

Emergency Medical and Trauma Services Branch

2023

Annual Legislative Report

July 2022 - June 2023

Submitted to the Colorado Legislature

Report to the Legislature Concerning Colorado's Emergency Medical and Trauma Services System

Report on the expenditure of finances credited to the Emergency Medical Services Account and the quality of the emergency medical and trauma services system pursuant to Colorado Revised Statutes §§ 25-3.5-606, 25-3.5-709, and 25-3.5-210.

This report identifies many of the specific responsibilities of the Colorado Department of Public Health and Environment and provides information regarding progress in ensuring all Coloradans have rapid access to emergency medical care and transportation across the state. Undoubtedly, the work done by the professional EMS and trauma providers is the most valuable resource in the emergency medical and trauma services system. This report is dedicated to the ongoing support of these caregivers.

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This report is available online at www.coems.info

Executive Summary

Colorado’s emergency medical and trauma services system provides high quality emergency medical and trauma care to the ill 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, today’s emergency medical and trauma services systems are full partners in the broader scope of health care across Colorado communities including time-sensitive medical syndromes and healthy community programs. Outcomes of care depend on patient and condition factors as well as systems of care, such as:

- Availability of appropriately trained health care providers
- Availability of properly equipped, positioned, and staffed rescue units and ambulances (ground and air)
- Location of trauma centers and other specialized health care facilities capable of treating time-sensitive conditions such as strokes and heart attacks
- Availability of well-equipped hospitals and clinics with well-trained staff members to stabilize patients who are far from tertiary care

The emergency medical and trauma services system also provides care and transportation to patients in non-emergency situations and serves as the “safety net” for many Coloradans who might not have immediate access to other health care services. Emergency medical services (EMS) agencies and trauma facilities are essential partners in community and public health initiatives, resource coordination and emergency management planning.

The Emergency Medical and Trauma Services Branch at the Colorado Department of Public Health and Environment is responsible for reducing morbidity and mortality resulting from sudden illness and injury by providing oversight for the delivery of emergency medical and trauma services as described above. The branch’s regulatory responsibilities are to:

- Certify and license EMS providers
- Register emergency medical responders
- Recognize educational programs that deliver initial EMS provider training and continuing education
- License and regulate air ambulance agencies
- Regulate EMS education programs
- Administer and manage State grant funding
- Designate hospitals and other health care facilities as trauma centers
- Regulate scopes of practice for EMS providers
- Provide technical assistance

Each year, EMS agencies and trauma centers in Colorado provide quality medical care to approximately one million patients. Of these patients, roughly 25 percent are trauma (injured) patients, and 75 percent are patients with medical, psychiatric or other conditions. These services are provided by over 200 ambulance services - which are staffed by a combination of 20,844 paid and unpaid professional EMS providers - and a network of hospitals designated as “trauma centers”.

Historically, ambulance services in Colorado have been licensed by individual counties. This created regulation duplicity and significant variability in expectations. With the passage of Senate Bill

22-225, Colorado will align ground ambulance service regulation with national best practices. Effective July 1, 2024, ground ambulance services in Colorado will be licensed and regulated by the CDPHE Emergency Medical & Trauma Services branch. CDPHE, in collaboration with stakeholders, is writing the ground ambulance administrative rules and creating a transition plan.

One of the most significant strengths of Colorado's emergency medical and trauma services system is the involvement and participation of the community's stakeholders. The State Emergency Medical and Trauma Services Advisory Council ("SEMTAC") is a 32-member "Type II" advisory board with EMS and trauma system experts representing hospitals, public and private EMS agencies, fire service-based EMS and rescue agencies, air ambulance providers and local government officials. The State Emergency Medical and Trauma Services Advisory Council is statutorily required to review and recommend rules for promulgation by the Board of Health, recommend trauma center designation, advise the department on all funding matters related to EMS and trauma, and provide resources dedicated to the care and transportation of the ill and injured. The partnership between the department, the council and the stakeholder community is very productive, and the department enjoys the benefit of this expert advice.

The department also benefits from the Emergency Medical Practice Advisory Council ("EMPAC"), another "Type II" advisory board. The Emergency Medical Practice Advisory Council provides the department with expert advice related to the technical scope of care for EMS providers and advises on EMS medical director requirements. The 13 council members represent urban and rural EMS medical directors and providers. The Emergency Medical Practice Advisory Council recommends changes to EMS provider scope of practice rules for promulgation by the department's chief medical officer and makes recommendations regarding waivers to the scope of practice rules for medical directors.

Colorado's Regional Emergency Medical and Trauma Services Advisory Councils are equally important to the state's emergency medical and trauma services system. These councils are created in statute to provide the critical link between the state's 64 counties and the clinics, hospitals and EMS provider agencies within each region. This system provides localized support for the education, recruitment and retention of personnel, technical assistance to agencies and vital communication between state agencies and local constituents. Regional councils complete 2-year biennial plans that outline goals, programs and initiatives. Regions represent the needs and interests of urban, rural and frontier constituents to the department and the state councils. Representatives from each region meet quarterly with state council and department staff members to help ensure coordination and collaboration between state, regional and local partners.

Emergency Medical and Trauma Services Branch staff members maintain open and effective communication with internal and external customers on a daily basis. They present at a variety of conferences and trainings and represent department interests in external stakeholder groups. A weekly email update is sent to stakeholders and includes hot topics and newly released information as well as upcoming meetings and training events. The branch's website, located at coems.info, provides useful and timely information including rules and regulations, applications, forms and access to the web portal. Additionally, the website allows people to check the current certification status of Colorado EMS providers, upload transport agency patient care reports and submit grant funding applications and quarterly progress reports.

Colorado's emergency medical and trauma system, and the department's Emergency Medical and Trauma Services Branch, is predominantly funded by a \$2 fee collected for each motor vehicle registered in Colorado. The \$2 vehicle registration fee is supplemented by the collection of trauma

center designation fees, air ambulance licensure fees and provisional EMS provider certification fees. The department relies on these funds to monitor and develop emergency medical service agencies and trauma centers; support the continued development of rural, frontier and underdeveloped trauma and emergency medical services systems; and increase the availability of equipment and personnel across the state of Colorado.

The \$2 motor vehicle registration fee is deposited in the EMS Account of the Highway Users Tax Fund (HUTF). In 2010, the fee was increased from \$1 to \$2 per vehicle registered. The adjustment was made in response to inflation and increased funding demands. In fiscal year 2018, a change implemented by the Department of Revenue which narrowed the collection of this fee for certain types of registrations reduced the revenue to the EMS Account by \$1.6 million; this revenue reduction is expected to continue indefinitely.

Section Updates

Funding Section

The fiscal year 2024 budget from the EMS Account for the emergency medical and trauma services funding program was \$6,291,355. A number of required appropriations were subtracted from this amount, leaving a total \$4,798,215 for EMTS grants. When adjusted for inflation, funding from the HUTF EMS account for the emergency medical and trauma services grant program remains near the lowest levels in the past decade. This budgetary reduction and continued low level of funding is primarily attributed to the change implemented by the Department of Revenue in fiscal year 2020 that narrowed the types of registrations subject to the \$2 EMS fee. Grant funds are essential to the sustainability of Colorado's emergency medical and trauma services system, especially in Colorado's rural and frontier communities.

Provider grants

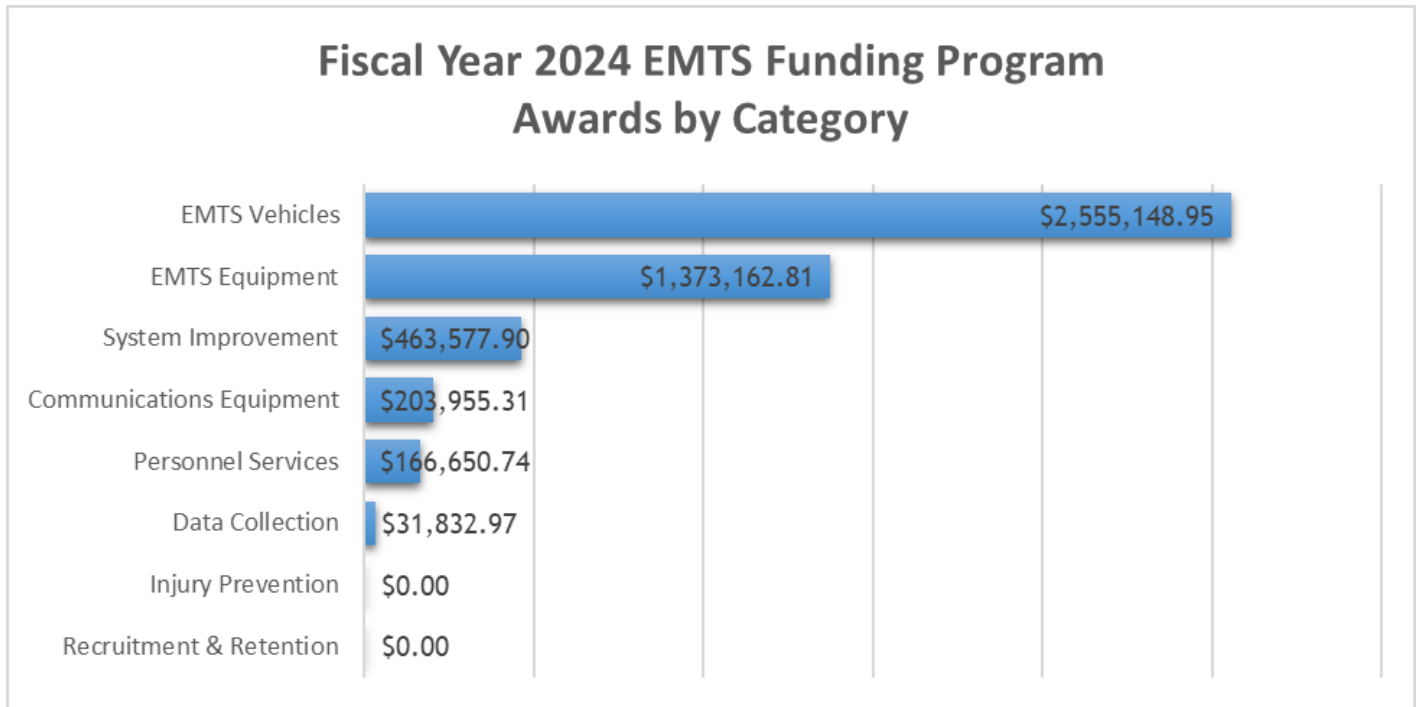
The funding program bolsters the impact on Colorado's EMS and trauma system by combining state grant program dollars with local matching funds to ensure buy-in and support at the local level. Provider grant categories include ambulances and EMTS vehicles, communications, data collection, EMS and trauma equipment, prevention, recruitment and retention and personnel and services. A total of \$4,330,750.78 was awarded in provider grants following a competitive scoring process that used a 50-point scoring tool. A list of the awards is found in Attachment A.

System improvement funding

The funding program also provides support for regional and statewide projects designed to enhance the emergency medical and trauma services system in Colorado. System improvement categories include technical assistance, system-level improvement projects, and conference and forum support. A total of \$463,577.90 was awarded in system improvement funding. This total includes \$363,000 distributed to 11 regions to continue the development and maintenance of EMS medical direction on a regional basis. A list of these awards are found in Attachment A.

Emergency Medical and Trauma Services System Consultative Reviews

At the request of local governments, emergency medical and trauma services providers, and Regional Emergency Medical and Trauma Services Advisory Councils, the department conducts consultative reviews. The department works collaboratively with regional and local stakeholders to assemble a team of practicing EMS and trauma professionals from communities across the state to assist the requesting entity in analyzing their current emergency medical and trauma services system and developing strategies for improvement. The consultative review team then provides a final report to local officials and stakeholders. There were two (2) requests for consultative reviews in fiscal year 2023, one of which was an emergency request.



Year-Round Education Opportunities

The CREATE program was successfully launched in July 2010 through the Colorado Rural Health Center. The CREATE program was developed to improve access to funding support for educating EMS and trauma providers on a continuing basis throughout each fiscal year, as opposed to the traditional provider grants program that was only open for applications one time per year. The CREATE program is funded at \$400,000 for each fiscal year to provide education awards. During fiscal year 2023, there were 152 Colorado EMS and trauma providers who were trained with assistance from these grants.

Peer Support Services

Colorado’s EMS professionals are dedicated to providing high quality medical care, even during the most challenging circumstances. They may experience a broad range of physical and emotional health effects as a result of working on the front lines, often being exposed to extreme stress and hazardous conditions, all while managing complex patient encounters. EMS personnel are at an increased risk for depression, post-traumatic stress symptoms, suicidal ideation, and a host of other functional and relational conditions.

Because of this, the ongoing support of the health and resiliency of Colorado’s EMS professionals remains a top priority. The Path4EMS program continues to coordinate efforts and provide resources to address these needs. The hallmark of this program is the provision of free and confidential access to mental health counseling and other wellness resources, as required by SB 19-065. The overarching goal of the program is to help ensure EMS professionals can safely and effectively perform their duties while protecting Colorado’s citizens and visitors. The Path4EMS program is administered through the EMTS branch, utilizing a number of designated clinical services providers. This valuable program lacks a permanent funding source and has been supported through the EMTS grant fund since its inception.

Trauma Section

The trauma system in Colorado was formally authorized in legislation in 1995. Since that time, much effort has gone into four primary and inter-related activities: trauma designation for acute care facilities, trauma system rule development, technical assistance, and trauma system assessment.

Trauma Designation

The Trauma Section's most visible activity is the process of trauma center designation. Every licensed health care facility in Colorado which receives 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 that agree to care for trauma patients receive site reviews and are designated by the state as Level I (highest) through Level V (lowest). Critical access hospitals and community clinics not routinely receiving trauma patients may seek a non-designated certification. In fiscal year 2023 the department worked closely with one non-designated facility to become a level IV designated trauma center and with one level IV facility to increase their designation to a level III.

On June 30, 2023, 85 designated trauma centers were serving the people of Colorado and 37 non-designated facilities were participating in the system. Fiscal year 2023 saw one level II trauma facility increase their designation to level I to better serve their regional community and one level IV trauma center reduce their designation level to non-designated to benefit the system as a whole.

Community engagement and technical assistance are two of the most important aspects of the trauma section's work. Fiscal year 2023 offered opportunities to provide assistance and engage stakeholders across the state:

- Trauma designation reviews were continued in a hybrid on-site/remote format.
- Many facilities continue to recover from the pandemic response and programmatic function was impacted as evidenced by an increase in designation reviews requiring a plan of correction. Trauma staff provided technical assistance to 26 facilities on various stages of plans of correction.
- There were 42 designation reviews or focused reviews completed by a team of physicians, nurses and trauma section staff members.
- Additionally, staff members provided technical assistance and/or compliance checks for facilities with plans of correction and hosted 14 training sessions for trauma nurse coordinators and registry staff.

Trauma Regulation

Rule development is another primary program function and is necessary to implement the concepts expressed in the emergency medical and trauma system laws. Rules are under constant scrutiny to determine whether they reflect nationally recognized best practice standards, protect the public's health, are measurable and make sense for both the patient and the regulated community. Trauma rules were not modified in fiscal year 2023.

Data Section

EMS and Trauma Data Collection and Reporting

Comprehensive data systems are essential to effectively plan, implement and evaluate a statewide emergency medical and trauma care system. Critical components include the Colorado Trauma Registry, the Colorado EMS Data Repository and the EMTS organizational profiles, as well as appropriate resources and personnel for efficient data management, analysis and use of the data to evaluate the delivery of patient care. The department continues to validate and analyze both EMS and trauma data for quality improvement across the state.

The Colorado Trauma Registry is a database designed to capture information on the care of trauma patients and on the leading causes of injury, hospitalizations and deaths. The data in the Colorado trauma registry is used not only to evaluate the effectiveness of the trauma system but also to identify and monitor the impact of injury prevention strategies. Each licensed hospital facility or clinic designated as a trauma center is required to submit a limited set of patient-specific information to the Colorado trauma registry. The Colorado trauma registry holds hundreds of thousands of records that provide key information on trauma care across the state. In response to requests by trauma stakeholders and in alignment with the National Trauma Data Standards (see www.ntdsdictionary.org), developed by the American College of Surgeons, staff members continue to update the Colorado trauma registry data elements and response options and provide technical assistance to users to improve the validity of trauma data reporting. In fiscal year 2023, data from the Colorado trauma registry were used to evaluate various aspects of the trauma system including:

- Trauma data submission and volume
- Data quality of trauma records
- Trauma incidents by age groups, specific geographic area, Injury Severity Score (ISS), mechanism of injuries
- Pediatric, falls, motor vehicle related injuries
- Site level reports for designation reviews
- Primary causes of injury
- Traumatic Brain Injuries (TBIs)
- Hospital/ED length of stay
- Snow sport related injuries

The Colorado EMS Data Repository houses patient care data from licensed ambulance agencies across the state. 6 CCR 1015-3 Chapter Three requires that all agencies must submit patient care data according to the national standard within 48 hours of patient contact. The department continues to leverage the EMS Data to construct robust regional compliance reports, injury summaries, and benchmark reports that examine key aspects of patient care across the state. These reports allow ambulance agencies to retrieve their own benchmark data as well as compare their numbers to their region and the state overall. In June 2022, updates to the EMS data rules (6 CCR 1015-3 Chapter Three) were made to require submission of the latest version of the national standard (NEMSIS Version 3.5.0). Colorado was the first state to transition to the new standard, leading the nation in data quality and analysis. EMS data continues to be utilized by several stakeholders, and presented to various audiences via conferences, meetings and reports to create a more complete picture of patient care across the state. Additionally, the Colorado EMTS data team was recognized by the National Association of State EMS Officials (NASEMSO) for its approach to analyzing EMS provider workforce data using novel data linkages with Colorado labor and wage data.

In fiscal year 2023, EMS data were used to evaluate various components of the emergency medical services care system, including:

- EMS agency data submission, timeliness, and volume
- EMS events by age groups, specific geographic area, medications administered
- Emergent responses and transports
- Vital signs, procedures (e.g., blood glucose measurement on seizure patients)
- Naloxone use and opioid-associated resuscitative emergencies
- Snow sport related emergencies
- Air medical transports
- Cardiac arrest, trauma and stroke events
- Events by destination (e.g., number of events resulting in transport to acute care facilities)
- Primary/secondary impressions
- Common causes of injuries by region
- Utilization of scope of practice waivers
- Response times by region including outliers and responses to time sensitive incidents such as cardiac arrest
- Utilization of interfacility transfers, and the time spent on these requests

Office of Cardiac Arrest Management

On June 1st, 2022, Governor Polis signed HB22-1251, establishing the first statewide office of cardiac arrest management. The bill outlined five primary objectives:

- 1) Coordinate the collection of sudden cardiac arrest data;
- 2) Implement an outreach campaign to raise public awareness regarding sudden cardiac arrest;
- 3) Maintain a list of training and education programs offered in the state to teach life-saving skills;
- 4) Employ a statewide cardiac arrest data coordinator and other personnel as necessary;
- 5) Coordinate the submission of data to an automated external defibrillator registry.

The first year of the office of cardiac arrest management was focused on the recruitment and hiring of a new program manager as well as engaging industry leaders, subject matter experts, and key stakeholders to better understand current statewide efforts and resources, and establishing the foundation for information sharing across the state on topics such as education programs, AED locations, cardiac arrest response and outcome data. Elizabeth Penrod was hired in January 2023, and brings over 10 years of public health experience to the office. She has already completed her onboarding with the national CARES (Cardiac Arrest Registry to Enhance Survival) team to begin managing EMS and hospital data related to cardiac arrests in Colorado. This includes ensuring data is flowing into the system appropriately, agencies have access to necessary information, data is complete and accurate, and reports can be generated to understand cardiac arrest care across the state. She has also purchased and built the framework for a (soon-to-be) publicly available website that will serve as a vessel for awareness campaigns as well as house information about education programs that teach life saving skills in Colorado. In addition, the office has dedicated countless hours to engaging with stakeholders to build a collaborative knowledge base and resource repository for all things related to cardiac arrest management.

Operations Section

The department is the state agency responsible for the oversight of the certification and licensure of EMS providers in Colorado and all EMS education programs. As of June 2023, there were 20,844 EMS providers certified or licensed in Colorado. During the fiscal year, the department processed over 6,000 applications for registration, licensure, certification or renewal for EMS providers and Emergency Medical Responders. The section routinely provides technical assistance to EMS education programs and military personnel regarding initial and continuing education and certification/licensure requirements. For all veterans, active military service members, and members of the National Guard and reserves stationed or residing in Colorado, or their spouse, the department offers exemptions for the Basic Cardiac Life Support (CPR) course and Advanced Cardiac Life Support (ACLS) requirements for certification/licensure.

EMS Providers

EMS provider certification and license levels include Emergency Medical Technician (EMT), Advanced Emergency Medical Technician (AEMT), Emergency Medical Technician-Intermediate (EMT-I) and Paramedic. In Colorado, Emergency Medical Responders complete a voluntary registration program with the department.

FY	EMR	EMT	Advanced EMT	EMT Intermediate	Paramedic*	Total
2022	396	14,046	380	309	5,461	20,196
2023	415▲	14,521 ▲	432 ▲	287 ▼	5,604 ▲	20,844 ▲

- Of the 5,604 paramedics in Colorado, 573 earned the Critical Care endorsement, 45 earned the Community Paramedicine endorsement, and 30 paramedics have both the Critical Care and Community Paramedicine endorsements.
- With the planned sunset of the national EMT-Intermediate credentialing exam on December 31, 2019, there is no longer a pathway for initial certification/licensure at the EMT-Intermediate level. However, currently certified/licensed EMT-Intermediates are able to maintain their certification/license by completing continuing education.

EMS Education Programs

The department provides regulatory oversight for EMS education across the state. In fiscal year 2023, Colorado had 220 education programs authorized to provide EMS education. Compared nationally, Colorado consistently outperforms national averages on the National Registry certification examination.

National EMS Certification Examination Pass Rates*				
	EMR	EMT	Advanced EMT	Paramedic
Colorado Candidates	90%	86%	78%	95%
National Average	74%	80%	68%	87%

* Data report provided by NREMT.org “Pass/Fail Report”, cumulative Pass within 6 attempts; data will change as candidates are eligible to attempt the NREMT cognitive exam for 24 months after course completion. Updated 8/29/2023

Air Ambulance Licensing

In fiscal year 2023, Colorado was served by 30 licensed air ambulance services, 21 of which have a full two-year license and an additional nine air ambulance services have a one-year out-of-state recognition license. The recognition license allows an agency to initiate up to 12 medical flights per year in Colorado, with no restrictions on the number of patients transported into Colorado if the flight originates outside of Colorado. The list of current licensed air ambulance services can be found on the Emergency Medical and Trauma Services [Public Portal](#).

Investigation and Enforcement

The department continues to oversee discipline and enforcement activities for Emergency Medical providers and Responders, licensed air ambulance agencies, and EMS education programs. During the 2023 fiscal year, the department completed 670 investigations of providers based on background checks or complaints related to EMS personnel. The Department also investigated 1 air ambulance agency complaint.

Medical Direction

Medical oversight of EMS practice in Colorado occurs at the local EMS agency level, as legislative requirements state that all EMS providers have a physician medical director in order to provide any direct patient care. Currently, the Emergency Medical Practice Advisory Council and Colorado Regional Medical Directors continue to focus on system quality improvements and to advance clinical EMS therapies and protocols to ensure the patients in Colorado are receiving the safest and most effective care available.

Regional medical direction involves a coordinated effort among Colorado’s eleven Regional Emergency Medical and Trauma Services Advisory Councils and was developed to:

- Facilitate communication and cooperation among EMS agency medical directors, allowing them to share ideas, discuss problems and communicate within their peer groups
- Provide resources for agency medical directors to enhance their ability to perform their job functions
- Facilitate improved efficiency in protocol development and delivery of education
- Provide a forum for the resolution of system issues at both local and regional levels
- Create opportunities for continuous quality improvement at both the EMS agency level and regional levels, provide benchmarks and best practices and allow for the monitoring of outcomes to guide the continued provision of quality care

The regional medical direction initiative allows each of the 11 regions within the state to play an integral part in developing medical direction that is consistent with standards across the state and meets local needs. The regional medical directors meet quarterly to share and discuss current local issues as well as best practices in regional medical oversight.

The Regional Medical Directors committee works with the Emergency Medical Practice Advisory Council to drive quality of care for the EMS systems throughout the state of Colorado. Funding is available annually for regional medical direction programs through evaluation and recommendation by the State Emergency Medical and Trauma Services Advisory Council. This process is separate from the annual competitive provider grant process, and as such allows regions to concentrate on meeting program deliverables and outcomes. Each year, funding is based upon performance reviews of the regions' abilities to meet the previous year's defined deliverables.

Type II Advisory Board

State Emergency Medical and Trauma Services Advisory Council

The State Emergency Medical and Trauma Services Advisory Council is a 32-member *Type II advisory board with EMS and trauma system experts representing hospitals, public and private EMS agencies, fire service-based EMS and rescue agencies, air ambulance providers and local government officials. In fiscal year 2023, the State Emergency Medical and Trauma Services Advisory Council held four (4) regular public meetings, as required on a quarterly basis. The State Emergency Medical and Trauma Services Advisory Council advised the department on a variety of policy issues during the fiscal year, including recommending trauma center designation, advising the department on funding matters related to EMS and trauma, and through the creation of the Ground Ambulance Licensing Task Force. The following State Emergency Medical and Trauma Services Advisory Council committees were operational during fiscal year:

- Bylaws
- Designation Review
- Education
- Pediatric Care
- Prevention
- Public Policy & Finance
- Safety
- Statewide Trauma Advisory

*Type II Advisory Board under C.R.S. 24-1-105 are generally a board that acts in an advisory capacity to the Department. This can be as advisors to assist the Department in developing requirements and practices and provide recommendations to the program area/Department. Any formal product of a board is reviewed by the Department prior to release or publication.

Emergency Medical Practice Advisory Council

The Emergency Medical Practice Advisory Council reviewed and made recommendations on requests for waivers to the EMS practice scope of practice rules by EMS agency medical directors. Additionally, the council began the development of statewide guidelines for waiver types. As of June 30, 2023, the department had 387 active scope of practice waivers:

- Four waivers for basic life support
- 337 for advanced life support provider levels
- 46 for combination basic and advanced life support provider levels

Related Activities

Communication Systems

Public access in the emergency medical services setting is defined as the ability of an individual to secure prompt and appropriate emergency medical care. All counties in the state have E911 telephone services. The existing Colorado digital trunked radio system (DTRS) provides statewide, two-way interoperable communications to state, local, tribal and a limited number of federal government agencies over a shared communication platform. The DTRS in Colorado consists of 251 remote tower sites, serving more than 1,000 agencies and more than 100,000 subscriber units (individual radios) spread across six zones. The DTRS averages nearly 8 million calls per month. Some local agencies provide additional funding to add infrastructure to the overall DTRS. Several new DTRS radio tower sites are under various stages of planning and construction. The emergency medical and trauma services funding program continues to assist with improvement of local communications needs throughout the state. Funding has provided equipment to agencies to enable them to utilize the DTRS and in some cases to keep legacy communication systems operational.

The First Responder Network Authority (FirstNet) is an independent authority within the U.S. Department of Commerce. Chartered in 2012, its mission is to ensure the building, deployment and operation of the nationwide, broadband network that equips first responders to save lives and protect U.S. communities. Public safety spent years advocating for a nationwide broadband network for first responders following the Sept. 11, 2001, terrorist attacks. Major public safety organizations continue to voice their strong support for the FirstNet network today. 'FirstNet Powered by AT&T' continues to work toward building out sites in Colorado to improve needed coverage.

House Bill 18-1325, known as the DTRS Coverage Bill, provided an appropriation of \$2 million dollars in FY18-19 and \$2 million dollars in FY19-20 for the Office of Information Technology, Public Safety Communications Network to work in partnership with local and regional government entities to add additional DTRS sites in areas experiencing critical coverage gaps for public safety radio communications. This program assisted with funding improvements at 10 new DTRS sites to fill known radio signal coverage gaps.

Injury Prevention

Toward the end of fiscal year 2022, joint efforts with the Violence and Injury Prevention-Mental Health Promotion Branch concluded and the continuation of a joint steering committee ended collaboration with Prevention Services Division. The department recognized the need for a committee to continue to help unify injury prevention efforts across the two branches so that stakeholders have one place to discuss, prioritize and implement prevention activities. As a result the Prevention Committee was formed as a subcommittee of SEMTAC to address disease prevention in general with a focus on injury prevention.

Emergency Medical Services for Children

Emergency Medical Services for Children

In 2018 the University of Colorado assumed responsibility for the Colorado EMS for Children Program establishing a cooperative agreement with the department and the University of Colorado School of Medicine. This cooperative agreement allowed for the continued partnership of EMTs and Colorado EMSC in successfully implementing the grant. The EMS for Children State Partnership Grant is now administered by the Section of Pediatric Emergency Medicine at the University of Colorado School of Medicine. CDPHE has continued to maintain a solid relationship and continues to successfully partner on many pediatric-focused projects that have helped improve emergency department and prehospital care for children across Colorado. This partnership between state institutions leverages the clinical expertise and research capacity of the University of Colorado with the regulatory and program expertise of the department in the Emergency Trauma Services Section.

The EMS for Children program continues to collaborate extensively with the Children's Hospital Colorado Outreach and Education team to deliver mobile simulation-based training to EMS and hospital providers in communities across the state. The program also continues to support an online education module to help providers better distinguish between accidental and inflicted injury, as well as the identification of children who are at risk for human trafficking. These modules provide continuing education courses to EMS providers not only in Colorado but the other 56 states and territories of the United States. In addition to in person high fidelity simulation, Colorado EMSC has focused on the identification and distribution of in person and virtual pediatric and health care resiliency training opportunities through their website.

In fiscal year 2023, the EMS for Children program continued work implementing the Colorado Pediatric Preparedness for the Emergency Room (COPPER) program. The COPPER program is aimed at improving emergency department preparedness in caring for pediatric patients. Multiple studies now show that when an ER is pediatric ready, children treated at that facility have reduced mortality by 40-60%. With ongoing, extensive stakeholder input citing the effects of the pandemic on staffing and facility priorities, the COPPER program is pleased to announce the verification of the first COPPER hospital in Colorado. Grand River Health in Rifle, Colorado completed its COPPER site survey on May 3, 2023 and was verified as COPPER Pediatric Advanced Hospital. As of August 2023, there are an additional 7 facilities in Colorado pursuing their COPPER status.

A second initiative, the Colorado Pediatric Emergency Care Coordinators (COPECC), was developed and implemented to promote and assist with the implementation of pediatric emergency care coordinators at EMS agencies across the state. The COPECC program provides education and resources related to the role and value of a pediatric emergency care coordinator and also facilitates workshops across the state.

Over the next four year Colorado EMS will continue to focus on the priorities set forth in the most recent State Partnership Grant Cycle:

- 1) Expand the uptake of Pediatric Readiness in Emergency Departments by establishing a standardized pediatric readiness recognition program for EDs, designating PECCs in EDs, and ensuring hospital EDs weigh and record children's weight in kilograms.
- 2) Improve Pediatric Readiness in EMS Systems by establishing a standardized pediatric readiness recognition program for prehospital EMS agencies; increasing PECCs in prehospital EMS

agencies; and increasing the number of prehospital EMS agencies that have a process for pediatric skills-check on the use of pediatric equipment.

- 3) Increase pediatric disaster readiness in hospital EDs and prehospital EMS agencies by ensuring that disaster plans address the needs of children.
- 4) Prioritize and advance family partnership and leadership in efforts to improve EMSC systems of care by including and engaging family representatives who can speak to the emergency care needs of children in their community on EMSC state advisory committees.

Attachment A: Fiscal Year 2024 Funding Awards

Organization Name	Match %	State Amount Requested	State Amount Awarded (Provider)	State Amount Awarded (System)
Alamosa County Ambulance District	50%	\$58,012.79	\$58,012.79	
Allenspark Fire Protection District	50%	\$17,369.00	\$17,369.00	
Alpine Rescue Team	50%	\$49,538.13	\$49,538.13	
Arkansas Valley Ambulance District	10%	\$91,836.52	\$14,777.73	
Arvada Fire Protection District	50%	\$31,303.80	\$31,303.80	
Aurora Fire Department	50%	\$5,680.00	\$0.00	
Bennett Fire Protection District #7	50%	\$47,722.38	\$47,560.10	
Calhan Fire Protection District	50%	\$45,676.28	\$45,676.28	
Central Mountains RETAC - RMD	0%	\$33,000.00		\$33,000.00
City of Steamboat Springs	50%	\$18,479.13	\$18,479.13	
Clear Creek EMS	50%	\$104,609.99	\$76,824.71	
Clear Creek Fire Authority	50%	\$23,129.50	\$23,129.50	
Clifton Fire Protection District	50%	\$156,524.16	\$158,036.66	
Colorado River Fire Protection District	50%	\$124,727.21	\$124,727.21	
Conejos County Government dba Conejos County EMS	20%	\$202,532.36	\$202,532.36	

Copper Mountain LLC	50%	\$18,382.01	\$18,382.01	
Custer County EMS	50%	\$82,082.00	\$82,082.00	
Eagle County Health Service District	50%	\$33,510.99	\$33,510.99	
Elizabeth Fire Protection District	50%	\$63,308.28	\$60,464.89	
Elk Creek Fire Protection District	50%	\$108,375.50	\$127,085.00	
Evergreen Fire Protection District	50%	\$81,073.00	\$81,073.00	
Foothills RETAC - RMD	0%	\$33,000.00		\$33,000.00
Foothills RETAC - SI	0%	\$10,300.00		\$10,300.00
Fowler Rural Fire Protection District	50%	\$55,813.47	\$55,813.47	
Gateway-Unawep Fire District	50%	\$32,294.27	\$32,294.27	
Gilpin Ambulance Authority	50%	\$243,662.42	\$243,662.42	
Grand County Emergency Medical Services	50%	\$157,456.50	\$157,456.50	
Greater Brighton Fire Protection District	50%	\$155,619.78	\$155,619.78	
Gunnison Valley Hospital	50%	\$81,073.00	\$81,073.00	
Highland Rescue Team Ambulance District	50%	\$102,325.00	\$102,325.00	
Hinsdale County Emergency Medical Service	50%	\$16,898.95	\$16,898.95	
Hugo Fire Protection District	20%	\$44,810.40	\$44,810.40	
Indian Hills Fire Protection District	50%	\$4,530.93	\$4,530.93	

Keefe Memorial Health Service District	50%	\$9,806.92	\$9,806.92	
Kim Area Volunteer Fire Department and Ambulance Service	50%	\$12,471.86	\$12,471.86	
Kiowa Fire Protection District	50%	\$98,450.00	\$98,450.00	
Kit Carson County Ambulance Service	10%	\$308,959.05	\$308,959.05	
Lake George Fire Protection District	50%	\$5,565.30	\$5,565.30	
Lincoln Community Hospital	50%	\$13,175.29	\$13,175.29	
Livermore Fire Protection District	50%	\$20,169.62	\$20,169.62	
Los Pinos Fire Protection District	50%	\$135,168.72	\$131,293.72	
Lutheran Hospital Assoc. of the San Luis Valley dba SLV Health	50%	\$44,137.71	\$44,137.71	
Mesa County Fire Authority	50%	\$26,389.52	\$26,389.52	
Metro Care Ambulance Service LLC	50%	\$60,953.25	\$60,953.25	
Mile-High RETAC - RMD	0%	\$33,000.00		\$33,000.00
Mile-High RETAC - SI	0%	\$53,986.90		\$53,986.90
Mineral County Ambulance Service	50%	\$17,503.65	\$17,503.65	
Montrose Memorial Hospital, Inc.	50%	\$6,073.53	\$6,073.53	
Montrose Memorial Hospital, Inc. - SI	0%	\$423,720.00		\$0.00
Nederland Fire Protection District	50%	\$108,837.15	\$108,837.15	
North Fork Ambulance Health Service District	50%	\$29,497.20	\$29,497.20	

North Park Hospital District	50%	\$124,178.20	\$124,178.20	
Northeast Colorado RETAC - RMD	0%	\$33,000.00		\$33,000.00
Northwest RETAC - RMD	0%	\$33,000.00		\$33,000.00
Oak Creek Fire Protection District	50%	\$121,750.00	\$120,250.00	
Park County Search and Rescue	50%	\$2,796.24	\$2,796.24	
Pitkin County dba Aspen Ambulance District	50%	\$128,270.23	\$128,270.23	
Plains to Peaks RETA	0%	\$33,000.00		\$33,000.00
Platte Canyon Fire Protection District	50%	\$101,434.00	\$0.00	
Rico Fire Protection District	50%	\$44,618.75	\$44,618.75	
Rio Grande Hospital	50%	\$17,050.86	\$17,050.86	
Sable Altura Fire Protection District	50%	\$11,071.01	\$11,071.01	
San Luis Valley RETAC - SI	0%	\$36,291.00		\$36,291.00
San Luis Valley RETAC - RMD	0%	\$33,000.00		\$33,000.00
Silverton San Juan County Ambulance Association	50%	\$22,477.75	\$22,477.75	
Southeastern Colorado RETAC - RMD	0%	\$33,000.00		\$33,000.00
Southern Colorado RETAC - RMD	0%	\$33,000.00		\$33,000.00
Southern Park County Fire Protection District	50%	\$94,841.64	\$94,841.64	

Southwest Health System, Inc.	50%	\$52,743.80	\$52,743.80	
Southwest RETAC - RMD	0%	\$33,000.00		\$33,000.00
Southwest Teller County Emergency Medical Services	50%	\$129,814.40	\$129,814.40	
Summit Fire & EMS Fire Protection District	50%	\$36,463.75	\$36,463.75	
The Memorial Hospital at Craig	50%	\$15,854.11	\$15,854.11	
Town of Limon dba Limon Ambulance Service	10%	\$94,131.21	\$94,131.21	
Trinidad Ambulance District	50%	\$40,824.95	\$41,271.07	
Trinidad Area Health Association dba Mt. San Rafael Hospital	10%	\$127,584.13	\$26,595.04	
Upper Pine River Fire Protection District	50%	\$47,401.24	\$47,401.24	
Upper San Juan HSD/dba Pagosa Springs Medical Center	50%	\$115,800.00	\$115,800.00	
Walsh Ambulance Service	50%	\$13,295.00	\$13,295.00	
Washington County Ambulance Service	50%	\$124,253.14	\$124,253.14	
Western RETAC - RMD	0%	\$33,000.00		\$33,000.00
Yampa Fire Protection District	50%	\$9,239.56	\$9,239.56	
		Subtotal:	\$4,330,750.78	\$463,577.90
Total Provider & System Improvement Funding:				\$4,794,328.68

Attachment B: Statewide Ketamine Use

In accordance with C.R.S. 25-3.5-210, the Department is providing this report on the statewide use of ketamine by emergency medical service providers and any complications that arise out of such use.

Ketamine is a medication that has sedative and analgesic properties. Emergency Medical Services (EMS) providers administer ketamine for pain management, sedation, and as a component of Rapid Sequence Induction (RSI). Ketamine and RSI are not within the scope of practice of most Colorado EMS providers but can be approved for use by Colorado Paramedics through a scope of practice waiver. Both acts are within scope of practice for Paramedics with Critical Care Endorsement. All EMS agencies operating under a scope of practice waiver are required to submit data into the ePCR system and attend data entry training.

Between July 1, 2022 and June 30, 2023, 1703 ePCRs with one or more ketamine administration(s) were identified in the Department's EMS Data Repository^{1,2,3}. Of those, 2 percent documented one or more potential medication complication(s). These data do not establish a causal link between the medication and complications or outcomes⁴.

Footnotes

- 1) All licensed ambulance agencies are required to submit ePCRs to the Department as specified by 6 CCR 1015-3. Non-licensed ambulance agencies may also utilize ketamine, and those incidents are not included in this dataset. These data include all ePCRs submitted to the Department with an incident date between 7/1/2022 - 6/30/2023 where ketamine was documented in the 'Medication Given' field (RXNorm codes including 6129, 6130, 203184, 330467). No narrative searches were conducted to retrieve additional information for the purposes of this report. Any instances of ketamine administered prior to EMS care were excluded.
- 2) EPCRs which listed the role of the person administering ketamine as Nurse Practitioner (NP) Registered Nurse (RN), or Physician (MD/DO) and other non-EMS providers were excluded.
- 3) These data were obtained from a live data system, which allows for the submission and alteration of ePCRs by the submitting agency at any time, therefore these data are subject to change. Data retrieved from the Colorado EMS Data Repository on 8/17/2023.
- 4) Data included in the Count of ePCRs with Any Reported Medication Complication(s) were determined using the 'Medications Complication' field associated with ketamine administration. This data field was missing or not documented in 219 ePCRs (13% of all ePCRs examined). No narrative searches or analysis of vitals signs were conducted. The included complications were: altered mental status, bleeding, hypoxia, injury, vomiting, hypertension, nausea, tachypnea, hypotension, and other.

Attachment C: Quarterly Branch Reports

The Branch submits quarterly reports to the State Emergency Medical and Trauma Services Advisory Council. These reports are included in this legislative report as part of the official record.