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Standard Guide for Structures and Responsibilities of Emergency Medical Services Systems Organizations[1]

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1. Scope

1.1 This guide establishes optimum guidelines for the structures and responsibilities that will facilitate development, delivery, and assessment of Emergency Medical Services (EMS) on state, regional, and local levels.

1.1.1 *State Level*—At the state level, this guide sets forth a basic structure for the organization and management of a state emergency medical services program and outlines the responsibilities of the state in the planning, development, coordination, and regulation of emergency medical services throughout the state.

1.1.2 *Regional Level*—At the regional level, this guide addresses the planning, development, and coordination of a functional and comprehensive EMS system which consists of all personnel, equipment, and facilities necessary for the response to the emergently ill or injured patient, according to national and state lead agency standards.

1.1.3 *Local Level*—At the local level, this guide sets forth a basic structure for the organization and management of a local EMS system and outlines the responsibilities that a local EMS should assume in the planning, development, implementation, and evaluating of its EMS system.

2. Significance and Use

2.1 This guide is not meant to mandate a specific structure or responsibility at the various levels but rather to suggest a means or method that will allow for the creation or further development of a state, regional, or local EMS system.

2.2 This guide will assist state, regional, or local organizations in establishing EMS systems or refining existing EMS systems.

3. Descriptions of EMS Systems

3.1 *State EMS System*—A state EMS system includes all of the components of all EMS systems within the state, however, particular emphasis is placed upon the following:

3.1.1 Legislation establishing authority and responsibility for EMS systems.

3.1.2 Development and enforcement of minimum regulations and standards.

3.1.3 Development and dissemination of a statewide plan and goals for EMS systems.

3.1.4 Provision of technical assistance.

3.1.5 Funds for the development, maintenance, and enhancement of EMS systems.

3.1.6 Supportive components, including training, communications systems, record keeping and evaluation, public education, and acute care center designation.

3.1.7 Overall coordination of EMS programs within the state and in concert with other states or federal authorities as needed.

3.2 *Regional EMS System*—A recommended method of structuring substate EMS systems to provide for EMS planning, development, and coordination is to delineate specific geographic areas within which one organization is designated as responsible for the arrangement of personnel, facilities, and equipment for the effective, coordinated, and expeditious delivery of health care services in a region (3.2.1) under emergency conditions occurring as a result of the patient's condition or because of accidents, natural disasters, or similar situations.

3.2.1 *Region*—To implement a regional EMS system, the state lead agency will identify the geographic or demographic area that is a natural catchment area for EMS provision for most, if not all, patients in the designated area. Since this cannot be a perfect definition from an EMS delivery point of view, administrative and coordinating efficiency considerations will have to be made in establishing boundaries. The state lead agency should determine and define the substate structure for planning, coordination, and provision of emergency medical services. When a regional EMS system lies near a state border such that appropriate and efficient care of patients will require cooperation of prehospital system in another state and medical centers in another state, the state lead agency will develop a plan with the adjoining state lead agency. This plan must provide for the triage and transfer of patients across the state border under supervision of the REMSO.

3.2.2 *Regional EMS Organization (REMSO)*—A REMSO is a staffed organization responsible and accountable to the state

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EMS lead agency for coordinating the system in a region including system operations, and organization and coordination of resources. A REMSO should have a medical director and other technical expertise in order to provide the necessary assistance to its EMS system. A REMSO should work on a regional or subregional basis in liaison with professional societies, public safety, other governmental agencies, local EMS systems, and legislative bodies to establish standards and program policies for continued system improvement.

3.2.2.1 The REMSO should be a substate unit of government or a private entity that may be single or multi-jurisdictional. The REMSO should have the capacity and authority to receive and disburse public and private funds and must be designated by the state EMS lead agency.

3.3 *Local EMS System*—The local EMS system may be organized as a community EMS council and should include all provider groups, private and public, involved in EMS delivery including ambulance or rescue services, hospitals or hospital councils, psychosocial services, local boards of health, police and fire departments, other related governmental and quasi-governmental or political subdivisional bodies, and consumers.

3.3.1 The local EMS system must have linkages to substate and state EMS systems.

3.3.2 The local EMS system should be in compliance with local ordinances and state and federal laws that govern EMS delivery.

4. Standardization

4.1 Standard setting is a major component of the state EMS system operation. This includes, but is not limited to:

4.1.1 Legislation.

4.1.2 Regulations.

4.1.3 Guidelines.

4.1.4 Licensure.

4.1.5 Training.

4.1.6 Certification.

4.1.7 Data collection and evaluation.

5. System Coordination

5.1 System coordination is a function of the state EMS system but may be delegated to a regional EMS organization (REMSO). System coordination includes, but is not limited to:

5.1.1 Regional system planning.

5.1.2 Operational coordination at a regional level.

5.1.3 Regional data collection and processing.

5.1.4 Evaluation.

5.1.5 Continuing education.

5.1.6 Coordination of mass casualty incident response.

NOTE 1—If there are no regional organizations within the state, the state EMS will need to accomplish these tasks.

6. Service Delivery

6.1 Service delivery is the major component of local EMS systems. Realizing that patient care is the ultimate goal of EMS systems, service delivery includes, but is not limited to:

6.1.1 Public information and education.

6.1.2 Notification.

6.1.3 Dispatch.

6.1.4 First response.

6.1.5 BLS/ALS ambulance.

6.1.6 Air transport.

6.1.7 Medical facilities.

6.1.8 Psycho-social services.

6.1.9 Evaluation and quality assurance.

7. State EMS System Structure

7.1 *Agency Organization*—Each state should have a single agency with overall responsibility for the state's role in emergency medical services.

7.1.1 Organizationally, this agency should be located in the state government structure such that it reflects the program's health orientation.

7.1.2 The agency should have a representative advisory council, commission, or board to provide advice to the executive and legislative branches on policies, procedures, programs and funding for emergency medical services statewide. Alternatively, the agency may have a board with the authority to adopt or approve rules and regulations. Such a body should also serve as a mechanism for obtaining public support and participation in the program.

7.2 *Personnel*—The agency should have adequate managerial, technical, and clerical staff to carry out its responsibilities.

7.2.1 There should be a designated director who is a full-time employee of the state.

7.2.2 If the director is not a physician, there should be a medical director who serves at least on a part-time basis, depending on the needs of the program.

7.3 *Legislation*:

7.3.1 There should be comprehensive legislation that establishes the EMS program, outlines its basic responsibilities, and provides the authority necessary to effectively carry out these responsibilities.

7.3.2 There should be legislation authorizing the establishment of minimum standards for emergency medical services in the state.

7.3.3 There should be legislation specifying penalties for noncompliance with the established minimum standards.

7.3.4 There should be legislation to provide funding for the EMS program.

7.4 *Substate Structure*:

7.4.1 The state EMS agency should determine and define the substate framework for the planning, coordination, and provision of emergency medical services. This guide suggests that certain responsibilities, authority, and accountability may be delegated to regional and local EMS systems. Although specific suggestions are offered in this guide, the intent is to allow flexibility in configuring state and substate structures to meet the functional needs of the system.

7.4.2 The state should designate the regional boundaries, the regional EMS organization within each region, and the regional organization's responsibilities, authority, accountability, and provisions for servicing the EMS needs of its constituent state political subdivisions. When a REMSO falls near the border of another state it is essential that the state lead agency develop a plan with the bordering state's lead agency so that the regional EMS system can triage and transfer patients across the border as required by the patient's condition.

7.4.3 If local EMS systems have a "council" or similar

organizational structure, the state should have appropriate communication channels to apprise them and the regional EMS systems of relevant information.

8. State EMS System Responsibilities

8.1 *Regulatory*:

8.1.1 The state should have the authority and responsibility for establishing minimum standards for the essential elements of the EMS system.

8.1.2 The state EMS agency should ensure that ambulance services are licensed and certified, that vehicles and equipment are inspected, and that ambulance personnel are licensed and certified.

8.1.3 The state EMS agency should have the responsibility to enforce the regulations, including the authority to take appropriate action to revoke or suspend the license or certification of those not in compliance. Revocation and suspension procedures should afford all litigants due process and provide for appeal.

8.2 *Planning and Standard Development*:

8.2.1 The state EMS agency should develop and disseminate a state EMS plan that does the following:

8.2.1.1 Describes the structure and framework for the development of EMS on a statewide basis.

8.2.1.2 Describes the current status of EMS and identifies statewide needs and priorities.

8.2.1.3 Outlines statewide goals for emergency medical services.

8.2.1.4 Is reviewed in accordance with the review cycle of the state health plan and with appropriate revisions made.

8.2.1.5 Is coordinated with the health planning agency and is integrated into the overall state health plan.

8.2.1.6 Is coordinated with the state emergency management agency and integrated where appropriate into the state emergency operations plan.

8.2.2 The state EMS agency should establish standards and guidelines for the development of EMS systems which:

8.2.2.1 Address all components of an EMS system. These components include but are not limited to: transportation, planning, critical care system development, evaluation, public information and education, training, certification, medical control, communications, mass casualty care, and others referred to within this guide.

8.2.2.2 Address the needs of patients in the following clinical target groups: behavior, burns, cardiac emergencies, obstetrical/perinatal emergencies, neonatal/pediatric emergencies, poisoning, head and spinal cord injuries, trauma, and other medical emergencies.

8.2.2.3 Identify the responsibilities of the various entities and levels of government involved in the system.

8.3 *Technical Assistance*—The state EMS agency should provide technical assistance to local units of government, EMS providers, and to the REMSOs. This should include, but not be limited to, the following:

8.3.1 Developing guidelines, model procedures, manuals, etc.

8.3.2 Serving as a clearinghouse and referral center for information.

8.3.3 Consulting with public officials, hospital administrators, ambulance service directors, EMS medical directors, etc.

8.3.4 Centralize EMS statistical data processing and provide activity reports to EMS providers and organizations involved in the provision and coordination of EMS.

8.4 *Funding*—The state government should provide funds to support the development, maintenance, and enhancement of emergency medical services systems including, but not limited to, the following:

8.4.1 Administrative and programmatic support of the state EMS agency.

8.4.2 Administrative and programmatic support of regional EMS organizations (REMSOs) in the form of direct funding or facilitation of other funding.

8.4.3 Grants to local EMS systems (or community EMS councils), ambulance providers, local governments, hospitals, and other appropriate agencies for improvement of the EMS system if such funds are available.

8.5 *Programs*—The state EMS agency should establish and/or operate supportive statewide programs for the development of emergency medical services to include, but not necessarily be limited to, the following:

8.5.1 Programs for the training and certification of prehospital EMS personnel.

8.5.2 Programs for planning, developing, and coordinating EMS communication systems. This should include citizen access, coordination, dispatch, and medical command/control.

8.5.3 Programs for the evaluation of the system including the establishment of an EMS patient record keeping system with, at a minimum, a standard run form or data set; the collection and tabulation of general statistics; and the development of programs to monitor, evaluate and outline definitive action steps to ensure optimal systems integrity of substate (regional) and local EMS systems.

8.5.4 Programs of statewide public education (PE) including the development of PE materials of importance to the citizens and EMS providers of the state.

8.5.5 Programs for application for designation as specialized acute care (trauma, burns, poison, pediatrics, etc.) centers, as necessary, to include evaluation of designated specialized acute care centers and systems.

8.5.6 Programs for preparedness, response, and evaluation of mass casualty incidents.

8.6 *Coordination*:

8.6.1 The state agency should have the primary responsibility for coordinating EMS activities with other state and federal agencies and with other states.

8.6.2 The state EMS agency should establish and maintain a liaison with other state and national EMS and EMS related organizations.

8.6.3 The state EMS agency should have a role in coordinating the EMS aspects of the state's disaster response. The state EMS agency should coordinate disaster programs affecting hospitals through state health planning agencies, professional associations and other appropriate organizations to maximize cooperation and obtain implementation assistance.

8.6.4 The state EMS agency should have a defined role in the state's highway safety program as established by statute or executive order.

9. Regional EMS System Structure

9.1 Regional EMS organizations (REMSO) can be established either as units of government or as private entities. The basic structures of a regional EMS system should consist of the following:

9.1.1 *When Structured as a Unit of Government*:

9.1.1.1 The REMSO should have a specific individual assigned as the lead person or coordinator responsible for the region's EMS system. This person is responsible to the designating state agency and to the governmental organization by which employed or from which a portion of his or her earnings are derived, and responsive to a REMSO advisory council.

9.1.1.2 A REMSO advisory council should consist of representatives designated by constituent state political subdivisions to provide guidance to the organization through the coordinator. All local EMS systems must be represented on the advisory council.

9.1.2 *When Structured as a Private Entity Organization*:

9.1.2.1 The REMSO board should consist of individuals willing to accept fiduciary responsibility for the governance of the organization designated as the REMSO, for the supervision of the REMSO director and actions of the REMSO staff.

9.1.2.2 The REMSO director, directly and through delegation to any REMSO staff, should be an individual who has the responsibility for the direction of the REMSO.

9.1.2.3 The REMSO advisory council should consist of individuals designated by constituent state political subdivisions to represent their constituencies on EMS matters. All local EMS systems must be represented on the advisory council. The council should be separate from the REMSO board, although individuals may serve as members of both. This separability is to ensure continued representation of key constituencies in the guidance of the REMSO operation regardless of the organization (board, director, staff) designated as the REMSO for that region by the state lead agency and any future changes in that designation.

9.1.2.4 A contract (or written agreement) between the state lead agency, the REMSO and constituent state political subdivisions should be executed defining the responsibilities and objectives of both parties.

9.1.2.5 The contract should identify any funding arrangement utilizing state funds and contain provisions for monitoring and auditing of expenditures.

9.1.2.6 The REMSO board should be the policy making body for the designated REMSO.

9.1.2.7 The REMSO advisory council (or sub-regional councils if practical) should also include provider and consumer participants of the EMS system in the region. The council(s) advise(s) the REMSO on EMS matters.

9.1.3 REMSO should be represented individually or collectively on the state lead agency advisory council.

10. Regional EMS System Responsibilities

10.1 The state lead agency should designate and contract with the REMSOs in the state. The state lead agency should provide state funding or facilitate other funding sufficient for the operation of REMSOs.

10.2 The REMSO board sets organizational policy for the REMSO and contracts with the state lead agency and state constituent political subdivisions. It must be responsive to the demands of the state lead agency and of the REMSO advisory council in order to hold the REMSO designation for the region.

10.3 The REMSO advisory council(s) should provide guidance to the REMSO in planning its activities.

10.4 The REMSO should maintain adequate staff and facilities to conduct ongoing planning, implementation, technical assistance, and evaluation of at least the following EMS system components (described as follows unless future ASTM standards substitute) in its region utilizing national standards adopted as state minimum standards for each (the REMSO itself need not be the implementing agency in each case; the local EMS agency may be the implementing agency as long as the REMSO can demonstrate that the component is being addressed adequately):

10.4.1 *Staffing and Training*—An adequate number of hospital and prehospital health professionals should exist to provide EMS on a 24-h basis. Provision should be made for the initial and ongoing training of these personnel utilizing curricula consistent with state and national criteria for each.

10.4.2 *Transportation*—There should exist an adequate system of ground, air, and water transport with vehicles that meet appropriate standards regarding location, design, performance, equipment, personnel, and safety. Basic life support (BLS) and advanced life support (ALS) prehospital and interhospital transport of critical patients should be addressed.

10.4.3 *Communications*—There should be provision for two-way communication between personnel and facilities within the coordinated communication system(s). Elements within the system(s) include public access to the EMS system, resource allocation, and medical control on both the BLS and ALS levels.

10.4.4 *Patient Transfer*—A system of identifying the most appropriate facility to manage a patient's clinical problem should be developed. This will be under medical control and will utilize pre-existing transfer policies. A mechanism to provide a continuum of care for each patient in the EMS system should be identified including protocols for selection of the primary receiving facility and subsequent transfer to an appropriate facility meeting the overall needs of the patient.

10.4.5 *Medical Control*—Medical control implies involvement of the medical community and ensures medical accountability in all phases of the EMS system and consists of the following elements that must be implemented:

10.4.5.1 Designation of a medical director for the region's EMS program, who is responsible for overall supervision and implementation of all medical requirements.

10.4.5.2 Effective emergency medical planning and designation of on-line medical control resources.

10.4.5.3 Design and utilization of treatment protocols that establish the standards for levels of care at both the BLS and ALS level from the scene to the appropriate level of hospital care in case of failure or interruption of provisions for on-line medical control.

10.4.5.4 New EMS technology that supports the training and operations of the program.

10.4.5.5 An effective process for accountability (records, case review, audits of day-to-day incidents and mass casualty incidents, etc.).

10.4.6 *Public Access and Education*—Provisions should be made to provide programs of public education and information to establish an awareness of the EMS system, how to access the system, and how to use the system properly. All patients should have access to the entire EMS system regardless of their ability to pay for such services. The public should have access to the governing boards and advisory councils regarding EMS in their area. Public CPR/First Aid training should be established.

10.4.7 *System Evaluation*—A regional prehospital patient record should be established in combination with a system, for central collection and processing of such records. The record should cover the patient's initial entry into the prehospital system through to the patient's transfer to the hospital emergency unit. A mechanism for tie-in to hospital patient visit and discharge information should exist. Analysis should be done on a routine basis, using this data (returned to the regions by the state if a statewide system exists) and appropriate process or outcome indicators, to determine the effectiveness of the EMS system.

10.4.8 *Emergency Responder Coordination*—The system should include provisions for appropriate system response to incidents beyond the day-to-day resource capacities of individual EMS provider organizations. Written mutual aid arrangements should be established with neighboring REMSO/ local EMS systems to ensure integration of care and should consider the role of non-EMS public safety agencies, their roles, relationships, and responsibilities in standard operation.

10.4.9 *Disaster/Mass Casualty Incident Coordination*—Provisions should be made for expanding standard operations to meet the needs created by mass casualty and disaster incidents. This will include plans for integrating state, regional, and local communications systems.

10.5 The REMSO should develop a written plan addressing all of the components in 10.4 and any additional components as may be prescribed in an EMS state plan. The plan should be assessed for progress made in each of the component areas and revised as necessary to be consistent with state standards. These assessments are to be reported to the state EMS lead agency and should be made available within the EMS region.

10.6 The REMSO should recommend appropriate minimum levels of EMS for each unit of local government within the EMS region, and include this in the plan and annual report described in 10.5. Designated minimum levels should be consistent with state minimum standards and should be influenced by such characteristics as population, geography, health status demographics, and local economy.

10.7 The REMSO should develop regional policies, protocols, and standards that meet state minimum standards.

10.8 The REMSO should coordinate with the state lead agency to ensure that state and regional minimum standards are actively enforced.

10.9 The REMSO should coordinate with local government, EMS provider organizations, consumer groups, local EMS systems, and other entities to promote fair representation and active participation on the REMSO provider/ consumer council.

11. Local EMS System Structure

11.1 The local EMS system may have a coordinating body (or community EMS council) composed of representatives from public and private provider groups involved in the delivery of EMS including ambulance and rescue services, medical society, emergency nurses, hospitals or hospital councils, psychosocial services, local boards of health, police and fire departments, other related governmental and quasi-governmental or political subdivisional bodies and representatives of the public or consumers of emergency medical sciences.

11.2 *Access to the System*—Public access should be through a centralized access such as a 911.

11.3 *Dispatch*:

11.3.1 There should be coordinated dispatch of resources.

11.3.2 It is desirable to have prearrival assistance or specific instructions to aid caller before help arrives on the scene. The instructions provided to the dispatcher should have medical control approval prior to implementation.

11.4 *Personnel*:

11.4.1 *Basic Life Support (BLS)*:

11.4.1.1 *First Responder*—Non-ambulance responders (police, etc.) should have minimum of DOT First Responder capability.

11.4.1.2 *EMT-Ambulance Attendants*—Attendants should have a minimum of DOT EMT-Basic capability. (Defibrillation and starting IVs are optional capabilities in accordance with state standards.)

11.4.2 *Advanced Life Support (ALS)*—Advanced life support should also include such techniques as endotracheal intubation and the use of intravenous medications and certain lifesaving procedures as defined in the state certification process.

11.5 *Medical Direction*—There should be physician control on all treatment protocols including on-line procedures and off-line standing orders.

11.6 *Psycho-Social Services*—There should be prior arrangements for availability, appropriate training, and utilization of trained mental health providers.

11.7 *Communications*—There should be provisions made for dispatch and communication between the field personnel and the receiving hospital or resource hospital.

11.8 *Transportation*—A transportation network (land, air, and water) should be established to ensure an adequate response time to the site as well as a minimal transit time from the site to the receiving facility. Provisions should include transportation to acute care centers.

11.9 *Receiving Facility*—A receiving facility should be in operation 24 hours a day, seven days a week with emergency care capability. Each facility should be identified as to its level of capability. Provisions should be made to identify special capabilities based on specific standards (trauma care, mental health units, poison control, cardiac care, pediatrics, etc.).

12. Local EMS System Responsibilities

12.1 *Planning and Development*—To implement the level(s) of service local EMS system wants or is capable of providing, consideration must be given to the following:

12.1.1 *First Responder*—Firefighters, police officers, and others who may respond to emergencies and provide emergency care but do not transport.

12.1.2 *Emergency Medical Technician*—Basic life support (BLS) ambulance attendant responders who provide initial stabilization at the scene of the emergency and transportation to the medical facility.

12.1.3 If a local EMS system has elected to have advanced life support (ALS) capability they will have advanced life support responders who, because of training and medical control, are permitted to utilize more advanced procedures prior to transporting victims to specialized acute care centers.

12.2 *Standards*—The local EMS agency should develop standards that meet state regulations. Those standards should include, but not be limited to:

12.2.1 *Level of Continuing Education*—The amount of annual continuing education will meet that required by the state.

12.2.2 *Staff*—The minimum number of qualified ambulance attendants consistent with state requirements.

12.2.3 *Training*—The hours of initial training must meet the minimum specified by the state. The local EMS agency should establish local quality control standards and provide for auditing competency.

12.3 *Coordination*:

12.3.1 The local EMS agency should assist in maintaining coordination between EMS providers and their medical direction. This may be best accomplished through regularly scheduled meetings between providers and medical administrators.

12.3.2 Other primary roles of coordination include oversight and assistance with communication problems, assisting the local training agency in preparation and conduct of courses, assuring that all EMS providers have mutual aid agreements as necessary, and participation in the preparation and development of emergency and disaster plans.

12.3.3 The local EMS system is directly responsible to the REMSO for all of its activities and the local EMS system activities must conform to REMSO policies. If there is no REMSO, the local EMS system is directly responsible to the state lead agency.

12.4 *Quality Assurance*—The primary responsibility is at local level and is achieved by high-quality initial training, continuing medical education, medical direction, monthly run reviews by medical control group, and periodic medical audits of patient care.

12.5 *Funding*—Financial support of service is a primary responsibility of local EMS and would include appropriate fee structuring, grants, donations, and government budget processes.

12.6 *Safety*—EMS system should ensure that standards for safety of rescuers, providers, patients, and bystanders are developed and enforced.

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