1.4 The EMD must be able to apply the following points:

8.1.4.1 The concept of the hysteria threshold and the method of attaining it, for example, repetitive persistence.

8.1.4.2 Until the hysteria threshold is broken, the EMD cannot be in control of a call.

8.1.4.3 The EMD must realize that this threshold exists and can be reached in most all cases so that they do not give up prematurely before obtaining control of the caller.

8.1.4.4 Increases in firmness or continued repetition in questioning or requests may not be successful initially until the threshold (that is different for each caller) is attained. At this point the EMD obtains control.

8.1.4.5 Handling an unpleasant, uncooperative, or hysterical caller by only obtaining the location of the incident and sending the response unit(s) is not acceptable.

8.2 *Prearrival Instructions:*

8.2.1 The objectives of giving prearrival instructions are:

8.2.1.1 To assist the caller in keeping the patient from further injury,

8.2.1.2 To enable the caller to do as much as possible to save a patient in a life-threatening situation, and

8.2.1.3 To transform a hysterical caller into a calmer rescuer who no longer feels helpless.

8.2.2 The following general instructions pertain to most callers:

8.2.2.1 Calm down,

8.2.2.2 Don't move the patient (except in situations that endanger the patient, such as fire, carbon monoxide, and so forth),

8.2.2.3 Observe the area for hazardous situations,

8.2.2.4 Observe what the patient is doing,

8.2.2.5 Identify the incident location by blinking the porch lights, opening garage door, describing house, identifying landmarks, and so forth,

8.2.2.6 Remove obstacles to the responders by locking up pets, sending children to neighbors, unlocking doors, obtaining elevators, opening gates, and so forth,

8.2.2.7 Preserve material or articles relating to the injury, and

8.2.2.8 Gather medications for responders.

8.2.3 General medical instructions commonly given to callers are as follows:

8.2.3.1 Airway management (head tilt/chin lift),

8.2.3.2 Heimlich maneuver,

8.2.3.3 Mouth-to-mouth ventilation,

8.2.3.4 Remove pillows from behind head,

8.2.3.5 CPR,

8.2.3.6 Direct-pressure hemorrhage control, and

8.2.3.7 Cool small burns in cold water.

8.2.4 The requisites of providing these instructions are as follows:

8.2.4.1 The EMD must be trained in basic life-support techniques before the provision of prearrival instructions,

8.2.4.2 Master the use of telephone treatment sequence cards, and

8.2.4.3 Understand the role of the trained versus untrained citizen at the scene of the emergency.

8.3 Roles of the EMD in emergency dispatch centers may differ such as assigned subroles:

8.3.1 *The Interrogator's Role:*

8.3.1.1 Obtain from the calling party the address or location of the emergency (first and most important),

8.3.1.2 Obtain from the calling party, or verify (in the case of E9-1-1 systems) the call-back telephone number at the calling location,

8.3.1.3 Obtain from the calling party the chief complaint,

8.3.1.4 Determine if the caller is with the patient,

8.3.1.5 Obtain the approximate age of the patient,

8.3.1.6 Determine if the patient is conscious (yes, no, or unknown),

8.3.1.7 Determine if the patient is breathing (yes, no, or unknown),

8.3.1.8 Use the EMD priority reference system to:

(1) Ask the systematized caller interrogation questions,

(2) Convey to the "dispatcher" the appropriate response assignment, and

(3) Give the calling party the listed telephone prearrival treatment instructions.

8.3.2 *The Dispatcher's Role:*

8.3.2.1 Alert the appropriate response unit(s) as determined by the interrogator's use of the EMD priority reference system,

8.3.2.2 Relay to responding unit(s):

(1) Location of incident,

(2) Age and sex of patient,

(3) Chief complaint,

(4) Status of consciousness,

(5) Status of breathing,

(6) Other pertinent information, and

(7) Number of victims (if applicable).

8.3.3 *Other Functions:*

8.3.3.1 Assist the emergency response unit(s) in finding the address or patient location, or both,

8.3.3.2 Relay information between various units and responding agencies,

8.3.3.3 Monitor and relay information between units, especially those that do not have compatible radio frequencies,

8.3.3.4 Understand the immediate transport concept based on the nearness of the scene to advanced life support or the hospital with regard to the criticality of the patient, and

8.3.3.5 Understand how to assist in coordinating a rendezvous.

8.3.4 Solitary EMDs must perform all functions in an integrated fashion.

9. Organizational Support

9.1 The organizational support for the EMD function must consist minimally of the following:

9.1.1 Provision of EMS physician medical direction regardless of whether the EMD function is carried on in a freestanding EMS communications center or a consolidated public-safety answering point or communications center.

9.1.2 Provision of prospective, concurrent, and retrospective supervision of the EMD function. Such supervision shall consist of:

9.1.2.1 Reoccurring continuing education,

9.1.2.2 A real-time supervisor having medical dispatch experience and expertise,

9.1.2.3 A quality assurance program with random case audit including logging tape reviews on a regular scheduled basis, and

9.1.2.4 A risk management program including problem review.

9.1.3 Provision of written procedures and protocols including:

9.1.3.1 A clear formal chain of command for establishment of policies, procedures, and resolution of grievances related to emergency medical dispatch,

9.1.3.2 Administrative procedures for real-time resource allocation in alternative response assignments,

9.1.3.3 An emergency medical dispatch priority reference system, and

9.1.3.4 Other local resource materials covering specific situations affecting the EMD, such as disaster plans, hospital resources, specialty facilities, and so forth.

9.1.4 Provision of complete written and recorded documentation of EMD activity and retention of these records.

9.2 Provision of initial EMD training and certification.

9.3 Probationary on-the-job training.