

IOWA EMS SYSTEM STANDARDS

**“What every Iowan can expect from
Emergency Medical Services”**



**Iowa Department of Public Health
Division of Acute Disease Prevention
and Emergency Response**

Bureau of EMS

Iowa EMS System Standards Overview

The Iowa EMS System Standards are a change initiative that provides a consistent and accountable approach to promoting and protecting the health of Iowans through EMS. The standards describe, in a tempered and realistic manner, the minimum infrastructure (county) and EMS services that all Iowans can reasonably expect from Emergency Medical Services no matter where they live in the state. Utilizing the Iowa EMS System Standards will attain the goal of designing and implementing an integrated, measurable, sustainable state wide EMS System.

Some of the benefits of implementing and utilizing the Iowa EMS System Standards are:

- Creates an “inclusive system” where all EMS providers, service programs and other health care professions participate in attaining identifiable, measurable minimum standards that will bring consistency to EMS practice. “Standards are statements that define the performance expectations that must be in place for EMS to assure high-quality patient care services.”
- Accountability to the public
- Consistent basic(minimal)EMS infrastructure across the state
- Identifying expected range of performance and what is needed to support that performance(capacity)
- Professionalization of EMS
- Increased visibility and understanding of the EMS system by the general public
- Supports ongoing evaluation and improvement of the EMS system
- Increased integration of EMS into the public health system
- Strengthens existing local, county, regional EMS organizations
- Enables proactive initiatives for required law/rule additions or changes
- Enables proactive initiatives for standardized funding mechanisms

Background:

In October, 2006 the Emergency Medical Services Advisory Council (EMSAC) was approached by the Bureau of EMS to support a change initiative involving EMS system standards. Discussions lead to a motion that “the Bureau should continue to develop draft standards and appoint partners to assist.” A group of 26 to 30 individuals were invited to participate through monthly meetings, in the development of a first draft version of minimum Iowa EMS System Standards. Progress reports were given to EMSAC in January and April, with the first draft version delivered to EMSAC in July, 2007.

The stakeholder group reviewed eight areas of EMS system development. These were:

- System Administration
- Staffing/Training
- Communications
- Response/Transportation
- Facilities/Critical Care
- Data collection/System Evaluation
- Public Information/Education
- Disaster Medical Response/Planning

In addition, while developing the minimum Iowa EMS System Standards, the stakeholder group used some guiding principles:

- Define basic minimum services and infrastructure that every EMS system should have in place
- Use clear, concise language that is easily understood by both the EMS/health care community and the general public
- Minimum standards should be measurable
- Keep in mind the principles of the national and state “EMS Agenda for the Future”

Next Steps:

The first draft version of the Iowa EMS System Standards was received by the EMS Advisory Council on July 11th, 2007. Further input from EMS stakeholders from across the state will be gathered during scheduled presentations from July through September, 2007.

The gathered public comments, public comment period ended September 21, 2007, for the Iowa EMS System Standards have been posted to the Bureau’s website.

A final draft version of the minimum Iowa EMS System Standards was presented to EMSAC October, 2007 and approved. This version of the Iowa EMS System Standards was approved and a program to pilot the standards was developed. The pilot program was designed to identify what is already in place to meet the standards, what is not in place to meet the standards, what measures are needed to meet the standards and what are the costs to meet and maintain the standards. The pilot program began in April, 2008 and ended in March, 2010 with final reports due April 30, 2010.

The pilot project consisted of four Iowa counties: Calhoun Co. population <20,000; Des Moines Co. population >20,000; Jones Co. population >20,000; Woodbury Co. population >50,000. These counties evaluated the use of the draft Iowa EMS System Standards to establish county wide EMS systems. During the pilot project, the four counties have met with the original stakeholder group three times (January 2009, August 2009, December 2009) to discuss results in terms of common themes, barriers, successes and best practices. A fourth meeting was held June 18, 2010 to discuss the results of the final project reports and determine what steps need to be taken in the near future. A third

draft of the EMS System Standards was developed from the changes, deletions and additions suggested in the final reports. A fifth meeting of the stakeholder group/pilot project counties was held August 3, 2010 to develop the final version of the EMS System Standards.

The final goal will be the development of a “Roadmap” to address issues of accomplishing and maintaining system standards, funding initiatives and law/rule additions/changes needed.

Iowa EMS System Standards Stakeholder Committee

Rick Benson	Council Bluffs	Steve Vandenbrink	Decorah
Gary Brown	Woodbury Co.	Dave Wilson	Cedar Rapids
Jeffrey Call	Bloomfield		
John Cockrell	Burlington		
Thomas Colthurst	Des Moines Co.		
Thomas Craighton	Hampton		
John Crouch	Des Moines Co.		
Larry Cruchelow	Carroll		
Jeff Doerr	Dubuque		
John Fiedler	West Des Moines		
Dan Frank	Mediapolis		
Sheila Frink	Anamosa		
Gene Haukoos	Estherville		
Trica Holden	Manly		
Kerrie Hull	Rockwell City		
Brian Jacobsen	Davenport		
Jerry Johnston	Mt. Pleasant		
Sarah LaBrune-Jongeling	Woodbury Co.		
Don Lucas	Mitchellville		
Dave Luers	Burlington		
Tim Malchow	Monticello		
Dr. Dennis Mallory	Toledo		
Laura Malone	Iowa Hospital Association		
Jim Mehaffy	Mediapolis		
Dave Miller	Harlan		
Angie Moore	Waukee		
Marty Parbs	Marengo		
Frank Prowant	Ankeny		
Kristi Quinn	Woodbury Co.		
Doug Reed	Oakland		
Ray Rex	Fairfield		
Matt Ringgenberg	Lake City		
Randy Ross	Onawa		
Julie K. Scadden	Schaller		
Scott Slough	Greenfield		
Dave Springer	Springfield, Ill.		
Terry Stecker	Sioux City		
Jim Stephen	Mt. Pleasant		
Dave Tice	Charles City		
Maile A. Timm	Story City		
Thomas Toycen	Mt. Vernon		
Matt Trexel	Des Moines Co.		

Glossary of Terms

ALS-Interventions identified at the EMT-I, AEMT, EMT-P, PS or Paramedic level

Ambulance-As defined by rule: 641-132.1 (147A) Definitions. “Ambulance” means any privately or publicly owned ground vehicle specifically designed, modified, constructed, equipped, staffed and used regularly to transport the sick, injured or otherwise incapacitated.”

Audit-Review of a process

BLS-Interventions identified at the FR, EMR, EMT-B or EMT level

Certification- State of Iowa EMS Certification

CQI- As defined by rule: 641-132.1 (147A) Definitions. “Continuous quality improvement (CQI)” means a program that is an ongoing process to monitor standards at all EMS operational levels including the structure, process, and outcomes of the patient care event.” This can change to fit the system.

Credentialing-The process for ensuring knowledge, skills and ability to participate within the system.

EMD (Emergency Medical Dispatch) - “Emergency Medical Dispatching” shall mean the reception, evaluation, processing, provision of dispatch life support, management of requests for emergency medical assistance, and participation in ongoing evaluation and improvement of the emergency medical dispatch process. This process includes identifying the nature of the request, prioritizing the severity of the request, dispatching the necessary resources, providing medical aid and safety instructions to the callers and coordinating the responding resources as needed but does not include call routing per se.

EMS- As defined by rule: 641-132.1 (147A) Definitions. “Emergency medical services” or “EMS” means an integrated medical care delivery system to provide emergency and non-emergency medical care at the scene or during out-of-hospital patient transportation in an ambulance.”

EMS System- means an integrated medical care delivery system to provide emergency and non-emergency medical care at the scene or during out-of-hospital patient transportation in an ambulance.” The system shall be no smaller than a county.

First Responder / EMR-State of Iowa EMS provider at least equipped with an AED

Medical Director- As defined by rule: 641-132.1 (147A) Definitions. “Medical director” means any physician licensed under Iowa Code chapter 148, 150, or 150A who shall be responsible for overall medical direction of the service program and who has completed a medical director workshop, sponsored by the department, within one year of assuming duties.”

NIMS- National Incident Management System.

Rural-Non-Urban areas

System Participant- Service or Agency recognized by the Bureau of EMS and the EMS System

Urban-Communities within a county with a population greater than 10,000

Wilderness-Area without infrastructure

System Organization and Management

1.01 System Administration: EMS System Structure

MINIMUM STANDARD: *Each COUNTY shall make provisions for emergency medical services treatment and transport for all within the county, to meet Iowa EMS System Standards. Each county shall be responsible for the approval of services within their EMS system based on a needs assessment.*

1.02 System Administration: EMS System Mission

MINIMUM STANDARD: *The EMS system shall have a written vision and mission statement and will meet at least annually to engage in strategic planning. The EMS system shall have a formal organization chart that identifies who is responsible for implementing the Iowa EMS system standards.*

1.03 System Administration: Public Impact

MINIMUM STANDARD: *The EMS system shall have a mechanism to seek and obtain appropriate consumer and health care provider input.*

1.04 System Administration: Medical Director / Medical Direction

MINIMUM STANDARD: *The EMS system shall have an active medical director or active Medical Director system. Systems with multiple medical directors shall form a medical advisory council to support the system medical director.*

- a) *Each EMS system shall develop written medical direction policies, procedures, and/or protocols for all transporting/non-transporting EMS services including, but not limited to:*
 - *Triage*
 - *Treatment*
 - *Medical dispatch protocols*
 - *Transport/tiered response/provision of ALS care*
 - *On-scene treatment times*
 - *Transfer of emergency patients*
 - *Standing orders*
 - *Hospital contact*
 - *On-scene physicians and other medical personnel*

- b) *Each EMS system shall develop and utilize a medical control plan that shall have on-line medical direction available that is provided by a physician or physician designee or supervising physician. The plan shall also identify the role*

of hospitals, alternative medical control and the roles, responsibilities, and relationships of out-of-hospital providers.

- c) The EMS system, in conjunction with the county medical examiner, shall develop a policy regarding determination of death, including deaths at the scene of apparent crimes.*
- d) The EMS system shall ensure that providers have a mechanism for reporting child abuse, and dependant adult abuse.*
- e) The EMS medical direction, in conjunction with transferring facilities, shall establish policy and procedures for out of hospital medical personnel during inter-facility transfers.*

1.05 System Administration: Development & Review Plan

MINIMUM STANDARD: *The EMS system shall develop an EMS System Plan, based on community need and utilization of appropriate resources, and shall submit it to the EMS Bureau. The plan shall:*

- a) Assess how the current system meets these guidelines.*
- b) Identify system needs for patients within each of the targeted clinical categories/special populations, and*
- c) Provide a methodology and timeline for meeting these needs.*
- d) Have a continuous quality improvement and evaluation process that is approved by the EMS System.*
- e) Provide for review and monitoring of EMS system operations.*
- f) Provide for an annual update to the EMS System Plan and submit the plan to the EMS Bureau. The update shall identify progress made in plan implementation and changes to the planned system design.*

1.06 System Administration: Advanced Life Support (ALS)

MINIMUM STANDARD: *The EMS system shall have a provision for ALS care.*

1.07 System Administration: Inventory of Resources

MINIMUM STANDARD: *The EMS system shall develop in coordination with county EMA a detailed inventory of EMS resources (e.g., personnel, vehicles, and facilities) within its area and, at least annually, shall update this inventory.*

1.08 **System Administration: System Participants**

MINIMUM STANDARD: *The EMS system shall ensure that system participants conform to their assigned EMS system roles and responsibilities.*

1.09 **System Administration: Policy & Procedures Manual**

MINIMUM STANDARD: *The EMS system shall develop policies and procedures that implement the Iowa EMS system standards. The system shall ensure that the manual is available to all EMS system providers (including public safety agencies, ambulance services, non-transport services, air-medical services, and hospitals) within the system. The EMS system shall have a mechanism to review, monitor and ensure compliance with system policies at least annually.*

1.10 **System Administration: Funding Mechanism**

MINIMUM STANDARD: *The EMS system shall identify funding mechanisms that are sufficient to ensure its continued operation and shall maximize use of its fiscal resources.*

Staffing and Training

2.01 Staffing: Assessment of Needs

MINIMUM STANDARD: *The EMS system shall, at least annually, assess staffing and training needs.*

2.02 Staffing: Personnel

MINIMUM STANDARD: *The EMS system shall have mechanisms to assure certification.*

- a) *The EMS system shall have a process for providers to identify and notify the Bureau of EMS, as required by rule, of occurrences that impact EMS certification.*
- b) *Services within the EMS system shall have a plan in place to credential personnel as applicable to EMS certification levels and local protocol as authorized by the medical director.*

2.03 Staffing: Dispatch Training

MINIMUM STANDARD: *Public safety answering point (PSAP) operators with medical dispatch responsibilities and all medical dispatch personnel (both public and private) shall be trained and/or certified using an approved program.*

2.04 Staffing: Non transport

MINIMUM STANDARD: *The EMS System shall ensure at least one person on each non-transporting EMS response shall be a currently certified EMS provider. Public safety agencies and industrial first-aid teams shall be utilized in accordance with EMS system policies.*

2.05 Staffing: Transport

MINIMUM STANDARD: *The EMS system shall ensure that all transporting units meet state personnel minimum staffing requirements.*

2.06 Training: Hospital Communications

MINIMUM STANDARD: *The EMS system shall ensure all hospital/alternative base station personnel who provide medical direction to out of hospital personnel shall be knowledgeable about EMS system policies and procedures.*

Communications

3.01 **Communications: Plan**

MINIMUM STANDARD: *The EMS system shall develop a plan to coordinate EMS communications. The plan shall specify the medical communications capabilities of emergency medical transport vehicles; non-transporting agencies; and system participants.*

3.02 **Communications: Equipment**

MINIMUM STANDARD: *The EMS system shall ensure system participants have two-way communications equipment that complies with the EMS communications plan and that provides for dispatch and ambulance-to-hospital communication.*

- a) *The EMS system shall ensure all hospitals within the EMS system shall (where physically possible) have the ability to communicate with each other by two-way communications according to the EMS plan.*
- b) *The EMS system shall ensure system participants involved in inter-facility transfers have the ability to communicate with both the sending and receiving facilities.*

3.03 **Communications: Dispatch**

MINIMUM STANDARD: *The EMS system shall ensure all emergency medical transport vehicles, where physically possible (based on geography and technology), shall have the ability to communicate with a single dispatch center or disaster communications command post.*

- a) *The EMS system shall review, at least annually, communications linkages (inter-operability) among providers (out of hospital and hospital) in its jurisdiction and recommend needed changes for their capability to provide service in the event of multi-casualty incidents and disasters.*
- b) *The EMS system shall have a functionally integrated dispatch with system-wide emergency management coordination, using standardized communications frequencies.*
- c) *The EMS system may establish an emergency medical dispatch priority reference system, including systemized caller interrogation, dispatch triage policies, and pre-arrival instructions.*

3.04 **Communications: 911 Coordination**

MINIMUM STANDARD: *The EMS system shall seek to have an active member appointed to the county 911 commission in order to participate in ongoing planning and coordination of the enhanced 9-1-1 system*

3.05 **Communications : Education**

MINIMUM STANDARD: *The EMS system shall be involved in public education regarding system access.*

Response & Transportation

4.01 **Response & Transportation: Service Area**

MINIMUM STANDARD: *The EMS system shall, in coordination with neighboring EMS Systems, determine the emergency medical service response areas, to ensure the most appropriate response.*

4.02 **Response & Transportation: Monitoring**

MINIMUM STANDARD: *The EMS system shall monitor compliance with appropriate code, rules, policies and procedures.*

4.03 **Response & Transportation: Contingency Response / Mutual Aid**

MINIMUM STANDARD: *The EMS system shall have contingency plans and assure the development of mutual aid agreements to provide for emergent and non-emergent response during increased system volume.*

4.04 **Response & Transportation: Response Time Standards**

MINIMUM STANDARD: *Each EMS system shall adopt the following standards for emergent responses. These standards shall take into account the total time from dispatch to arrival of the responding unit at the scene, including all dispatch intervals and driving time. Emergency medical service areas (response zones) shall be designated so that, for eighty percent of emergent responses:*

- The response time for first responders does not exceed:
 - Urban—5 minutes
 - Rural—15 minutes
 - Wilderness—as quickly as possible

- The response time for an ambulance (not functioning as the first responder) does not exceed:
 - Urban-8 minutes
 - Rural- 20 minutes
 - Wilderness—as quickly as possible

- The response time for an advanced life support does not exceed:
 - Urban-8 minutes
 - Rural-20 minutes

4.05 Response & Transportation: Air - Medical Services

MINIMUM STANDARD: *The EMS system shall have a process for identifying specialty air-medical transport services and shall develop policies and procedures regarding:*

- *Requesting of air-medical service*
- *Determination of patient destination*
- *Orientation of pilots and medical flight crews to the EMS system*
- *Addressing and resolving formal complaints*

4.06 Response & Transportation: Special Vehicles

MINIMUM STANDARD: *Where applicable, the EMS system shall identify the availability and staffing of specialty vehicles such as all-terrain vehicles, snowmobiles, water rescue and transportation vehicles.*

4.07 Response & Transportation: Multi-casualty Disaster Response

MINIMUM STANDARD: *The EMS system shall develop multi-casualty response plans and procedures that are consistent with NIMS guidelines.*

Facilities/Critical Care

5.01 **Facilities: Assessment of Capabilities**

MINIMUM STANDARD: *The EMS system shall assess, at least annually, the EMS-related capabilities of acute care facilities in its service area.*

5.02 **Facilities: Triage, Transport & Transfer Protocols**

MINIMUM STANDARD: *The EMS system shall assist hospitals with coordination of pre-hospital triage, transport and transfer destination protocols and agreements.*

5.03 **Facilities: Mass Casualty Management**

MINIMUM STANDARD: *The EMS system shall assist hospitals and acute care facilities with planning and preparation for mass casualty management, including procedures for coordinating hospital communications, evacuation, and patient flow.*

5.04 **Facilities : Trauma Care system**

MINIMUM STANDARD: *The EMS system shall monitor the use of the Out of Hospital Trauma Triage Destination Decision Protocol in cooperation with their Trauma Care Facility.*

5.05 **Trauma Care Facility Verification**

MINIMUM STANDARD: *The EMS system shall participate in the trauma verification process.*

Data Collection/System Evaluation

6.01 System Evaluation: Continuous Quality Improvement Program

MINIMUM STANDARD: *The EMS system shall establish an EMS CQI program to evaluate the response to emergency medical incidents and the care provided to specific patients. The program shall address the total EMS system, including all pre-hospital provider agencies and hospitals. It shall address compliance with policies, procedures and protocols and identification of preventable morbidity and mortality and document resolution of deficiencies found.*

6.02 System Evaluation: Out of hospital Care Audits

MINIMUM STANDARD: *The EMS system shall conduct audits of out-of-hospital care, including both system response and clinical aspects. The EMS system should have a mechanism to link pre-hospital records with dispatch, emergency department, in-patient, and discharge records.*

6.03 System Evaluation: Medical Dispatch

MINIMUM STANDARD: *The EMS system shall have a mechanism, in cooperation with the dispatch center, to review medical dispatching to ensure that the appropriate level of medical response is sent to each emergency and to monitor the appropriateness of pre-arrival/post dispatch directions.*

6.04 System Evaluation: System Design Evaluation

MINIMUM STANDARD: *The EMS system shall establish an evaluation program to evaluate EMS system design and operations, including system effectiveness at meeting community needs, appropriateness of guidelines and standards, prevention strategies that are tailored to community needs, and assessment of resources needed to adequately support the system. This shall include structure, process and outcome evaluations.*

6.05 System Evaluation: Provider/Service Participation

MINIMUM STANDARD: *The EMS system shall have the resources to require provider/service participation in the system wide evaluation programs.*

6.06 System Evaluation: Reporting

MINIMUM STANDARD: *The EMS system shall, at least annually, report on the results of its evaluation of EMS system design and operations to their governing agency, local services, and other stakeholders.*

6.07 **Data Collection: Pre-hospital Record**

MINIMUM STANDARD: *Pre-hospital records for all patient responses shall be completed and forwarded to appropriate agencies as defined by Iowa Administrative Code.*

6.08 **Data Collection: Data Management System**

MINIMUM STANDARD: *The EMS system should participate in an integrated data Management system that includes system response and clinical (pre-hospital, hospital and public health) data.*

Public Information and Education

7.01 **Public Information: Materials**

MINIMUM STANDARD: *The EMS system shall promote the development and dissemination of information materials for the public that address:*

- *Understanding of EMS system design and operation*
- *Proper access to the system*
- *Self help (e.g. CPR, first aid, etc)*
- *Patient and consumer rights as they relate to the EMS system*
- *Health and safety habits as they relate to the prevention and reduction of health risks in target areas*
- *Appropriate utilization of emergency departments*
- *Promote injury control and preventive medicine*

7.02 **Public Information: Disaster Preparedness**

MINIMUM STANDARD: *The EMS system, in conjunction with the local office of emergency management (EMA) shall promote citizen disaster preparedness activities.*

7.03 **Public Information: First Aid and CPR Training**

MINIMUM STANDARD: *The EMS system shall promote the availability of first aid and CPR training for the general public.*

Disaster Medical Response

8.01 Disaster Medical Response: Planning

MINIMUM STANDARD: *The EMS system shall participate with their local EMA and Public Health to develop plans, procedures and policy to respond effectively to the medical needs created by disasters.*

8.02 Disaster Medical Response: Response Plans/Review

MINIMUM STANDARD: *The EMS System shall have medical response plans and procedures for disasters which shall be applicable to incidents caused by a variety of hazards.*

a) *The EMS system shall annually review the disaster medical response plans.*

b) *The Iowa Office of Home Land Security and Emergency Management Division multi-hazard functional plan should serve as the model for the plans.*

8.03 Disaster Medical Response: Emergency Operation Centers

MINIMUM STANDARD: *The EMS system shall participate with their local EMA in the development and exercise of a plan for activation, operation and deactivation of the emergency operation center.*

8.04 Disaster Medical Response: Hazardous Materials Training

MINIMUM STANDARD: *The EMS System shall ensure all EMS providers be properly trained and equipped for response to hazardous materials incidents, as determined by their system role and responsibilities.*

8.05 Disaster Medical Response: Plan Participation (ICS)

MINIMUM STANDARD: *The EMS system shall ensure that system participants are trained to implement the incident command system.*

8.06 Disaster Medical Response: Inventory

MINIMUM STANDARD: *The EMS system shall develop and maintain an inventory of the disaster medical resources that are available for deployment, and update annually.*

8.07 Disaster Medical Response: Continuation of Service

MINIMUM STANDARD: *The EMS system shall develop plans to ensure continuation of EMS services during disasters to the extent possible.*

8.08 Disaster Medical Response: Hospital Plans

MINIMUM STANDARD: *The EMS system shall encourage hospitals to ensure that their plans for internal and external disasters are fully integrated with the system's medical response plan(s).*