



April 30, 2024

City of Leon Valley
Fire Department
6300 EL Verde Road
Leon Valley, TX 78238

Enclosed with this letter is the University of Texas Health Science Center at San Antonio (UTHSCSA), Department of Emergency Health Sciences, Office of the Medical Director's response to the City of Leon Valley Fire Department's **RFQ LVFD 34-01 for medical direction.**

UTHSCSA's Office of the Medical Director is uniquely qualified to provide patient-centered and evidence-based medical direction to assist the City of Leon Valley and its citizens and visitors. We have a robust background in emergency medicine, extensive experience in out-of-hospital care, and a commitment to enhancing public health safety. We are excited to discuss renewing our long-standing relationship with the City of Leon Valley Fire Department.

The Office of the Medical Director (OMD) has hands-on experience in coordinating with emergency services and tailoring medical protocols to meet diverse community needs. Through the work of Dr. Mark Sparkman and the OMD, we hold key qualifications to this position:

- **Proven Leadership-** Successfully managed medical teams during critical situations, ensuring swift, efficient, and compassionate care.
- **Expertise in Emergency Medicine:** Over 50 years of experience in trauma care and acute medical services, focusing on adult and pediatric emergency management.
- **Strategic Planning and Implementation:** Developed and refined emergency response strategies that reduced response times with a continual focus on improving patient survival rates.
- **Commitment to Training and Development:** Designed and executed training programs for EMS personnel, enhancing their skills and confidence in delivering emergency medical services.
- **Evidence-based care-** An international reputation through EMS research and scholarly presentations growing and promoting the field of EMS.

We are particularly proud of our relationship with the City of Leon Valley Fire Department and continuing our partnership of developing innovative approaches to EMS, as well as the opportunity to work closely with fire department teams to enhance safety and outcomes across the community.

Thank you for your consideration. We look forward to discussing our capabilities and qualifications. If you require any further information or clarification of any of the elements of our proposal, please contact Lance Villers.

Sincerely,

Lance Villers, PhD, LP
Associate Professor & Chair
Dept of Emergency Health Sciences
UT Health San Antonio
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San Antonio, TX 78229-3900
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Institutional and Department Profile

UT Health San Antonio

The UT Health San Antonio, Department of Emergency Health Sciences (DEHS), Office of the Medical Director (OMD) is pleased to submit our qualifications for Medical Direction for Leon Valley Fire Department (RFQ LVFD 24-01). We have extensive experience providing medical direction to enhance fire and emergency services for better service to their constituents.

Across its missions of research, education, patient care, and community service, The University of Texas Health Science Center at San Antonio, also called UT Health San Antonio, remains relentlessly committed to advancing the health of all in San Antonio and the surrounding region.

With an annual biomedical research portfolio of over \$360 million, the university is a primary driver of the city's \$44.1 billion health care and biosciences sector. Through its six schools, a diverse workforce of 7,900, an annual expense budget of \$1.23 billion, and a clinical practice that provides 2.6 million patient visits each year, UT Health San Antonio generates a substantial economic impact across South Texas as it daily serves the public good.

Department of Emergency Health Sciences

The Department of Emergency Health Sciences is one of 8 departments within the School of Health Professions. The EMT-Paramedic program originated within the School of Medicine Division of Orthopaedic Surgery in 1974 as a result of a community effort by the Bexar County Medical Society, the San Antonio Fire Department (SAFD), San Antonio College, and the UTHSCSA. In 1981, the program expanded to offer EMT, EMT-Intermediate, and EMT-Paramedic training to the general public and the SAFD. The EHS Department first gained CAHEA/CAAHEP accreditation in 1983.

In 1989, the EMT Department was transferred to the School of Allied Health Sciences. In February 2000, the Department was granted approval to offer a Bachelor of Science Completion Degree in Emergency Health Sciences. In 2004, the EMT Department changed

its name to the Department of Emergency Health Sciences (EHS), reflecting its expanding role in pre-hospital and emergency services education, physician medical direction, and research.

The Department of EHS has been a longtime partner of the City of San Antonio. Through a recurring contract, the Department provides initial and continuing education, quality assurance and EMS field evaluations, and online and offline medical direction. The Department contracts with the Bexar County Hospital District to provide all county first responders medical control and quality assurance. The Department also has a long tradition of training military personnel, including contracts for training with the US Army Special Operations Command, 232nd Medical Battalion, US Air Force Special Operations Forces, and the US Army Flight Medics.

Today, the Department of EHS has expanded further to offer accredited EMS certification and continuing education courses to areas throughout Texas through partnerships with EMS agencies, fire departments, and hospitals. The EHS Department is composed of 3 divisions with distinct missions that serve a variety of communities of interest.

Highlights of the EHS Department:

1. Initial Education Division:

- Trains approximately 7,000 students annually in AHA-approved and other medical continuing education programs.
- Offers EMS certification programs for selected EMS agencies across Texas in 3-5 Paramedic cohorts annually.
- Offers one of the only fully online Bachelor of Science Degree program for paramedics.

2. Office of the Medical Director:

- Trains nearly 1,500 San Antonio Fire Department personnel in EMT and Paramedic continuing education.
- Provides Medical Direction, Performance Improvement, and Quality Assurance Program for the medical operations of the SAFD.
- Provides physician medical direction for 10 federal, county, municipal, and private EMS providers in Texas.
- Includes 3 full-time physicians and 5 EMS Fellows.

3. Research Division:

- Partners with the military for EMS Fellowship training and research projects.
- Annual research awards and sponsored program activity of nearly \$3 million.
- Multiple conference research presentations and abstracts each year.

Office of the Medical Director

Agency Capabilities

Medical Control & Performance Improvement Programs

The Department of EHS currently provides an identical scope of work to other municipalities and private agencies, demonstrating our understanding of the nature of this contract and its operational requirements. The Department of EHS has contracts for various levels of physician medical direction, EMS delivery quality improvement, infection control services, field evaluation of EMS personnel, online medical direction, and EMS initial and continuing education programs for the following agencies (all current):

- San Antonio Fire Department
- San Antonio Police Department
- North Channel EMS
- City of Windcrest
- Harris County ESD 12
- Wilson County 1&3
- Wilson County 4
- City of Converse
- City of Pleasanton Fire Department
- Kerrville Fire Department
- HIS Centre
- Bexar County First Responder Network
- Bexar County District 2
- City of Helotes
- Boeing
- Marksman Security (Toyota)
- Leon Valley Fire Department

The Department of EHS, OMD, can provide the resources and personnel required to maintain a Performance Improvement (PI) Program for contracted agencies. EHS, through the Medical Director, assigned faculty, and the PI process, will:

- A. Credential EMS personnel by providing documentation of:
- a process for EMS personnel to demonstrate skills proficiency to the satisfaction of the Medical Director;
 - a process for reintegration (i.e., bringing an individual from a prolonged inactive status back into active practice in the field); and
 - perform documented field evaluations by the EHS faculty, which would include demonstration of adequate patient care and scene control skills, appropriate conduct and effective human communications by EMS personnel or demonstration of corrective remediation, etc.;

- B. Assure EMS personnel internship by providing documentation of:
- a process in which newly certified/licensed emergency medical responders, personnel removed from service due to prolonged absence, and other Medical Director-credentialed personnel ride as a third person until personnel have met pre-established competencies/prerequisites as defined by the Medical Director.
- C. Assure and maintain professional development of EMS personnel by maintaining and providing documentation:
- of professional development training of EMS personnel in specific content areas and specific hourly requirements required to obtain at least the minimum continuing education hours;
 - that EMS personnel receive continuing education in accordance with state or national recertification requirements;
 - that the continuing education instruction spans the three learning domains: cognitive, affective, and psychomotor;
 - that demonstrates programmatic strengths and performance improvement plans for weaknesses and;
 - that the continuing education clinical content is defined and approved by the Medical Director.
- D. Assure and maintain protocol/standard of care management by providing documentation of:
- ongoing protocol review, updated according to current literature practice techniques, executed and approved by the Medical Director;
 - a process for protocol knowledge assessment among EMS personnel; protocol assessment that reflects the ongoing protocol review and revision, with structure and content defined and approved by the Medical Director and a defined remediation process with established timelines;
 - a process for protocol criteria to be jointly defined by the Medical Director and the Fire Chief;
 - a reassessment/re-education process and timeline that clearly identifies the criteria for identification of weakness and successful completion of re-education; or revocation of credentials if unsuccessful;
- E. Assure and maintain a Quality Improvement Program by providing documentation of:
- a five-component problem-solving process with the following components: assessment, goal setting, plan development, intervention, and progress evaluation;
 - measurable, written, and disseminated clinical indicators that are regularly assessed for compliance with established thresholds;
 - an appropriate, organized and prioritized monitoring and evaluation system for compliance with documentation standards, correct protocol selection and appropriate patient care;
 - assessment of key performance indicators such as response and averaging with correct statistical monitoring, clinical care (skills performance, protocol selection, patient assessment, etc.), customer relations program, education, and administrative and response policies as defined by the Fire Chief or appropriate designee;
 - a monthly random chart review of all runs (at least 5% or 30, whichever is greater) for compliance with documentation standards, correct protocol selection, and appropriate patient care;
 - an annual cardiac arrest survival analysis in accordance with current acceptable criteria, with comparative analysis with regard to nationally acceptable criteria;

- tracking the individual performance of skills for each EMS personnel. These will include those skills tested by NREMT;
 - measurable, written, and disseminated clinical indicators that are regularly assessed for compliance with established thresholds;
 - an appropriate, organized, prioritized, written, and disseminated monitoring and evaluation system for compliance with documentation standards, correct protocol selection, and appropriate patient care;
- F. Assure and maintain a system to respond to sentinel event response process/management by providing documentation of:
- a process to appropriately direct the response to emergency problems such as equipment failures, supply deficiency, medication errors, fleet failures, etc., if appropriate;
 - appropriate record-keeping and tracking of sentinel events;
 - process to investigate sentinel events that involve the appropriate parties;
- G. Assure and maintain an ongoing corrective action process by providing documentation of:
- annual documentation of the results of the quality improvement efforts and formal complaint tracking process, including the content of continuing education or individual training sessions to resolve identified deficiencies;
 - evidence to resolve and reassess identified deficiencies;
 - a process to determine whether deficiencies are individual or system-oriented;
 - a developed reporting structure that includes a public performance report;
 - a policy and methods regarding privilege/confidentiality;
 - a process of remediation and improvement strategies that comply with DSHS continuing education requirements, as appropriate.

Medical Director's Individual Capabilities

The OMD meets all Essential and Desirable qualifications described in the RFQ.

Medical Direction is provided 24 hours per day through published monthly call schedules available to supervisors, field personnel, and dispatchers via cell phones. EMS Medical Directors and the Department of EHS have extensive knowledge of electronic patient care systems, sentinel reporting requirements, chart auditing, DSHS performance improvement directives, and quality assurance procedures for EMS personnel.

The EHS OMD will assign Dr. Mark Sparkman's services to provide medical direction for the Leon Valley Fire Department.

Mark K. Sparkman, MD
Associate Professor Emergency Medicine
University of Texas Health Science Center at San Antonio

Employment History

Year	Position	Institution
2000-Current	Associate Professor, Emergency Medicine	University of Texas Health Science Center at San Antonio, TX
2006-2018	Medical Director	Air Medical, San Antonio, TX
2008-2016	Medical Director	San Antonio College EMS Program
1986-1992	Paramedic/ Firefighter	New Braunfels Fire Department, New Braunfels, TX
1983-1986	Paramedic	Careflite GAE, Dallas, TX

Education

1996	MD	University of Texas Southwestern Medical Center at Dallas School of Medicine Dallas, TX
1990	BA, Chemistry	Texas Lutheran College, Seguin, TX

Academic Appointments

2014	Associate Professor	University of Texas Health Science Center, Emergency Medicine
2005	Assistant Professor	University of Texas Health Science Center, Emergency Medicine

Non-Academic Appointments

2020	Medical Director	Leon Valley Fire Department
2020	Medical Director	Helotes Fire Department
2020	Medical Director	Bexar County ESD 8 Fire Department
2014	Assoc. Medical Director	San Antonio Fire Department
2012	Assoc. Program Director	University of Texas Health Science Center at San Antonio, Dept of Emergency Medicine
2010	Program Director, EMS Fellowship	University of Texas Health Science Center at San Antonio, Dept of Emergency Medicine
2010	Medical Director	University Hospital Emergency Department San Antonio, TX
2000	Attending Physician	McKenna Memorial Hospital, New Braunfels, TX

Certifications and Licensure

Board Certification

American Board of Emergency Medicine 11/2001 to 12/2025
American Board of Emergency Medicine EMS Physician 11/2019 to 11/2029

Certifications

BLS -- AHA
PALS -- AHA
ACLS -- AHA
ATLS -- ACS
Medical Director – NAEMSP

License to Practice

State of Texas, TSBME, # L-0614. 08/2000, Exp 02/2024

Honors and Awards

08/2017 Master Clinician, Long School of Medicine
06/2007 Nominee Excellence in Teaching
06/2005 Nominee Excellence in Teaching
06/2001 Excellence in Teaching Award
06/2000 EMS Can Do Gold Award for EMS Activities
06/2000 Walter A Hoyt Award for Basic Sciences Research
06/2000 Outstanding Research Award in Emergency Medicine

Professional Affiliations

American College of Emergency Physicians
National Association of EMS Physicians
National Association of EMTs
Texas College of Emergency Physicians
Texas Chapter National Association of EMS Physicians
National EMS Quality Assurance
International Trauma Life Support

Committees

National

NAEMSP Council of EMS Fellowship Directors
NAEMSP Safety and Quality Committee
NAEMSP Diversity in EMS
NAEMSP Pediatrics
NAEMSP Rural EMS
NAEMSP EMS Professionalism Subcommittee
NAEMSQA Measures Implementation
Safe States Alliance Membership

State

Governor's EMS and Trauma Advisory Committee, EMS Medical Directors 2023
Emergency Medical Services for Children State Partnership 2014 – current
Governor's EMS and Trauma Advisory Committee, Injury Prevention 2014-2022
Governor's EMS and Trauma Advisory Committee, Trauma Systems Committee Exp.
12/2010

Local

STRAC EMS Medical Directors
STRAC Emergency Department Operations Committee
STRAC Electronic PCR / Hospital Health Record Committee
STRAC Emergency Medical Task Force 8, Mobile Medical Unit Physician

Essential Qualifications:

EHS Faculty & Staff

In addition to Dr. Sparkman, the EHS Department's *OMD* also includes 3 fulltime EMS physicians to provide backup online and offline medical direction.

Highlights of the OMD:

- Over 1,250 hours of yearly classroom EMT & Paramedic Continuing Education
- Over 6000 hours yearly of in-field evaluation of EMS personnel
- Medical Control available 24 hours per day/365 days per year
- Participation in Quality Assurance and Quality Improvement activities
- Participation in Region-wide initiatives for improved medical care (Heart Alert, Stroke Alert, Hypothermia)
- Specialized training – airport medics, dispatch, mass casualty training, Weapons of Mass Destruction
- Participation in large city events – Fiesta, Rock-N-Roll Marathon
- Extensive knowledge in civilian and military out-of-hospital medicine

In order to meet all Responsibilities and Requirements of the RFQ, the OMD, through the medical director, shall through off-line and on-line medical direction:

Off-line Medical Direction:

The OMD shall provide off-line physician medical direction. The Medical Director has ultimate authority over medical care issues in accordance with the Texas Administrative Code Title 22, Part 9, Chapter 197. The service director, chief, or designee(s) possess ultimate authority for direction and decisions related to administrative, operational, training, and related issues. The Medical Director shall:

1. Be responsible for clinical oversight via phone, radio, e-mail or video conferencing of emergency medical services rendered.
2. Develop and monitor medically correct guidelines that permit specified ALS (Advanced Life Support) and BLS (Basic Life Support) procedures.
3. Develop, implement, and revise policies and procedures of pre-hospital care, patient triage, dispatch, communications, education development, and training.
4. Approve continuing education as it pertains to the delivery and practice of EMS care.
5. Provide clinical supervision via phone, radio, e-mail or video conferencing to emergency medical personnel.
6. Maintain effective communication with members of the EMS, city/county government, medical community, media, and the public as deemed appropriate by the Director or designee
7. Serve as a patient advocate and an advocate for emergency medical personnel.
8. Facilitate the credentialing of personnel under his medical authority.
9. Conduct reasonable measures through training, education, and other reasonable measures as determined by the Medical Director. Further, bring identified medical care deficiencies, if any, to acceptable levels, considering operational policies and budget constraints.
10. Establish written guidelines for conducting medical reviews, chart audits, and field evaluations.
11. Process, mediate, and attempt to resolve any medical complaint or inquiry originating from any element of the medical community in a timely fashion and report such actions to the Director and/or designees immediately upon receipt of the complaint and resolution of such complaint.
12. Respond to, mediate, and resolve any concerns or complaints of any member of the medical community and/or involving EMTs or medical related issues forwarded by medical personnel, in a timely manner. Review all patient care procedures, protocols, standard operating procedures and policies to ensure compliance with all applicable Texas Department of State Health Services statutes, administrative rules and departmental policies promulgated by TDSHS.
13. Ensure emergency medical personnel are trained in the use of the local trauma triage processes.
14. Develop and revise, when necessary Alert Protocols, i.e. Heart Alert, Stroke Alert, etc.
15. Review and reasonably update, as necessary, the services' Emergency Disaster Plan, Medical section.
16. Assist in the development of EMS mass casualty and disaster services planning and exercising.
17. Provide field response via telephone or radio support, as needed, during multiple casualty or disaster incidents at the request of the Incident Commander.
18. Develop and implement a patient-care quality assurance system to assess the medical performance of medical personnel by use of a quality assurance program including, but not limited to, a prompt review of run reports and skills performance data, compliance with medical protocols, and direct observation when possible.
19. Develop and maintain a system to review and evaluate new medications, equipment and treatment modalities for potential implementation and review for possible

- elimination of medications, equipment and treatment modalities that no longer provide effective and efficient care and treatment for emergency patients.
20. Discuss with the Director (or designee) on a regular basis, which shall be no less than once a month, to keep him/her apprised of any changes or issues affecting the service's program and suggest program improvements.
 21. Review patient care reports and apply analytic procedures to ensure appropriate documentation of patient care is being accomplished. Evaluate patient care reports to evaluate the effectiveness of the patient care that is provided by field emergency medical personnel and makes recommendations for improvement.
 22. In instances where it is found that an Emergency Medical Technician or otherwise certified personnel's performance is unsatisfactory, the Medical Director or his Assistant has the authority to de-authorize or suspend the individual from patient care activities. Immediate suspension from patient care activities will be implemented by the services' administration until the case can be thoroughly reviewed; The Medical Director may temporarily or permanently de-authorize any emergency medical personnel, without prejudice, from participation in patient care activities as provided by state law and as described in the Suspension or Revocation of Credential to Practice Section of the Clinical Operating Guidelines which has been provided to all emergency medical personnel.
 23. Ensure and certify the service's program security procedures for medications, fluids and controlled substances are in compliance with local, State, and Federal law. Create, authorize and ensure adherence to detailed written operating procedures regarding all aspects of handling medications, fluids and controlled substances by emergency medical personnel.
 24. Provide authorizations and oversight for purchase of pharmaceuticals and equipment requiring prescription.
 25. Evaluate and recommend medical equipment and supply standards.
 26. Participate in local, regional, state and national committees, and other standing or newly established committees that require appropriate CENTER and/or service representation.
 27. Remain in clinical practice in emergency medicine during the term of this contract and any extensions thereof.
 28. Perform other duties as required by law, rule, policy or other requirements as deemed appropriate by Director and/or Designee.

On-line Medical Direction

The OMD shall, through the Medical Director:

1. Provide, coordinate, and delegate online Medical Direction services on a twenty-four (24) hour basis, seven (7) days a week and respond within a reasonable amount of time to calls from EMS field personnel.

As required by state code, the services provided as EMS medical director will follow all state codes as defined in:

Code	Title
Title 25, Part 1, Chapter 157	Texas Administrative Code, Department of State Health Services, Emergency Medical Care
Title 22, Part 9, Chapter 197	Texas Administrative Code, Texas Medical Board Rules, Emergency Medical Service

UT Health San Antonio, Department of Emergency Health Sciences, Office of the Medical Director references:

HIS Centre: Mechelle Salmon. Mechelle.salmon@hiscentre.com 830-228-4504

Kerrville: Eric Maloney eric.maloney@kerrvilletx.gov 830-257-8000

Helotes: Scott Moreland smoreland@helotes-tx.gov 210-695-3572

Bexar County District 2: Josh Brown josh.brown@bc2fd.org 210-881-0658

Contact Person:

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