

STATE OF COLORADO



Colorado Department
of Public Health
and Environment

Emergency Medical and Trauma Services System Annual Legislative Report

Submitted to the Colorado Legislature
By the Emergency Medical and Trauma Services Section
Health Facilities and Emergency Medical Services Division
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Executive Summary

Colorado's Emergency Medical and Trauma Services (EMTS) System provides transportation and immediate care to the sick and injured 24 hours a day, 365 days a year. Emergency medical and trauma care services are defined as the immediate health care services needed as a result of an injury or sudden illness, particularly when there is a threat to life or long-term functional abilities. In addition, this comprehensive system provides transportation in non-emergent settings that supports long-term patient care goals. Patient survival depends on several factors, including the availability of appropriately trained health care providers and properly equipped and positioned ambulances, rescue units, trauma centers and other specialized health care facilities. A coordinated emergency medical and trauma services system offers timely preventive, acute and rehabilitative health care services for Colorado's residents and visitors.

The *Emergency Medical Services Act of 1978*, the Emergency Medical Services Account in 1989, the *Trauma Act of 1995*, the *Colorado Emergency Medical and Trauma Services Act of 2000* and 2005 legislation addressing emergency medical technician (EMT) investigations and discipline, provide authority and limited funding for the development of a comprehensive emergency medical and trauma service system for Colorado.

The number of injury deaths in Colorado was 2,312 in 2002, making trauma the leading cause of death for Coloradans ages 1– 44. Studies indicate that 30 percent to 40 percent of all trauma deaths occur within one hour of injury, and that 30 percent to 40 percent of these deaths are preventable if timely, appropriate care is received. In 2002, based on trauma registry data, the department estimated that the lifetime earnings lost due to premature death from injury in Colorado was \$1.8 billion. National experience clearly demonstrates that a coordinated and well-developed emergency medical and trauma services system can result in a reduction of the number of preventable deaths and in disability resulting from injury.

The individual program components that make up Colorado's Emergency Medical and Trauma Services System include:

- Public Education and Information
- Injury Prevention
- Communications Systems
- Training and Certification of Emergency Medical Technicians
- Transportation Systems, including Air and Ground Ambulance Licensure Standards
- Trauma Center Designation for Acute Care Hospitals and Clinics
- Rehabilitative Care
- Disaster Medical Care
- Education and Research
- Trauma Registry and Prehospital Data Collection
- State and Regional Continuing Quality Improvement Systems
- Planning – State Emergency Medical and Trauma Services Advisory Council and

Regional Emergency Medical and Trauma Services Advisory Councils

Each of these sub-systems will be discussed in greater depth throughout the body of this report. The first part of the report identifies the specific responsibilities of the department and is followed by a focus on the utilization of state resources available for system development.

This section is followed by a summary of the status of each sub-system. The report concludes with a more detailed statement about future and ongoing challenges to system development.

Funding

The Emergency Medical and Trauma Services (EMTS) Section continues to be funded predominately from the Emergency Medical Services Account of the Highway Users Tax Fund, supplemented by the collection of trauma center designation fees and limited short-term federal grants. A \$1 fee included in each motor vehicle's annual registration funds the Emergency Medical Services Account, established in 1989.

Challenges

As a result of the challenges faced by the Emergency Medical and Trauma Services (EMTS) Section in 2004, significant improvements in process and a sharpening of focus have been adopted. Among the most significant improvements has been the reorganization of work unit responsibilities to more closely align with organizational goals. This action supports the section's first and foremost commitment to protecting the safety and welfare of the public while also serving the needs of the stakeholders of the community. In November 2004, a new section chief was hired following a comprehensive search and screening process by the department. Combined with the filling of several staff vacancies by highly qualified professionals, this has fostered a revitalization of effort and a clarification of the mission that have resulted in increased organizational performance and service. Specific examples of these improvements are discussed in more detail in other parts of this document.

Although improvements in the department's service to the emergency medical and trauma services community has improved dramatically during the past year, opportunities for further enhancements to this system continue to present themselves. Throughout the development of Colorado's EMTS system, the number of rules and regulations promulgated in support of legislative direction has increased. These rules and regulations are in need of updating to stay abreast of current standards of medical practice as well as to make them more user friendly for constituents. The section has made progress in this arena by establishing statewide ground ambulance and air ambulance licensing rules, with the former adopted by the State Board of Health in July, and the latter being presented to the board for adoption before the end of the year. The challenge of continuing to review and update rules in certification, trauma center designation, grant funding and certification enforcement will be an important focus of effort for the next year.

The revenue generated from the Emergency Medical Services Account continues to be of

significant concern. The various programs that depend on this funding are operating within a very narrow margin, and a small shift in expenses or revenue can easily create an unexpected shortfall. The department and the State Emergency Medical and Trauma Services Advisory Council will continue to monitor the situation and will be prepared to make adjustments as needed in the grants program, regional funding, certification, training and other program activities.

Given the status of potential natural and/or man-made threats to our state and nation, the importance of ongoing coordination between state and local agencies in the development of mass casualty plans is critical. The EMTS section, in concert with the Regional Emergency Medical and Trauma Advisory Councils, will continue their work with emergency managers and the All Hazards regions to ensure that EMTS resources are appropriately incorporated into both state and local plans.

Colorado Department of Public Health and Environment Roles and Responsibilities

The Colorado Department of Public Health and Environment shares regulatory responsibilities for the practice of emergency medical technicians and oversight of emergency medical services (EMS) medical directors with the Colorado Board of Medical Examiners. The responsibility for the licensing of ground ambulances is shared with the governing bodies of Colorado's counties. Additionally, the State Emergency Medical and Trauma Services Advisory Council (Appendix A) provides recommendations on department rules, utilization of the funds in the Emergency Medical Services Account, implementation of program activities and assistance with the identification of system needs and priorities.

Originally defined by the *Emergency Medical Services Act of 1978*, the *Trauma System Act of 1995*, modified by the *Colorado Emergency Medical and Trauma Services Act of 2000* and again by the passage of Senate Bill 01-174 in 2001, the department's primary roles in the development of emergency medical and trauma services throughout the state are as follows:

- Certification of emergency medical technicians, including processing applications, issuing emergency medical technician certificates, and investigating complaints involving emergency medical technicians.
- Regulation of institutions providing emergency medical technician training, including developing curricula, approving course content, monitoring the quality of instruction and investigating complaints involving training centers.
- Administration and management of the Emergency Medical Services Provider Grants program.
- Provision of community and regional technical support for the development and provision of emergency medical and trauma services across the state in coordination with the Regional Emergency Medical and Trauma Advisory Councils.
- Development of a prehospital care data collection system.
- Designation of health care facilities as one of five possible levels of trauma centers.
- Conducting analyses of the sub-systems' responses to injured patients using quality improvement models.
- Creation and maintenance of the Colorado Trauma Registry.
- Evaluation of the Emergency Medical and Trauma Services System.
- Targeted program activities based on available federal funding.

Legislative Background

The *Emergency Medical Services Act*, passed in 1978, gave the department, the Board of Medical Examiners, and individual counties, with advice from the State Emergency Medical and Trauma Services Advisory Council, limited authority to develop a coordinated emergency medical services system. The department was given the responsibility of

certifying emergency medical technicians. Department approval is required for course content and curriculum prior to an institution providing training programs for emergency medical technicians. All emergency medical technicians are required to have a medical director. The Colorado Board of Medical Examiners was given supervisory authority over medical directors who provide medical direction for emergency medical technicians. The Colorado Board of Medical Examiners also defines the scope of practice for emergency medical technicians. Counties were given the responsibility of inspecting and licensing ground ambulances based in their respective counties.

In 1989, a stable, minimum level of funding for the state's emergency medical services system was established by inclusion of a \$1 fee in each annual motor vehicle registration. This revenue is deposited into the Emergency Medical Services Account of the Highway Users Tax Fund. Until July 1, 2002, the annual appropriation was distributed in a fixed ratio with 60 percent designated for distribution as grants to improve and maintain local emergency medical services systems; 20 percent for county planning and coordination of emergency medical services; and 20 percent for the direct and indirect costs of the department for planning, developing, implementing and maintaining the statewide system.

The *Trauma System Act of 1995* gave authority to the department to assist in the development of a coordinated statewide trauma system. System development was the combined responsibility of the department, the State Board of Health and all Colorado counties, with advice from the State Trauma Advisory Council. The State Board of Health and the department established the trauma system's framework with the development of minimum system standards, including standards for hospitals and other health care facilities to become designated trauma centers. Funding for the designation of trauma centers is derived from fees paid by facilities seeking designation. This fee was intended to address the direct and indirect costs of designation activities. Area Trauma Advisory Councils were formed throughout the state in 1998 and were responsible for development of area plans for the coordinated delivery of care to trauma patients in their respective areas. The administrative, regulatory and Area Trauma Advisory Council components of the Trauma Program were funded within the Emergency Medical Services Account appropriations as authorized in an FY98 decision item. In addition, a short-term, state grant provided partial support of the trauma registry and initial development of a prehospital trauma data collection system.

The *Colorado Emergency Medical and Trauma Services Act of 2000* created a merged state advisory council, the State Emergency Medical and Trauma Services Advisory Council (SEMTAC) (Appendix A). It also merged the regional efforts of the Area Trauma Advisory Councils and the voluntary efforts of the Emergency Medical Services Regional Councils to create the Regional Emergency Medical and Trauma Advisory Councils (RETACs) (Appendix B and Appendix C).

The *Colorado Emergency Medical and Trauma Services Act of 2000* gave the new state council the responsibility of making recommendations for the utilization of the Emergency Medical Services Account funds beginning on July 1, 2002. The required 60/20/20 annual appropriation distribution, described above, was removed at that time. The legislation also

gave the department authority to designate Level V Trauma Centers and to license air (fixed- and rotor-wing) ambulance services.

In 2001, the Board of Health was given the authority to adopt rules for the utilization of the results of criminal background checks in the certification of emergency medical technicians.

In 2002, a technical bill was passed that rectified some housekeeping matters and eliminated inconsistencies as well as clarified the role, responsibilities and funding of the Regional Emergency Medical and Trauma Advisory Councils (RETACs).

In 2003, legislation was introduced to implement recommendations of a 2002 Legislative Audit. HB03-1370 gave the State Board of Health the authority to promulgate rules that define the review and designation cycles for Colorado's trauma centers. Another bill, SB03-009, removed the option of conducting name-based criminal background checks for emergency medical technician certification, instead requiring fingerprint background checks only. It also gave the Board of Health the authority to adopt rules enabling the department to consider crimes of moral turpitude in the certification of emergency medical technicians. Both of these bills were adopted.

In 2005, the legislature approved two important bills that affect the Emergency Medical and Trauma Services System. HB 1302 was introduced to clarify the licensing requirements of air ambulances in Colorado by allowing the department to require accreditation by the Commission on the Accreditation of Medical Transport Systems (CAMTS) by any air ambulance service transporting patients within or from the state of Colorado. Governor Bill Owens signed this bill, and rules are presently pending adoption by the Board of Health. The second bill, SB 231, was submitted by the department to increase and clarify the investigative powers of the department in the investigation of allegations of misconduct by certified emergency medical technicians as well as require the reporting of misconduct by emergency medical services medical directors, emergency medical service agencies, and certified emergency medical technicians. Governor Owens signed this bill, and this authority has become an integral part of the overall investigation process used by the department to follow up on reports of misconduct by emergency medical technicians certified in Colorado.

Part I

Emergency Medical and Trauma Services Section Funding

Overview of Fiscal 2005 Funding

The Emergency Medical and Trauma Services Section's programs are funded primarily from the Emergency Medical Services Account and the collection of trauma center designation fees. The Emergency Medical Services Account is funded by a \$1 fee, set in 1989, that is included in each motor vehicle's annual registration. The Emergency Medical Services Account supports the Emergency Medical Services Provider Grants program, funding for the Regional Emergency Medical and Trauma Advisory Councils, the direct and indirect expenses of program administration, the regulatory aspects of the trauma program, and the development aspects of the Emergency Medical and Trauma Services System. Program administration includes certification of emergency medical technicians, oversight of training programs, operation of the State Emergency Medical and Trauma Services Advisory Council, and provision of technical assistance to emergency medical service providers and to Regional Emergency Medical and Trauma Advisory Councils. The Trauma Program is also supported by fees collected from health care facilities that apply to be designated as trauma centers. The section currently receives two federal grants: an Emergency Medical Services for Children grant and an EMS-Trauma Systems planning/development grant. State licensure of fixed- and rotor-wing ambulance services is expected to become operational during FY06. Fees collected from air ambulance services that apply to be licensed in Colorado will support this activity. Table 1 outlines the spending authority for FY06.

	HUTF / EMS Account	Trauma Center Designation Fees	Federal Grants	Air Ambulance Fee
EMS Provider Grants	\$1,928,793			
RETAC Funding	\$1,785,000			
Program Administration	\$893,073		\$138,000	\$24,237
Division of Information Technology (Telecomm.)	\$67,756			
Trauma Center Designation (program administration and survey team expenses)		\$389,682		
Indirect Cost Assessment	\$246,312	\$42,148	\$24,426	\$5,914
Total	\$4,920,934	\$431,830	\$162,426	\$30,151

Table 1: Fiscal Year 2006 Budget

Emergency Medical Services Provider Grants Program

Summary of Legislation

The *Colorado Emergency Medical and Trauma Services Act of 2000* continued the appropriation of funds from the Emergency Medical Services Account for distribution as grants to local emergency medical and trauma services providers. It also gave the State Emergency Medical and Trauma Services Advisory Council the responsibility of making recommendations for the utilization of the Emergency Medical Services Account funds beginning on July 1, 2002.

The department administers a competitive grants program to distribute this funding. Per statute, a minimum of \$150,000 must be used for the training of emergency medical personnel and \$100,000 must be reserved for emergency grant awards. The priorities for distribution of the remaining grant monies, as defined in the statute, include updating underdeveloped emergency medical and trauma services systems and replacing aging and outdated equipment. The grant money is distributed based on substantiated need as defined in the grant application. This grant program requires a local cash match of 50 percent. Based on financial need, there is an opportunity for applicants to request a waiver of the cash match requirement. Members of the State Emergency Medical and Trauma Services Advisory Council are an integral part of the waiver process to ensure appropriate determination of financial need.

Funding Distribution

The FY06 budget from the Emergency Medical Services Account for the Provider Grants Program is \$1,928,793, which includes the allocation of a minimum \$150,000 for emergency medical personnel training and \$100,000 reserved for emergency grant awards.

The department received 91 provider grant applications for FY06 requesting funding for projects totaling \$2,561,705 (amount requested as grant funding from the state). Emergency vehicles, the most requested and most expensive equipment, topped the list of funded items. A complete list of the specific grant awards can be found in Appendix D. The figure below illustrates the distribution of the provider grant funds as of August 2005. Table 2 provides the anticipated funding priorities under each grant category.

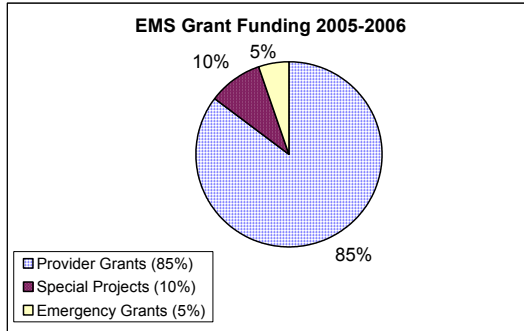


Figure 1: EMS Provider Grant Funding FY06

Emergency Medical Services Grant Funding 2005-2006		
	Awarded	Award %
Provider Grants		
Communications	\$31,733	
Defibrillation	237,268	
Emergency Medical Services Equipment	83,431	
Emergency Vehicles	781,471	
Training	424,690	
Data Collection	39,430	
Injury Prevention	2,500	
Extrication Equipment	25,771	
Provider Grants	\$1,626,294	
Recruitment and Retention	25,000	
Grants Subtotal	\$1,651,294	85%
Emergency Fund	100,000	5%
Special Projects		
EMS Data Collection	146,236	
RETAC Forum Project	18,000	
Medical Director Course Development Project	7,000	
EMS Management/Leadership Seminar	5,000	
Instructor/Coordinator Development Project	25,000	
Special Projects Subtotal	201,236	10%
Total	1,952,530	100%

The \$100,000 emergency fund was established to provide immediate financial assistance to emergency medical services provider agencies experiencing unexpected problems that cause the degradation or potential elimination of the provision of emergency medical services. This fund is used to address emergency requests when the grant funding processing deadlines have passed. Applicants for funding under the emergency fund are required to submit an application that clearly outlines the nature of the need, and the department determines awards.

Statewide Funding Projects

The department, in consultation with the State Emergency Medical and Trauma Services Advisory Council, establishes statewide projects that improve emergency medical services and impact all emergency medical service providers in Colorado. The following is a list of

these projects slated for implementation in FY06:

- EMS Data Collection - \$146,236
Each transporting ambulance service is required by statute to submit patient care records to the department. A project was initiated in 1998 to begin development of a prehospital care data collection system. Due to legislative budget constraints, the implementation of this program on a statewide basis has been difficult to accomplish. This project has been reorganized, however, and is making significant progress. These funds, combined with support from the Emergency Medical Services for Children grant, will help the department establish a system to receive specified data from all of Colorado's ambulance services. Currently all goals to date have been accomplished. Continuation of these activities is contingent upon finding a long-term funding source, as current funding is inadequate to sustain the program for more than three years.
- RETAC Forum Project – Statewide Meetings - \$18,000
For the past five years, quarterly RETAC meetings have been held to further the development of the RETACs and offer technical assistance. The department contracts with an outside vendor to coordinate the meetings. Department staff, SEMTAC members, RETAC coordinators, RETAC executive council members, county commissioners and members of the public routinely attend these meetings and provide collective input and direction to support the local implementation of Emergency Medical and Trauma Services System goals. Agendas and minutes of each meeting are posted for the public on the department's Web site.
- Medical Director Training - \$7,000
This grant provides 50 percent tuition assistance for a one-day course for training medical directors and their coordinators. This course is also supported through the section's operational budget in terms of providing faculty and student materials. A portion of these funds will be used to update the course and ensure that it is compliant with current standards of care and information.
- Management Training - \$5,000
Through a contract with the Emergency Medical Services Association of Colorado (EMSAC), this project provides reduced tuition for a management training course for emergency medical services administrators and managers. This project has been received well in prior years and continues to benefit emergency medical service agencies throughout the state.
- Instructor/Coordinator Development Project - \$25,000
The department is responsible for the approval of curricula that qualify individuals to train emergency medical technicians of all levels. This project provides funding for the revision and updating of the emergency medical service Assistant Instructor and emergency medical service Instructor/Coordinator courses that are required for all emergency medical service educators. In addition to the updating of information, both programs will be revised to include presentation via distance education technology, thus

making this program more available to rural training institutions. The department has entered into a contract with a qualified vendor to update and revise both courses. This project will result in the most current educational program being made available to emergency medical service education centers and community colleges.

Regional Emergency Medical and Trauma Advisory Council Development

Summary of Current Legislation

The *Colorado Emergency Medical and Trauma Services Act of 2000* created Regional Emergency Medical and Trauma Advisory Councils (RETACs). These councils combine the efforts of the previously existing Area Trauma Advisory Councils and Regional Emergency Medical Services Councils. The RETACs have the responsibility for creating and supporting a regional implementation plan for delivery of emergency medical and trauma care at the local/county level. This year, the RETACs are charged with implementing processes to monitor the effectiveness of their plans. These efforts will be further refined over the coming year and adjustments will be made as appropriate as data become available. At a minimum, each RETAC must:

- Provide a biennial plan that details the regional emergency medical services plan.
- Provide an annual financial report that details the expenditures of money received.

The State Emergency Medical and Trauma Services Advisory Council reviews the plan and financial reports. There are 11 Regional Emergency Medical and Trauma Advisory Councils (RETAC). Each RETAC consists of a minimum of five counties (Appendices B and C) with the board members being appointed by the counties that make up the region.

Current Funding Distribution

Based on the *Colorado Emergency Medical and Trauma Services Act*, since July 1, 2002, each Regional Emergency Medical and Trauma Advisory Council has received annually \$75,000 plus \$15,000 for each county within a RETAC. These funds are for administrative costs, planning and, to the extent possible, the coordination of services in and between counties. Prior to 2002, these funds were distributed as systems development grants to the Area Trauma Advisory Councils and the Regional Emergency Medical Services Councils and as specific county funding for local emergency medical services planning. Total FY06 funding for the Regional Emergency Medical and Trauma Advisory Council is \$1,785,000.

Trauma Center Designation

Summary of Legislation

In 1995, trauma system legislation created a Trauma System Cash Fund and authorized the

State Board of Health to establish a schedule of fees based on the direct and indirect costs incurred in the designation of trauma centers. The fee schedule was adopted in January 1998, with the collection of fees beginning in April 1998. However, the fee basis did not include the costs associated with rule development or modification; processing of appeals or waiver requests; attorney fees; ongoing monitoring; or provision of technical assistance. These costs are being covered by fee revenue at this time. However, current fee levels may not be adequate to support these activities in the future. The fee basis also did not include and does not fund any of the trauma registry costs.

In Colorado, health care facilities receiving trauma patients by ambulance or other means must participate in the trauma system by agreeing to follow rules regarding the care of those patients. Facilities may choose to be "non-designated" and thus agree not to keep any trauma patients with complex injuries. Facilities, which do agree to care for trauma patients, receive site reviews and are designated by the state as Level I through Level V trauma centers. As of November 1, 2005, there are 67 designated trauma centers in Colorado with the majority of acute care general hospitals and critical access hospitals participating and about half of the community clinics with emergency care also participating.

Since the last report, two facilities, Telluride Medical Center and Keystone Medical Center, have achieved Level V trauma designation status. This speaks to one of the strengths of the system – the active participation of many rural and remote facilities that provide front-line care for rural Coloradans and guests in our state. See Appendices H and I for a listing and map of trauma centers in Colorado.

System development has been furthered this year through the development and clarification of a variety of trauma rules. The goal of this process is to further improve and standardize trauma care in the state. Additionally, the trauma program has actively provided technical assistance to almost every trauma center in the state on a variety of issues that range from orientation of new trauma nurse coordinators at rural hospitals to dealing with physician availability issues. Since the last report, staff members have been on-site at more than 20 facilities, providing technical assistance and regulatory oversight. Current plans include 32 trauma designation site reviews.

Trauma Program staff has worked with the Injury Epidemiology staff to improve various aspects of the Trauma Registry and to seek funds for additional work that remains to be done. As a result, the department received a grant of \$40,000 per year for three years from the Health Resources and Services Administration (HRSA), most of which will be used to fund system quality improvement efforts informed by Trauma Registry data.

Funding Distribution

The FY06 spending authority for designation-related costs and utilization of fee revenue is \$431,830 and includes site review teams; administrative costs, including the cost of providing a state observer; and the indirect costs assessment.

Part II

Evaluation of the Emergency Medical and Trauma Services System

In 1978 and 1989, legislation adopted by the Colorado legislature established several sub-systems, including treatment, transportation, telecommunications, local emergency medical services and documentation, and created the grant program funded by the Emergency Medical Services Account.

In 1995, the trauma system was defined in state statute as including the following sub-systems: injury prevention, communication systems, prehospital care, designated trauma centers, rehabilitative care, access to medical response systems in a disaster, trauma education and research, data collection and analysis, quality improvement systems and regional planning councils.

The *Colorado Emergency Medical and Trauma Services Act of 2000* created the Colorado Emergency Medical and Trauma Services System, integrating the sub-systems and development efforts identified above.

This part of the report describes the status of each of Colorado's emergency medical and trauma services sub-systems listed below and contributions made toward system development by the department's Emergency Medical and Trauma Services Section, working in coordination with the State Emergency Medical and Trauma Services Advisory Council and the Regional Emergency Medical and Trauma Advisory Councils. The sub-systems are as follows:

- Public Education and Information
- Injury Prevention
- Communications Systems
- Training and Certification of Emergency Medical Technicians
- Transportation Systems – Prehospital Care/Transport Protocols and Licensure Standards
- Trauma Center Designation, Acute Care Hospitals and Clinics
- Rehabilitative Care
- Disaster Medical Care
- Education and Research
- Trauma Registry – Prehospital Data Collection
- State and Regional Continuing Quality Improvement Systems
- Planning – State Emergency Medical and Trauma Services Advisory Council and Regional Emergency Medical and Trauma Advisory Councils

Public Education and Information

The department has implemented an effective public education and information program in the Emergency Medical and Trauma Services Section. In July 2005, the section released the

inaugural edition of *On the Scene: Covering EMS in Colorado*, a newsletter targeted specifically toward transport and fire agencies, emergency medical technicians, trauma nurse coordinators, the Regional Emergency Medical and Trauma Advisory Councils (RETACs), the State Emergency Medical and Trauma Services Advisory Council (SEMTAC) and other emergency medical service providers. The newsletter features agency spotlights, regular articles from the section chief and the state medical director, staff and program updates, upcoming events and other timely pertinent emergency medical service-related information. The newsletter serves as a direct communication conduit between the department and emergency medical service providers. The section is also rebuilding and updating its Internet site, releasing a series of informational brochures and issuing an annual update highlighting section achievements and programmatic outcomes.

- Current Activity: Some Regional Emergency Medical and Trauma Advisory Councils have implemented general public information and education programs utilizing existing local funding or through coordination of activities with other local agencies.
- Current Activity: The section has developed and implemented a quarterly electronic newsletter *On the Scene: Covering EMS in Colorado*. Features are the Chief's Corner, State Medical Director's Desk and program updates.
- Current Activity: Through the implementation of Recruitment and Retention mini-grants, several of the Regional Emergency Medical and Trauma Advisory Councils have created regional public information campaigns both to inform the citizens of their areas of EMTS functions and to recruit new health care providers.
- Challenge: Raising community-based awareness about the complexities of the Emergency Medical and Trauma Services System. Identification and maintenance of ongoing funding for this activity.

Injury Prevention

The injury prevention activities of the Emergency Medical and Trauma Services Section are coordinated with the activities of the Injury Section, and specifically the Injury and Suicide Prevention Program, on several fronts. Injury Section staff have made data availability a priority for all constituents, including the EMTS Section. This has allowed EMTS Section staff to provide technical assistance to constituents in finding local data to help select and plan for injury prevention projects.

The Colorado Trauma Network—a group of trauma nurses, registrars, and physicians—hosted a free training on *Evidence-based Injury Prevention Strategies*. The need for this training was identified by EMTS Section staff who recognized that, while trauma centers in Colorado are required to participate in injury prevention activities, only the largest centers have people trained in injury prevention to manage such efforts. This training was presented by Injury and Suicide Prevention staff and provided a wide variety of resources to assist trauma centers in planning programs that have the greatest likelihood of resulting in a reduction in injury rates or injury severity.

The Colorado Emergency Medical Services for Children program, funded by a federal Maternal and Child Health Bureau grant, has collaborated with the Injury Section to provide limited and targeted resources and information to communities regarding pediatric emergencies. In addition, the staff has worked with the Injury Section to improve data collection efforts on traumatic injuries to children.

- **Current Activity:** The department recently released another edition of the comprehensive *Injury in Colorado* report that provides data, some at the county level, on injuries ranging from motor vehicle crashes to suicide and lists suggestions on injury prevention along with resources.
- **Current Activity:** Some Regional Emergency Medical and Trauma Advisory Councils have implemented small-scale injury prevention programs utilizing existing local funding, a successfully funded provider grant or coordination of local activities on a regional basis.
- **Current Activity:** Injury prevention activities are receiving greater attention from some designated trauma centers as trauma nurses are increasing collaborative efforts with other community organizations.
- **Challenge:** Funding remains a barrier to the implementation of both statewide and local injury prevention efforts. Almost all funding sources (both state and federal) are restricted to very specific types of injury prevention; for example, increasing booster seat use. Little, if any, funding is available for communities to implement strategies designed to address the priority needs as identified through local data, such as falls in the elderly population or adult seat belt use.
- **Challenge:** Volunteers or staff with little injury prevention expertise often carry out injury prevention projects. There are many opportunities for the EMTS Section to provide additional technical assistance to these efforts but not enough staff to assist all deserving projects.

Communication Systems – Public Access and Provider Agency Communications

Public access is defined as the ability of an individual to secure prompt and appropriate emergency medical care. For nearly 30 years, 911 has been designated as the national emergency telephone number. The single most important piece of information provided during an emergency call is the location of the person(s) requiring help. At 911 communication centers, the caller's telephone number and location are provided automatically. Such systems are called enhanced 911 or E911. Initially, E911 was available to telephone line phones.

In 1996, the Federal Communications Commission (FCC) took action to improve the E911 service available to cellular telephone users. Wireless E911 is being implemented in two phases. Phase 1 provides a call back number and the location of the cellular tower that received the call to a Public Safety Answering Point (PSAP). Phase 2 requires that callers' latitude and longitude information be provided to the PSAP and, depending upon the

technology used, the location accuracy is within 50 meters to 300 meters of the cellular phone location.

All counties in the state have E911 telephone line services. As of June 2005, 37 counties were E911 wireless Phase 1 compliant, and 17 were E911 wireless Phase 2 compliant.

In addition to regular telephone lines and cellular phones, a third technology has recently begun being used to place telephone calls. This technology, known as Voice over Internet Protocol (VoIP), uses a broadband Internet connection to transport telephone calls. A May 2005, FCC order directs interconnected VoIP providers to supply E911 services to their customers. E911 service for those using VoIP is to be implemented by the end of 2005.

A reliable communications system is an essential component of the overall emergency medical and trauma services system. Recent experiences, such as the World Trade Center and the London attacks, highlight that regular telephone lines and cellular phone services are vulnerable to traffic overload. These public access systems may not be available for emergency medical services use during an emergency. A radio-based communications system that has reliable access and provides interoperability between responding agencies is a necessity for a robust emergency medical services communications system.

The existing Colorado Digital Trunked Radio (DTR) system provides statewide, two-way communications to state government, local government and a limited number of federal government agencies over a shared communications platform. The DTR system is based on Association of Public-Safety Communications Officials (APCO) Project 25 standards. A standards-based system is ranked as the optimum level on the Homeland Security Interoperability Continuum. Standards basing has resulted in multiple manufacturers being able to build equipment for use on the DTR system and other APCO 25 systems. Appendix G outlines the present coverage of the DTR system throughout the state.

The DTR system consists of over 100 tower sites throughout the state that are spread across three zones. The zones are networked to form the system. Radio traffic is able to pass between the zones. This allows a radio user to communicate to another user across Colorado. Appendix G shows the current DTR coverage in Colorado.

A recent Department of Local Affairs (DOLA) Wireless Interoperability Network (WIN) grant has made \$20 million available to continue the DTR system infrastructure build out. This will fund approximately 55 additional tower sites. The majority of the tower sites will be constructed in the western and southwestern areas of the state. Future plans include adding a fourth zone controller, and perhaps a fifth zone controller, to increase the system's capacity.

The EMS Provider Grants Program has helped to improve and expand EMS communications throughout the state. Funding has provided equipment to agencies so that they can utilize the DTR system and keep existing legacy systems operational.

The department, the State Emergency Medical and Trauma Services Advisory Council and the liaison from the Colorado Division of Information Technologies, Telecommunications Section, continue to provide technical assistance and financial resources to local communities in improving radio communications.

- **Current Activity:** The DTR system has zone controllers located in the Denver metropolitan area, north central and western Colorado. The feasibility of adding zone controllers 4 and 5 is being evaluated. Build out of tower sites funded by the DOLA WIN grant is underway and is expected to continue into 2006.
- **Challenge:** The current utilization of cell phones whereby ambulance services communicate directly with hospitals is a vulnerable point in the response system.
- **Challenge:** Require every Trauma center designated Level I through Level V to have installed, at a minimum, one DTR system radio to be used for transport communications and during large-scale emergencies.

Training and Certification of Emergency Medical Technicians

The department processes approximately 4,000 applications for certification or re-certification of emergency medical technicians each year as well as the certification and support of over 100 training centers statewide (Appendix K). This activity is one of the fundamental requirements for creating and maintaining a state Emergency Medical and Trauma Services System. Although the challenges faced by this system in 2004 highlighted significant shortcomings at that time, this function has been fully reorganized and today provides accurate, timely, and appropriate certification services to protect the public and provide quality service to the Emergency Medical and Trauma Services System.

Following the implementation of rules that removed the direct responsibility of emergency medical technician certification testing from the department, steps were taken to increase efficiency and improve accuracy of all certification activities. Two general professionals and two administrative assistants presently staff the education and certification program within the EMTS Section. Quality assurance policies have been implemented, and since July 2004, 100 percent accuracy in the certification process has been realized. Working closely with the National Registry of Emergency Medical Technicians, which is now responsible for the administration of initial certification examinations in Colorado, processes have been streamlined, a new electronic database has been implemented, and all cases of suspicious certifications have been appropriately investigated and closed. Each of these activities has been developed and implemented in concert with the Certification Task Force of the State Emergency Medical and Trauma Services Advisory Council.

Since the shift from a state-administered certification test to the National Registry examination was accomplished in a relatively short period of time, and understanding that many emergency medical technician students were in training at the time of this change, the Statewide Emergency Medical and Trauma Services Advisory Council approved \$50,000 from the Emergency Medical Services Provider Grants funds to provide financial support to

students in meeting this new requirement. These funds were made available to any emergency medical technician student who successfully completed the National Registry of EMTs examination to reimburse the costs of the examination during FY05. Despite a concentrated effort to inform all emergency medical services training centers, Regional Emergency Medical and Trauma Advisory Councils, and emergency medical technicians of this opportunity, less than \$1,000 was reimbursed to eligible applicants. The remaining funds were reverted into the grant fund for re-allocation in FY06.

Although all of the recommendations regarding initial certification requirements that were forwarded by the Certification Task Force in 2004 have been implemented, an overall update to the regulations for emergency medical technician certification is presently underway. These changes will ensure that all regulations are in concert with the current methodology of both initial certification and recertification requirements. This process provides an opportunity to ensure that disciplinary rules are consistent with the requirements of SB 05-231. The Emergency Medical and Trauma Services Section has implemented policies regarding the process of investigating complaints against emergency medical technicians, training institutions and trauma centers. By reorganizing existing resources, a half-time policy analyst has been added to the Emergency Medical and Trauma Services Section staff to provide a coordinating point for all investigative and enforcement actions. This has resulted in an increased ability of the department to react quickly and appropriately to complaints regarding emergency medical and trauma service providers.

The department also approves all institutions providing emergency medical technician training and provides instructor training programs and curricula approved by the State Emergency Medical and Trauma Services Advisory Council and the Colorado Board of Medical Examiners.

Emergency medical care involves the delivery of care by non-physician providers outside the traditional setting of a hospital or physician's office. In Colorado, every emergency medical technician who is providing patient care services is required to be supervised by a medical director, who provides direction for the delivery of care. The department routinely coordinates with the Colorado Board of Medical Examiners in the review and approval of medical director applications and provides training for physicians in the supervision of emergency medical services personnel. The medical director position within the department was created in 1990. The state Medical Advisory Group (Appendix F), founded in 1995, was developed to provide additional physician input to the department and the Colorado Board of Medical Examiners. In an effort to codify the Medical Advisory Group and clarify its role and responsibility, the State Emergency Medical and Trauma Services Advisory Council has recommended the development of a shared process between the department and the Board of Medical Examiners to formalize the appointment process, term length and role of this important technical advisory body. These recommendations are presently being finalized and will be implemented by January 2006.

The State Emergency Medical and Trauma Services Advisory Council and the department dedicate a small amount of funds from the Emergency Medical Services Provider Grants

program for a recruitment and retention program designed to assist local emergency medical service agencies in assessing current workforce needs and in establishing a plan for creation of a stable workforce. The ability to train, to retain and to provide continuing education to rural and frontier services continues to be the primary focus of the recruitment and retention program.

- Current Activity: The department provides a one-day workshop for physician advisors, using grant funds to offset attendees' tuition.
- Current Activity: Modifications are being made to the rules, procedures and requirements for both initial certification and certification renewal.
- Current Activity: Timely and accurate handling of complaints regarding emergency medical technicians and appropriate disposition of cases in a manner that is focused on the protection of patients and service to stakeholders continues.
- Current Activity: The department continues to provide technical support and advice to emergency medical service stakeholders in the development of education programs to support the life-long learning process of emergency medical technicians.
- Current Activity: A special projects contract to update the Colorado emergency medical services instructor/coordinator training program and to ensure its distribution to training centers is administered by the department.
- Challenge: The shortage of qualified and interested physicians in rural and frontier communities to serve as medical directors continues to be a challenge.
- Challenge: There is insufficient support to maintain a grant program to address workforce needs of local agencies.
- Challenge: While initial training costs have been covered by various federal grants, the maintenance costs associated with preparedness training are expected to be an ongoing challenge.

Transportation Systems – Prehospital Care/Transport Protocols and Licensure Standards

Safe, reliable ambulance transportation is a critical sub-system of an effective emergency medical and trauma services system. The transportation component includes the regulation, inspection and licensure of ambulance services and vehicles; provision for uniform coverage 24 hours a day; a protocol for air medical dispatch; and a mutual aid plan. Providing a minimum level of emergency medical and trauma care to all residents and visitors is the primary objective of this sub-system.

Authority for the regulation, inspection and licensure of ground ambulances is the responsibility of each respective Colorado county or joint city and county process. The department, with advice from the State Emergency Medical and Trauma Services Advisory Council and the Regional Emergency and Trauma Advisory Councils, has completed regulations, pursuant to the *Colorado Emergency Medical and Trauma Services Act of 2000*, that set minimum standards for Colorado counties to follow in the local licensure of ambulance services. The Board of Health adopted these regulations in July 2005, and the

Emergency Medical and Trauma Services Section is providing technical assistance to Colorado counties in their implementation. Statute establishes minimum requirements for ambulance attendants such as driver's licensure and certification. For the trauma patient, specific minimum standards have been adopted for ambulance and first response unit staffing, agency response and scene times, and patient triage and transport destination protocols.

The *Colorado Emergency Medical and Trauma Services Act of 2000* also created authority for the department to develop minimum license standards for air ambulances in Colorado. Through the development process of regulations addressing this authority, the Colorado air ambulance community advocated the passage of HB 05-1370 that amended this authority to include mandatory national accreditation as the basis for air ambulance licensing. As a result of the passage of this bill, the Board of Health is considering regulations that require all air ambulance services that transport patients within or from the state of Colorado to maintain national accreditation in order to be licensed by the department. The licensing process will be started in early 2006, and mandatory accreditation will become a reality by July 1, 2007.

- Current Activity: Minimum standards for the operation of air ambulance services have been drafted and are scheduled for adoption by the State Board of Health by January 2006.
- Current Activity: The State Board of Health adopted minimum standards for the licensure of ground ambulances by local government in July 2005.
- Current Activity: Sample templates for county licensure of ground ambulances are being developed, and the department is providing technical assistance to counties in the creation of local resolutions.
- Challenge: No entity is identified in statute as being responsible for ensuring the provision of emergency medical transportation services (ground ambulance services) to the citizens of, or visitors to, the state of Colorado. Some geographic areas of the state are technically "uncovered," creating financial as well as response challenges to nearby provider agencies.

Trauma Center Designation, Acute Care Hospitals and Clinics

"Getting the right person to the right facility in the right amount of time" is the goal of the trauma system. Seriously injured patients in Colorado may face barriers of distance, weather and geography in obtaining the care they need. The trauma designation program works with facilities, large and small, across the state to improve their capacity to care for trauma patients. Beginning with extensive technical assistance and mentoring offered to facilities and ending with the regulatory function of trauma designation, the program seeks to assure that trauma care standards are met in each facility. From the facility perspective, designation of hospitals and clinics as trauma centers identifies those facilities that have made a commitment to maintain a level of trauma care resources, including trained staff, equipment and policies and procedures.

The department began facility designation in June 1998 and has designated 67 trauma centers since that time. Appendices H and I provide a list and a map depicting geographic distribution of current designated trauma centers.

- Current Activity: The staff has prepared a site review schedule for the next three-year trauma designation cycle.
- Current Activity: Staff is providing technical assistance to three currently non-designated facilities that have expressed interest in joining the trauma system over the next year.
- Current Activity: A statewide assessment of progress in the emergency medical and trauma system will be completed soon as a requirement of a grant. This will allow staff and stakeholders to compare Colorado's progress to the progress of other states and to national benchmarks.
- Challenge: There is insufficient information presently available to answer many of the questions regarding systemwide quality improvement. Efforts to implement a truly standardized statewide data gathering system must continue to be led by the department.
- Challenge: Staffing is inadequate to complete important and necessary tasks within the program, such as expanded rule and policy development, system quality assessment activities and data analysis.
- Challenge: Statutory and regulatory modifications would be needed to enable designated trauma centers to have access to the written results of site reviewers without compromising the confidentiality of the findings.

Rehabilitative Care

Adequate rehabilitative care is critical to the goal that each trauma patient returns to a productive life. In Colorado's system, rehabilitation services are either provided by the trauma center or the trauma center transfers the patient to an appropriate facility. There are some very well respected rehabilitation facilities in Colorado capable of providing a wide range of services. However, not all Coloradans have access to all services because many are uninsured or have insurance that dictates the scope of rehabilitation available.

- Current Activity: The department requires that trauma centers maintain transfer agreements for rehabilitation services that they do not provide. These agreements are produced at trauma site reviews. In addition, patient charts are reviewed during the trauma designation surveys, and experienced clinicians check to see that appropriate rehabilitative care is recommended.
- Challenge: As is prevalent across the country, the lack of adequate insurance coverage for rehabilitation in most health plans continues to hinder patient access to these services.

Disaster Medical Care

Regional coordination of the medical care component of local disaster plans helps ensure the effective utilization of resources to meet patients' needs in the event of a mass-casualty or bio-medical disaster. Coordination of these resources is specifically defined in statute as the responsibility of the counties. The State Emergency Medical and Trauma Services Advisory Council has assisted the department in the development of a Mass Casualty Annex to the All Hazards State Emergency Operations Plan. The Regional Emergency Medical and Trauma Advisory Councils will continue to work toward coordinating the medical components of these local plans and will assist in creating them where needed, for both mass-casualty and bioterrorism response. Specific efforts have been made over the past year to formalize and increase participation and communication between the Regional Emergency Medical and Trauma Advisory Councils and Colorado's All Hazards regions. The close coordination between emergency managers and the Emergency Medical and Trauma Services System is vital to the success of these efforts. Regional planning will mitigate the impact of the lack of centralized and coordinated communication systems and community responses to either of these types of events.

Homeland Security Presidential Directive 5 requires federal departments and agencies to make adoption of the National Incident Management System (NIMS) by state and local organizations a condition for federal preparedness assistance through grants, contracts, and other activities beginning in FY05. To help meet this need, the United States Fire Administration (USFA) and the National Highway Traffic Safety Administration (NHTSA) provided assistance to the Emergency Medical and Trauma Services Section for two staff members to become certified as NIMS Trainers in June 2005. The Emergency Medical and Trauma Services Section and the Colorado Division of Fire Safety collaborate on providing NIMS programs throughout Colorado.

- Current Activity: Regional Emergency Medical and Trauma Advisory Councils are coordinating with the State All Hazards Advisory Committee and local and federal agencies to generate regional emergency management plans that include the medical component in the event of an All Hazards response.
- Current Activity: The department continues to work with the State Emergency Medical and Trauma Services Advisory Council's Mass Casualty Incident plan to ensure ongoing consistency with the State Emergency Operations Plan.
- Current Activity: Section has two certified NIMS Trainers available for requested training programs.
- Current Activity: Staff attends and participates in State All Hazards Advisory Committee.
- Current Activity: Regional Emergency Medical and Trauma Advisory Councils are providing emergency medical services transport information for inclusion in the Resource Ordering and Status System (ROSS) database for the state.
- Challenge: Resources must be identified in order to further develop and maintain the medical annex or medical response for the State Emergency Operations Plan.
- Challenge: Medical responses throughout the state to either a mass-casualty or

bioterrorism event must be continue to be coordinated at the local, regional and state levels.

Education and Research

Education and research in emergency medical and trauma clinical care ensures both the continuous identification of improvements to emergency medical and trauma patient care as well as information dissemination in the training of emergency medical and trauma care clinicians. In Colorado, trauma education and research are requirements of the Level I and Regional Pediatric Trauma Centers.

- Current Activity: Education and research in trauma clinical care are the responsibilities of the teaching hospitals that also are trauma centers.
- Current Activity: The Emergency Medical and Trauma Services Section is managing a contract to update and improve the training course for emergency medical services instructors/coordinators to ensure that this course is consistent with current research and educational methodology.
- Current Activity: The Emergency Medical and Trauma Services Section maintains an ongoing communication process among the state's trauma centers, academic institutions, and other sources of research to provide a conduit of information to all components of the Emergency Medical and Trauma Services System as new research develops improved techniques in medical care.
- Current Activity: Technical assistance and support to educational institutions and organizations throughout Colorado by the Emergency Medical and Trauma Services Section. These activities include the support of a statewide emergency medical services training committee, providing technical materials to educational institutions and other appropriate activities to ensure the dispersal of educational information.

Trauma Registry – Prehospital Data Collection

A comprehensive evaluation program is required in order to effectively plan, implement and monitor a statewide emergency medical and trauma care system. This is done with an effective and sufficiently funded trauma registry, prehospital data collection system and appropriate resources to analyze the data in order to improve the system and patient care.

The Colorado Trauma Registry is a unique database designed to capture information about the mechanisms of injury and the care of the trauma patient. Each licensed facility, clinic or prehospital provider that provides service or care to trauma patients currently is required to submit a limited set of patient-specific information to the department. These data, combined with the Colorado Hospital Association's discharge dataset and the Colorado Vital Records Section's death files, are used to evaluate and monitor the emergency medical and trauma care system. The dataset also will provide information on the system's response to trauma patients and their needs.

Collection and analysis of information from ambulance agencies will allow analysis of out-of-hospital care, and, when combined with data from the in-hospital component, can provide an overall picture of the patient care continuum. The department and the State Emergency Medical and Trauma Services Advisory Council have provided limited technical assistance and resources to local and regional programs to develop their information systems. The department has made progress in empowering local agencies to collect and analyze data at the local level. The State Emergency Medical and Trauma Services Advisory Council approved the EMS Data Project funding to continue this project. This year's work is one of transition, with the goal of providing alternative methods for data collection by ambulance agencies by the end of FY06. A contract was entered into with the Western Regional Emergency Medical and Trauma Advisory Council to provide technical assistance to all ambulance agencies that are presently submitting data to the department. This contract provides support to those agencies that will be participating in a Web-based pilot project being developed by the Health Facilities and Emergency Medical Services Division. Staff is currently developing this new Web-based data collection system through a cooperative process with a number of agency users and field personnel and will begin initial field testing of the application within the first six months of FY06.

- Current Activity: With guidance from the Emergency Medical and Trauma Services Section, the Western Regional Emergency Medical and Trauma Advisory Council is providing technical assistance in the development of a Web-based data collection system for emergency medical services agencies throughout the entire state.
- Current Activity: The Emergency Medical and Trauma Services Section continues to support data collection activities by the provider agencies in the six Regional Emergency Medical and Trauma Advisory Councils that have participated in this effort over the past several years.
- Challenge: Future capacity of the Trauma Registry and the Emergency Medical Services Data Collection System is contingent upon finding ongoing funding.

State and Regional Continuing Quality Improvement (CQI) Systems

System assessment and evaluation at the state, regional and provider levels ensure appropriate patient care and identify best practice models to be used to further reduce death and long-term disability as a result of an injury or serious illness. Minimum continuing quality improvement requirements remain under development for statewide and regional implementation as resources become available. The Colorado Trauma Registry data, which will continue its work as long as resources exist to manage the registry, will assist in the evaluation of both the regional and the statewide emergency medical and trauma services systems.

Confidentiality was secured for system assessments during the 1999 legislative session. The *Colorado Emergency Medical and Trauma Services Act of 2000* broadened this evaluation and assessment system to include evaluation of the system's response to the medical patients

up to the point of prehospital disposition.

- Current Activity: Regional Emergency Medical and Trauma Advisory Councils and staff will continue working toward the completion of the Emergency Medical and Trauma Services System's continuing quality improvement plan. Implementation is expected by September 2006.
- Challenge: We must ensure opportunities for involvement of both prehospital and acute care stakeholders in the development of the state and regional continuing quality improvement plan.

Planning – State Emergency Medical and Trauma Services Advisory Council and the Regional Emergency Medical and Trauma Advisory Councils

Planning and coordination in development of the state system is accomplished with advice from the State Emergency Medical and Trauma Services Advisory Council.

Due to variations in the demographics and geography of Colorado, local participation and expertise for identifying problems and designing solutions for local area plans are required. The passage of the *Colorado Emergency Medical and Trauma Services System Act of 2000* created the Regional Emergency Medical and Trauma Advisory Councils, established requirements for regional planning and provided a minimum level of funding beginning in FY02. Eleven Regional Emergency Medical and Trauma Advisory Councils were created across the state by local government in 2001 to ensure local participation and coordination in regional system planning.

- Current Activity: The State Emergency Medical and Trauma Services Advisory Council is developing a plan to begin a comprehensive strategic planning process to be initiated during FY06. This plan will include opportunities for input by emergency medical service agencies, fire departments, trauma centers and Regional Emergency Medical and Trauma Advisory Councils.
- Challenge: Given resource constraints, the department is able to provide only limited technical assistance to the Regional Emergency Medical and Trauma Advisory Councils.

Part III

Challenges for Colorado's Emergency Medical and Trauma Services System

Emergency Medical Technician Certification

The certification system for emergency medical technicians in Colorado has significantly improved accuracy and customer service over the past year. These efforts will continue to be monitored as part of an ongoing quality improvement process. Updating the comprehensive regulations that govern the activities of this program is one of the priorities for the coming year. Methods to streamline the process of emergency medical technician certification to increase levels of security and to improve service to individual agency providers are also areas of focus.

As these improvements continue to be initiated and monitored, the process for the accurate storage of paper files presents a challenge. As the numbers of certified emergency medical technicians continues to grow, additional space with adequate storage systems must be addressed. The program anticipates that the criminal background check process by the Colorado Bureau of Investigation will improve over the next year. If this process is successful, it will reduce the turn-around time in the certification of emergency medical technicians as well as potentially decrease the amount of paper.

Funding

The amount of revenue generated from the Emergency Medical Services Account continues to be of concern for the program in coming years. The program is operating within a very small margin, and a small shift in expenses or revenue can easily create an unexpected shortfall. The department and the State Emergency Medical and Trauma Services Advisory Council will continue to monitor the situation and be prepared to make adjustments as needed in the grants program, regional funding, certification, training and other program activities.

Preparedness-Mass Casualty Plans

Additionally, given the status of a potential threat to our state and nation, ongoing coordination between state and local agencies in the development and maintenance of state and local mass casualty plans, which make up the medical annex of a state or local emergency management plan, is essential. The continued integration of coordination activities between the Emergency Medical and Trauma Services System and Colorado's All Hazards regions is vital to the overall preparedness of Colorado.

Appendices

**State Emergency Medical And Trauma Services
Advisory Council
November 2005**

Appointed Member	Representing	RETAC
A. Daniel Barela	Member of the general public from a rural area	Western RETAC
Denis Bensard, M.D.	Board certified physician certified in pediatrics or a pediatric subspecialty	Mile High RETAC
Scott Bourn, R.N.	Officer or employee of a public provider of prehospital care	Mile High RETAC
Nancy Carrington, R.N.	Trauma nurse coordinator	Northeastern RETAC
Chris Cribari, M.D.	Board certified surgeon providing trauma care at a Level II Trauma Center	Northeastern RETAC
David Deaver III, M.D.	Board certified surgeon providing trauma care at a Level III Trauma Center	Southwest RETAC
Hannah Foley, R.N., N.P.	Registered nurse involved in rural emergency medical and trauma services care	Foothills RETAC
Dwight Gardner	County commissioner, or council member, representing a rural county or city and county	Southeast RETAC
Karl Gills	Administrative representative of a rural trauma center	Northwest RETAC
Pam Gripp	Officer or crew member of a volunteer organization who provides prehospital care	San Luis Valley RETAC
William Hall, M.D.	Board certified emergency physician	Northwest RETAC
Robert Hawkins	Representative of a government provider of prehospital care	Mile High RETAC
Richard Kinser	Officer or employee of a private provider of prehospital care	Western RETAC
John Nichols, M.D., Ph.D.	Board certified neurosurgeon involved in providing trauma care at a Level I or II Trauma Center	Mile High RETAC
Daniel J. Noonan	Fire chief of a service that provides prehospital care in a rural area	Southwest RETAC
Kathay Rennels	County commissioner, or council member, representing an urban county or city and county	Northeastern RETAC
Ira "Jerry" Rhodes	Fire chief of a service that provides prehospital care in an urban area	Mile High RETAC
David Ross, M.D.	Licensed physician who is a prehospital medical director	Mile High RETAC
Wade Smith, M.D.	Board certified surgeon providing trauma care at a Level I Trauma Center	Mile High RETAC
Kathy "Lynn" Stevens, R.N.	Flight nurse of an emergency medical service air team or unit	Southern RETAC
Nancy Stuart	County commissioner, or council member, representing a rural county or city and county	Foothills RETAC
Michelle Sweeney, M.D.	Member of the general public from an urban area	Southern RETAC
Chuck Vale	County emergency manager	Northwest RETAC
Mary White	Administrative representative of an urban trauma center	Mile High RETAC
John Woodland, M.D.	Regional council chair	Central Mountain RETAC

State Emergency Medical And Trauma Services
 Advisory Council
 November 2005

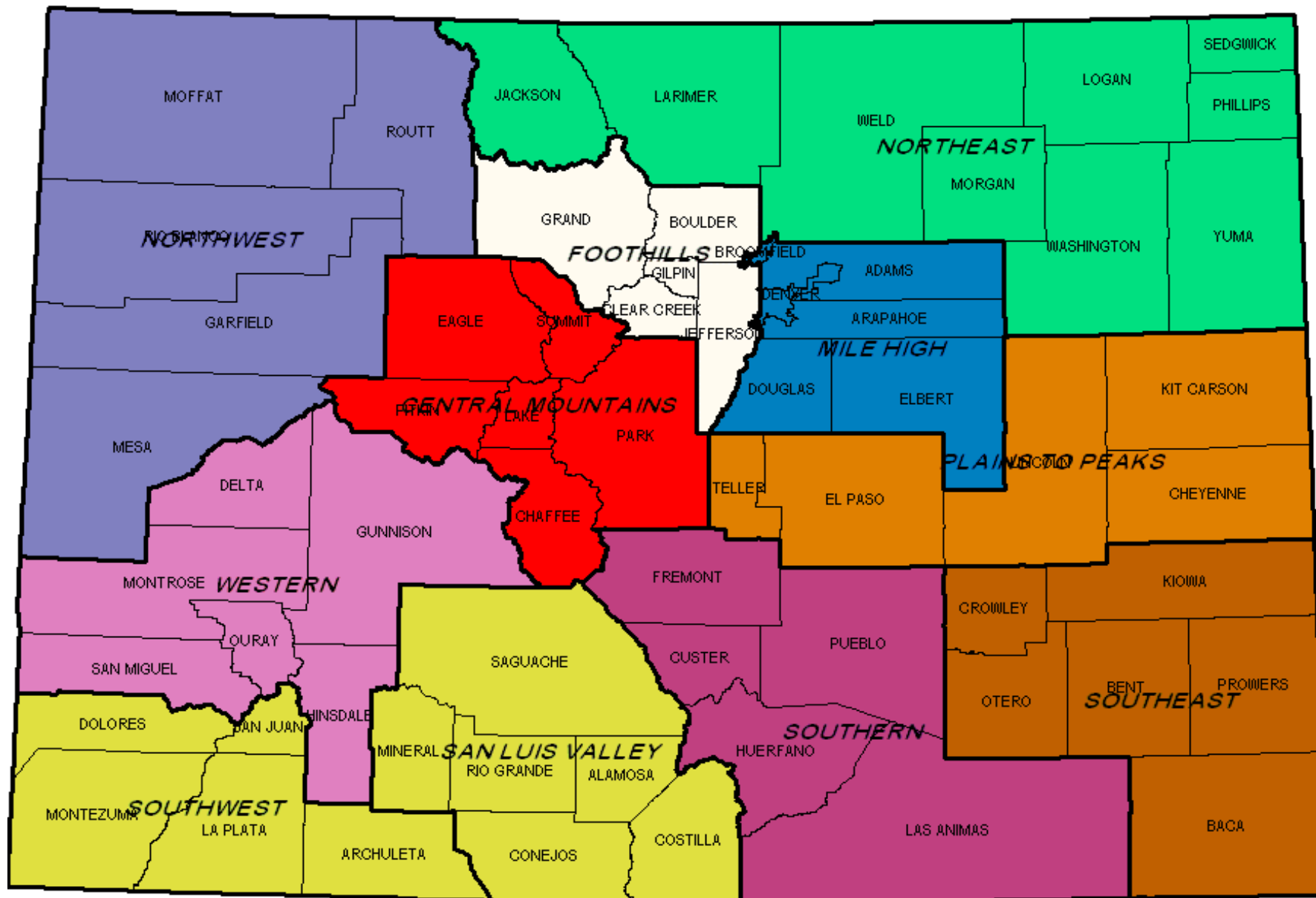
Ex-officio Member	Representing
Open	Member of the Colorado Coroners Association, as selected by the association
Michael Carter	Director of the state board for community colleges and occupational education or the director's designee
Ron Lutz	Manager of telecommunication services of the Colorado information technology services in the Department of Personnel, General Support Services, or the manager's designee
D. Randy Kuykendall	Executive Director of the Department of Public Health and Environment or designee
George Atencio	Director of the office of transportation safety in the Department of Transportation or designee
Sheriff Don Krueger	Representative of the County Sheriffs of Colorado
Captain Scott Friend	Representative of the Colorado State Patrol



Colorado Department
of Public Health
and Environment

Regional Emergency Medical and Trauma Advisory Councils

November 2005



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Mile-High RETAC Chairman

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Emergency Medical Services Provider Grants Awards

Fiscal Year 2005-2006

Agency Name	Funds Awarded	Category Funded
Adams County Communications Center	\$2,335.00	EMS Equipment
Bennett Fire Protection District #7	\$8,804.00	EMS Equipment
Bent County Ambulance Service	\$8,040.00	Training
Beulah EMS	\$1,962.50	Training
Boulder Mountain Fire Protection District	\$1,830.50	EMS Equipment
Burning Mountains Fire Protection District	\$4,048.88	EMS Equipment
Byers Rescue Squad	\$4,173.00	Communications
Cascade Volunteer Fire Department	\$2,811.99	EMS Equipment
Central Orchard Mesa Fire Protection District	\$785.00	EMS Equipment
Chaffee County Emergency Medical Services	\$6,649.25	EMS Equipment
City of Federal Heights	\$20,000.00	Defibrillation Equip
City of Federal Heights	\$3,122.50	EMS Equipment
City of Lamar Ambulance Service	\$10,500.00	Defibrillation Equip
City of Steamboat Springs	\$3,000.00	Training
City of Wray	\$33,685.00	Vehicle
Clear Creek Ambulance	\$33,000.00	Vehicle
Clifton Fire Protection District	\$38,407.00	Vehicle
Colorado Mountain College	\$6,440.10	EMS Equipment
Colorado Northwestern Community College	\$31,375.26	Training
Crowley County Ambulance Service	\$2,800.00	Training
Crowley County Ambulance Service	\$24,213.00	Defibrillation Equip
Custer County Ambulance	\$9,510.00	Training
Custer County Ambulance	\$4,210.00	EMS Equipment
Del Norte Community Ambulance, Inc.	\$60,405.80	Vehicle
Delta County Ambulance District	\$30,744.00	Defibrillation Equip
Delta Montrose Technical College	\$40,948.00	Training
EMD of Colorado	\$24,271.52	Data Collection
Fairmount Fire Protection District	\$9,600.00	Training
Florissant Fire Protection District	\$1,085.00	EMS Equipment
Grand County Government	\$9,225.00	Training
Hasty-McClave Ambulance Service	\$4,220.04	EMS Equipment
Heart of The Rockies Regional MCF	\$5,048.12	Communications
Hinsdale County	\$12,300.00	Defibrillation Equip
Hinsdale County	\$4,585.00	Training
Huerfano County	\$46,897.00	Vehicle
Kim Area Volunteer Fire Dept and QRT	\$46,163.20	Vehicle
Lake Dillon Fire Protection District	\$12,487.50	Extrication Equip
Lands End Fire Protection District	\$20,250.00	Defibrillation Equip
Leadville-Lake County Fire Rescue	\$11,036.05	EMS Equipment
Leadville-Lake County Fire Rescue	\$11,199.00	Communications
Lefthand Fire Protection District	\$3,051.00	Communications
Monte Vista Fire Department	\$13,283.50	Extrication Equip
Morgan Community College	\$56,630.00	Training

Morgan County Ambulance Service	\$1,298.88	Communications
Morgan County Ambulance Service	\$44,445.88	Vehicle
Mountain Communities Fire Protection District	\$937.50	Training
Mountain Communities Fire Protection District	\$1,835.67	EMS Equipment
North Central Fire Protection District	\$2,443.00	Communications
North Central Fire Protection District	\$6,331.50	EMS Equipment
North Metro Fire Rescue District	\$19,000.00	Defibrillation Equip
North Metro Fire Rescue District	\$49,024.00	Vehicle
North Park Hospital District	\$4,000.00	EMS Equipment
North Routt Fire Protection District	\$3,307.22	Defibrillation Equip
North Washington Fire Prot Dist Amb Enterprise	\$6,985.00	EMS Equipment
Northeast Teller Country Fire Protection District	\$7,233.00	Data Collection
Northeastern Junior College	\$19,368.58	Training
Northwest Fremont EMS, Inc.	\$455.00	Training
Northwest Fremont EMS, Inc.	\$1,705.92	EMS Equipment
Norwood Ambulance	\$2,525.00	Training
Norwood Ambulance	\$604.00	EMS Equipment
Olathe Fire Protection District, EMS Division	\$10,822.23	Defibrillation Equip
Ouray County Emergency Medical Services	\$2,300.00	Communications
Ouray County Emergency Medical Services	\$4,127.50	Defibrillation Equip
Plains To Peaks RETAC	\$2,500.00	Injury Prevention
Plateau Valley Fire District	\$8,448.00	Training
Plateau Valley Fire District	\$1,250.00	Communications
Pleasant View Fire District	\$970.00	Communications
Poudre Canyon Fire Protection District	\$7,448.00	Training
Poudre Canyon Fire Protection District	\$52,400.00	Vehicle
Rio Blanco Fire Protection District	\$43,147.00	Vehicle
Rocky Ford Emergency Service	\$38,407.00	Vehicle
San Juan Basin Technical College	\$120,205.00	Training
San Juan Basin Technical College	\$2,215.18	EMS Equipment
Sedgwick County Ambulance Service	\$6,420.00	Training
Southeast Colorado Hospital Ambulance Service	\$30,424.17	Defibrillation Equip
Southwest Teller County Hospital District EMS	\$7,925.00	Data Collection
Springfield EMS Association, Inc.	\$13,597.04	Training
The State of Colorado, Front Range	\$5,884.80	Training
Thompson Valley Health Services District	\$37,352.78	Defibrillation Equip
Town of Silt Volunteer Ambulance	\$40,230.00	Vehicle
Trinidad Ambulance District	\$50,107.00	Vehicle
Trinidad State Junior College	\$58,875.00	Training
Upper Pine River Fire District	\$14,228.00	Defibrillation Equip
Walsh Hospital District	\$43,147.00	Vehicle
Weisbrod Memorial Hospital	\$42,044.80	Vehicle
Weld County Paramedic Services	\$2,375.00	EMS Equipment
Weld County Paramedic Services	\$76,814.00	Vehicle
Wet Mountain Fire Protection District	\$2,850.00	Training
Yampa Fire Protection District	\$43,147.00	Vehicle

**Emergency Medical Services Provider Grants
Awards**

\$1,626,294.36

Emergency Medical Services Recruitment and Retention Grants Awards

Fiscal Year 2005-2006

Agency Name	Funds Awarded
Bent County	\$5,000.00
Chaffee County EMS	\$1,500.00
Lamar Ambulance Svc	\$1,500.00
Limon Ambulance	\$1,500.00
Morgan County Ambulance Svc	\$1,500.00
St. Vincent Hospital Ambulance Svc	\$3,000.00
San Luis Valley RETAC	\$3,575.00
Silt/West Care Ambulance	\$1,500.00
Southeastern CO RETAC	\$2,905.00
Southwestern Regional EMS	\$3,020.00
Total	\$25,000.00

Regional Emergency Medical and Trauma Advisory Councils
Funding Summary November 2005

RETAC Name	Participating Counties	Funding
Central Mountains RETAC	Chaffee, Eagle, Lake, Park, Pitkin, Summit	\$165,000.00
Foothills RETAC	Boulder, Clear Creek, Gilpin, Grand, Jefferson	\$150,000.00
Mile High RETAC	Adams, Arapahoe, Broomfield, Denver, Douglas, Elbert	\$165,000.00
Northeastern RETAC	Jackson, Larimer, Logan, Morgan, Phillips, Sedgewick, Washington, Weld, Yuma	\$210,000.00
Northwest RETAC	Garfield, Mesa, Moffat, Rio Blanco, Routt	\$150,000.00
Plains to Peaks RETAC	Cheyenne, El Paso, Kit Carson, Lincoln, Teller	\$150,000.00
San Luis Valley RETAC	Alamosa, Conejos, Costilla, Mineral, Rio Grande, Saguache	\$165,000.00
Southeast CO RETAC	Baca, Bent, Crowley, Kiowa, Otero, Prowers	\$165,000.00
Southern CO RETAC	Custer, Fremont, Huerfano, Las Animas, Pueblo	\$150,000.00
Southwest RETAC	Archuleta, Dolores, La Plata, Montezuma, San Juan	\$150,000.00
Western RETAC	Delta, Hinsdale, Gunnison, Montrose, Ouray, San Miguel	\$165,000.00

Total RETAC Funding

\$1,785,000.00

Medical Advisory Group

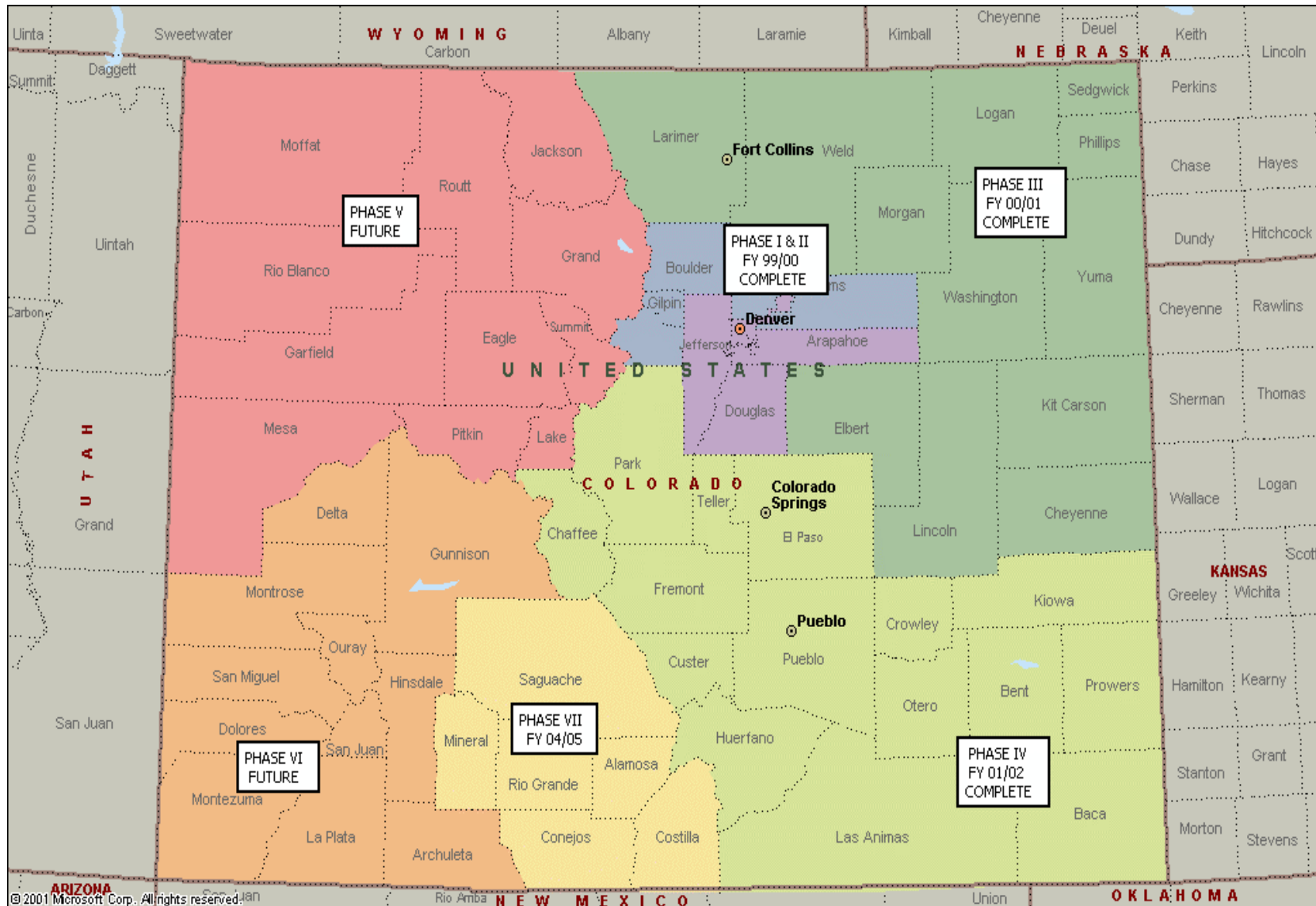
November 2005

Representation	Medical Advisor
Rural	David Cionni, M.D., F.A.C.E.P. PO Box 770520 Steamboat Springs, Colorado 80477
Urban	John A. Collins, M.D. , F.A.C.S. 1148 East Elizabeth Fort Collins, Colorado 80524
Urban	Chris Colwell, M.D. 777 Bannock Street Denver, Colorado 80204
Urban	Marilyn J. Gifford, M.D. 1400 East Boulder Street Colorado Springs, Colorado 80909
Rural	William Hall, M.D. 2635 N 7 th Street Grand Junction, CO 81501
Urban	Mark Kozlowski, M.D. 300 East Hampden, Suite 100 Englewood, Colorado 80246
Rural	Dan Noonan 44301 US Highway 550 Durango, Colorado 81301
Urban	David Ross, D.O. 2215 N Cascade Avenue Colorado Springs, CO 80907
Rural	Timothy Zimmerman, EMT-P P.O. Box 708 Fredrick, Colorado 80533

Colorado Department of Public Health and Environment Staff

Fred Severyn, M.D.
Chairman, Medical Advisory Group
Colorado State Emergency Medical Services Medical Director
4300 Cherry Creek Drive South, A-2
Denver, Colorado 80246

Digital Trunked Radio System Phase Implementation Schedule Map As of 12/04



Colorado Designated Trauma Centers

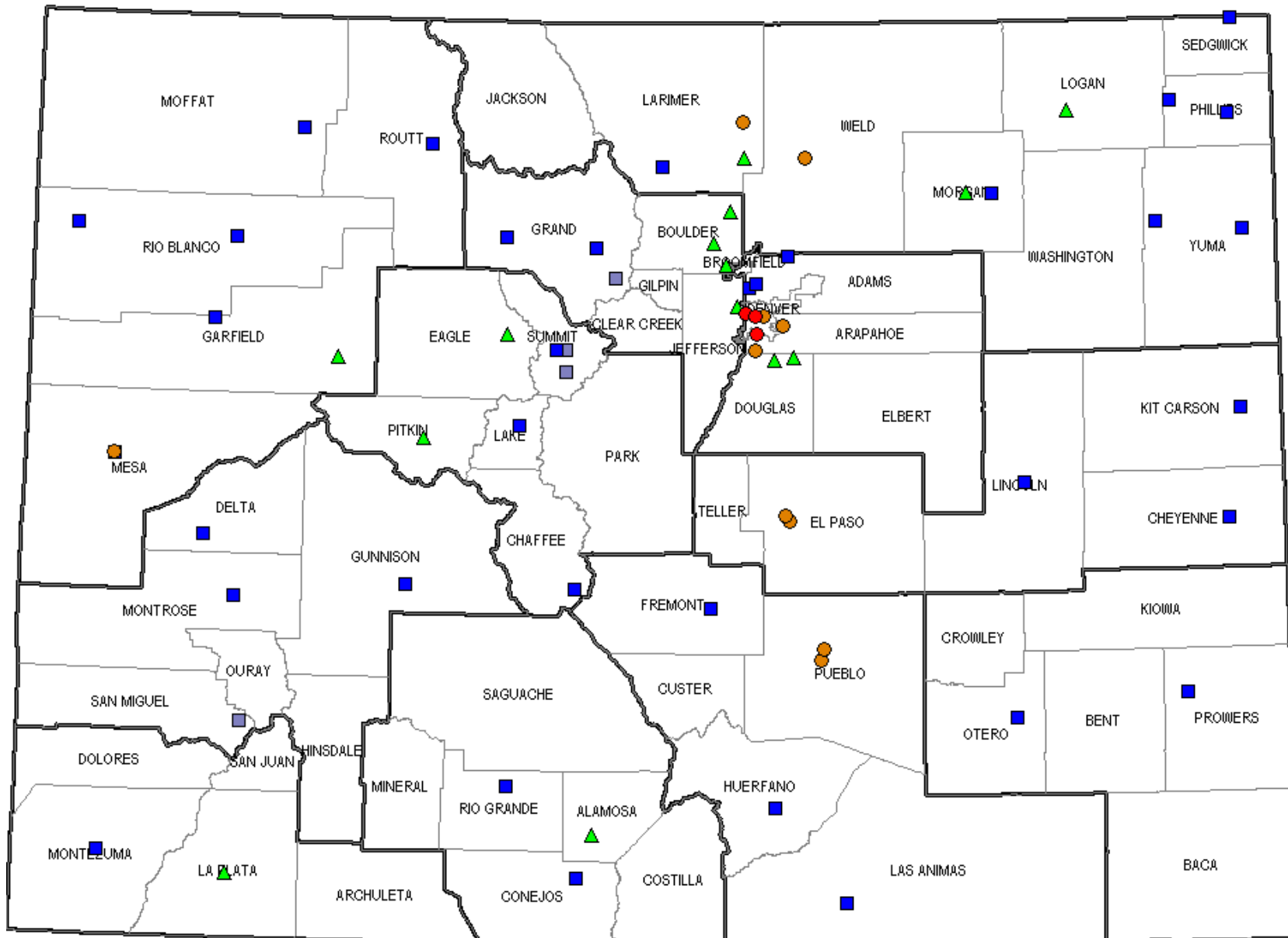
Updated September 2005

Level	Facility Name	City
I	Denver Health Medical Center *	Denver
I	St Anthony Central Hospital *	Denver
I	Swedish Medical Center	Englewood
II	Littleton Adventist Hospital *	Littleton
II	Memorial Hospital	Colorado Springs
II	North Colorado Medical Center *	Greeley
II	Parkview Medical Center	Pueblo
II	Penrose St Francis Health Services	Colorado Springs
II	Poudre Valley Hospital *	Fort Collins
II	St Mary-Corwin Medical Center *	Pueblo
II	St Marys Hospital and Medical Center	Grand Junction
II	The Medical Center of Aurora	Aurora
II	University of Colorado Hospital Authority	Denver
III	Aspen Valley Hospital	Aspen
III	Avista Adventist Hospital	Louisville
III	Boulder Community Hospital	Boulder
III	Colorado Plains Medical Center	Fort Morgan
III	Longmont United Hospital	Longmont
III	Lutheran Medical Center	Wheat Ridge
III	Mckee Medical Center	Loveland
III	Mercy Medical Center	Durango
III	Parker Adventist Hospital	Parker
III	San Luis Valley Regional Medical Center	Alamosa
III	Sky Ridge Medical Center	Lone Tree
III	Sterling Regional Medical Center	Sterling
III	Vail Valley Medical Center	Vail
III	Valley View Hospital Association	Glenwood Springs
IV	Arkansas Valley Regional Medical Center	La Junta
IV	Community Hospital	Grand Junction
IV	Conejos County Hospital Corporation	La Jara
IV	Delta County Memorial Hospital	Delta
IV	East Morgan County Hospital	Brush
IV	Estes Park Medical Center	Estes Park
IV	Granby Medical Center	Granby
IV	Grand River Medical Center	Rifle
IV	Gunnison Valley Hospital	Gunnison
IV	Haxtun Hospital District	Haxtun
IV	Heart of the Rockies Regional Medical Center	Salida
IV	Keefe Memorial Hospital	Cheyenne Wells
IV	Kit Carson County Memorial Hospital	Burlington
IV	Kremmling Memorial Hospital District	Kremmling
IV	Lincoln Community Hospital	Hugo

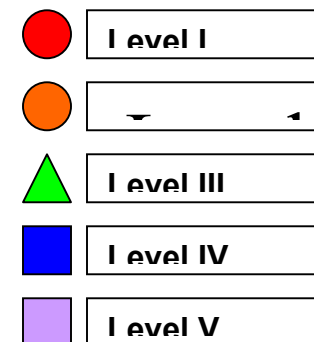
IV	Melissa Memorial Hospital	Holyoke
IV	Montrose Memorial Hospital	Montrose
IV	Mt. San Rafael Hospital	Trinidad
IV	North Suburban Medical Center	Thornton
IV	Pioneers Hospital of Rio Blanco County	Meeker
IV	Platte Valley Medical Center	Brighton
IV	Prowers Medical Center	Lamar
IV	Rangely District Hospital	Rangely
IV	Rio Grande Hospital	Del Norte
IV	Sedgwick County Memorial Hospital	Julesburg
IV	Southwest Memorial Hospital	Cortez
IV	Spanish Peaks Regional Health Center	Walsenburg
IV	St. Anthony North Hospital	Westminster
IV	St. Thomas More Hospital	Canon City
IV	St. Vincent General Hospital District	Leadville
IV	Summit Medical Center	Frisco
IV	The Memorial Hospital	Craig
IV	Wray Community District Hospital	Wray
IV	Yampa Valley Medical Center	Steamboat Springs
IV	Yuma District Hospital	Yuma
V	Breckenridge Medical Center	Breckenridge
V	Keystone Medical Center	Keystone
V	Seven-Mile Medical Clinic	Winter Park
V	Telluride Medical Center	Telluride
Non D	Animas Surgical Hospital	Durango
Non D	Basin Clinic	Naturita
Non D	Boulder Community Hospital-Foothills	Boulder
Non D	Centennial Medical Plaza	Englewood
Non D	Colorado Mountain Medical at Copper Mtn.	Copper Mountain
Non D	Crested Butte Medical Center	Crested Butte
Non D	Dr. Mary Fisher Medical Center	Pagosa Springs
Non D	Exempla St. Josephs Hospital	Denver
Non D	Family Health West Hospital	Fruita
Non D	Good Samaritan Medical Center	Lafayette
Non D	Mountain Family Health Center	Central City
Non D	Pagosa Springs Family Medicine Center	Pagosa Springs
Non D	Plains Medical Center	Limon
Non D	Porter Adventist Hospital	Denver
Non D	Presbyterian/St. Lukes Medical Center	Denver
Non D	Rose Medical Center	Denver
Non D	Southeast Colorado Hospital District	Springfield
Non D	The Children's Hospital at Parker Adventist	Parker
Non D	Uncompahgre Combined Clinic	Norwood
Non D	University of Colorado Hospital-Anschutz	Denver
Non D	Weisbrod Memorial County Hospital	Eads
RPTC	The Children's Hospital Association *	Denver

*These Facilities are verified by the American College of Surgeons

RPTC (Regional Pediatric Trauma Center Lvl I)	1
Level I	3
Level II	10
Level III	14
Level IV	35
Level V	4
Total Designated Trauma Centers	67
Total Non-Designated Facilities	21
Total	88

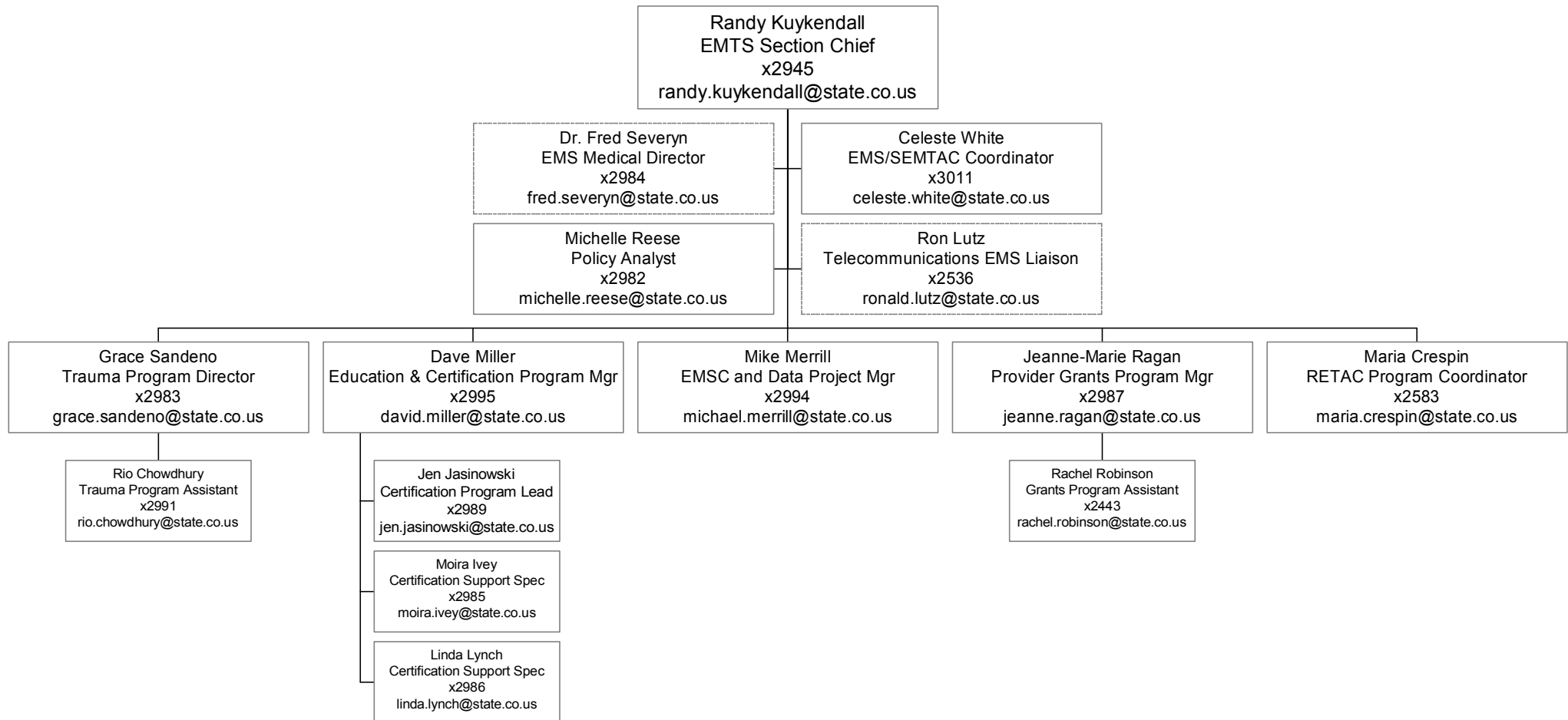


Colorado Department
of Public Health
and Environment



State of Colorado Designated Trauma Centers Levels I-V

Colorado Department of Public Health and Environment
 Health Facilities and Emergency Medical Services Division
 Emergency Medical and Trauma Services Section



Certification Statistics

Between July 1, 2004, and June 30, 2005, staff has processed 4,076 applications as listed below with 100% accuracy.

Activity	Applications Processed
Initial Certification requires NREMT certification (includes graduates from Colorado programs and individuals coming from other states)	
EMT-Basic	1,137
EMT-Intermediate	43
EMT-Paramedic	424
Renewal of Certification Using NREMT Certification	
EMT-Basic	314
EMT-Intermediate	11
EMT-Paramedic	111
Renewal of Certification Through State Requirements	
EMT-Basic	1,503
EMT-Intermediate	138
EMT-Paramedic	325
Re-Entry of Certification Using NREMT Certification	
EMT-Basic	37
EMT-Intermediate	2
EMT-Paramedic	6
Re-Entry of Certification Not Using NREMT Certification	
EMT-Basic	24
EMT-Intermediate	0
EMT-Paramedic	1