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# **ANNUAL REPORT OF THE SIOUX FALLS REGIONAL EMERGENCY MEDICAL SERVICES AUTHORITY (REMSA) 2006**

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## **Introduction**

In 2006, REMSA continued its oversight of the emergency medical services (EMS) system for the City of Sioux Falls. This report outlines the state of the City's EMS system in 2006.

## **System Structure and Development**

Emergency medical dispatch services in Sioux Falls are provided by a joint City/County dispatch center. City agencies provide first response, while ambulance service is by a private company under contract to the City, and several local acute care hospitals have emergency departments. Over 400 professionals employed by these various agencies provide emergency medical services. REMSA's role is to meld these individuals into a system which provides the highest quality prehospital care possible.

REMSA is governed by a board that meets monthly to address administrative and system issues. These meetings are scheduled in advance and are open to the public.

REMSA has appointed a Medical Board which addresses quality of care, protocol, provider certification, and patient care issues. It meets monthly. REMSA has three staff positions, Dr. Jeff Luther, the EMS Medical Director; Julie Charbonneau, Executive Director; and Dean Trumbull, Quality Improvement Officer.

REMSA continued the EMS system review and improvement process during 2006. Much of the EMS system structure is shaped by the ambulance provider contract. The REMSA Medical Board has found that provider performance under the current ambulance contract meets or exceeds all standards. After collecting data from all system stakeholders, exploring all options and seeking the input of Fitch and Associates, a nationally recognized EMS consulting firm, REMSA recommended that the City seek another sole-provider contract with the current provider, Rural/Metro Corporation. A draft contract has been negotiated and implementation of the contract along with a supporting ordinance will be before the

City early in 2007.

### **Prevention, Early Recognition, Bystander Action and System Access**

REMSA supports appropriate bystander involvement in emergency medical situations. The REMSA Medical Director participates in prevention and safety programs with the American Heart Association, Red Cross and South Dakota Safety Council. He is also a member of the Minnehaha County Infant and Child Mortality Review Committee.

During EMS Week in May, we sent press releases and were available for media interviews as a public awareness and education effort.

### **Requests for Service, Dispatch, Prearrival Instructions**

Emergency Medical Dispatch (EMD) is provided by Metro Communications. EMD consists of caller interrogation to determine the severity of the call; dispatch of appropriate resources, which may include police, fire, and ambulance; emergency first aid instructions given to callers; and most importantly identification and mitigation of scene safety issues. Metro Communications utilizes the Medical Priority Dispatch System (MPDS), the most widely recognized and utilized EMD system, for both call-taking and instructions. MPDS is used in over 2565 communication centers and 22 countries.

In 2006, Metro Management Council was restructured in anticipation of organizational changes to Metro Communications. Previously Metro Communications had been a Department of Minnehaha County. Minnehaha County and Sioux Falls approved a plan to create a new independent governmental entity, Metro Communications, beginning in July of 2007. Metro will continue to be funded by governmental users (at this time Minnehaha County and Sioux Falls) but will be capable of supporting additional users. Rather than serving as an advisory committee, Metro Management Council now provides more direct and formal oversight.

REMSA provides quality assurance and medical oversight of Metro Communications under a contract with Metro Management Council.

The quality of EMD at Metro Communications remained above standards. Metro Communications is accredited as a Center of Excellence in Emergency Medical Dispatch, and in 2006 was awarded re-accreditation for three years. Metro Communications was the 56th of 75 centers worldwide to hold this recognition. Excellence in this vital link between the public and the EMS system has long been a REMSA goal and we are pleased to see this level of performance.

A new digital trunked radio system purchased with grant funding by South Dakota was installed in 2004. While the primary purpose was to enhance communications across the state in the event of a disaster, it has also allowed responders to maintain communications with each other and their communications center when traveling even a few miles outside their coverage area. Full implementation in the Sioux Falls area was delayed but is nearly complete.

Metro Communications installed the Aegis NewWorld computer aided dispatch (CAD) system in 2004. Metro Communications was the largest system to implement the New World System, which resulted in unanticipated challenges for Metro and New World. Software features that apparently worked in much smaller markets but were unable to meet the demands of the call volume of the Sioux Falls Metro System. This initially resulted in vastly limited or non-functional user input functions as well as very limited reporting features. Many of the limitations have been addressed. NEMSIS (National Emergency Medical Services Information System) standards have been adopted by 49 states, the National Highway Traffic Safety Administration (NHTSA), FEMA, the CDC as well as many medical organizations. Many CAD vendors are incorporating this standard into current and future releases. REMSA strongly encourages adoption of these standards.

Dean Trumbull is a National Faculty MPDS instructor and provides MPDS EMD training at the local, state and national level. We believe that his providing EMD training locally contributes to high quality Emergency Medical Dispatch.

## **First Response**

Police Officers and Firefighters provide first response in medical emergencies.

Because of their ability to respond quickly, police officers respond to cardiac arrest, choking, and emergency childbirth calls as medical first responders. They also respond as EMS providers to situations with a subject down when it is unknown whether there is a medical problem. Police officers are trained in CPR and Red Cross first aid. In 2006, the REMSA Medical Director and QI Officer began developing an automated external defibrillator (AED) program, training officers from the Sioux Falls Police Department. This project was fully implemented in Oct. 2006. AEDs are placed in all active patrol and supervisory vehicles.

The Police Department keeps records of their involvement in EMS. These records are reviewed to develop policies for the role of Police Officers in emergency medical care.

The Police Department provides valuable EMS services in the community.

All members of the Sioux Falls Fire Rescue Department are trained and function at the Emergency Medical Technician - Basic (EMT-B) level. Sioux Falls Fire Rescue responded to 4834 emergency medical calls in Sioux Falls in 2006.

Firefighter EMTs operate under local patient care protocols. Fire Rescue personnel utilize an internal quality improvement process with involvement of the medical director and REMSA QI Officer with a goal of continuing to improve first responder level care. REMSA staff also review Fire Rescue Department EMS calls to track trends to be used for developing policies for the role of firefighters in emergency medical care.

Firefighters are trained to provide Automated External Defibrillation. The Medical Director or REMSA staff evaluate every call on which the AED is used.

Sioux Falls Fire Rescue has spearheaded a public access defibrillator (PAD) (AEDs for the public) program for the Sioux Falls region. Over 800 PADs have been placed regionally. Initial reports show them being used in cardiac arrest situations about once per month. Sioux Falls Fire Rescue was selected as a “best practices” site in a program to help PAD program development nationwide.

2006 was marked with the retirement of Fire Chief Donn Hill, and the appointment of Chief Rick Larsen. REMSA is grateful for the many system contributions of Chief Hill and looks forward to working with Chief Larsen.

Fire Chief Larsen is working towards having a fire unit on scene at 90% of calls within 5 minutes of the call. We do not have fractile response time statistics for Fire Rescue EMS calls in 2006 because of difficulty obtaining reports from the computer aided dispatch system at Metro Communications. This problem has been addressed and this report should be available in the future.

Sioux Falls Fire Rescue is accredited by the Commission on Fire Accreditation International. There are fewer than 200 accredited services out of 32,000 fire services nationwide. Accredited agencies ensure their pursuit of excellence in emergency response.

Sioux Falls Fire Rescue’s continuing commitment to EMS is a vital part of the local EMS system.

## **Ambulance Service**

Ambulance service at the advanced life support (paramedic) level is provided by Rural/Metro Ambulance under a contract with the City. 911 calls for ambulance service in Sioux Falls are responded to by an ambulance with a crew of two, at least one of which is certified by REMSA as a senior paramedic. The

second crew member may be another senior paramedic, a paramedic or a basic EMT. Over 97% of Rural/Metro's staff are senior paramedics and paramedics.

Rural/Metro Ambulance responded to 11,353 calls for service from their Sioux Falls location in 2006. This is a slight increase from the previous year. Sixty-five percent of these calls resulted in transport to a hospital, which is a three percent decrease from last year's transport percentage.

There are typically nine ambulance staff on duty each day, seven assigned to the three stations and two being on "first call" meaning they are immediately available to take a call. During the overnight hours, when call volume is lower, typical staffing drops to eight. The number of staff on duty at any one time can vary upwards, as additional personnel are called in as needed during unexpected peaks in call volume.

Patient care by ambulance crews is provided under specific local patient care guidelines and policies. These guidelines are developed with input from the Medical Board, Medical Director, and ambulance provider. The REMSA Medical Director also seeks input on policies and guidelines from other members of the local medical community. The Medical Board reviews and approves all patient care guidelines.

Specific performance requirements are specified by the ambulance provider's contract. REMSA monitors compliance with all contract provisions. Rural/Metro complied with all contract requirements for response time in 2006, including responding to over 92% of emergency calls in eight minutes and fifty-nine seconds or less. (The contract requires 90% compliance within that time frame.) REMSA staff review every emergency call with a response longer than eight minutes and fifty-nine seconds, in a continuing search for problem areas and trends. We did not see an increase in such extended responses in 2006. Rural/Metro continues to comply with all of the other performance requirements specified by contract. The City's contract with Rural/Metro includes performance security in the form of a performance bond and a three-way equipment lease.

Rural/Metro Ambulance in Sioux Falls is one of 102 ambulance services nationwide that is accredited by the Commission on Accreditation of Ambulance Services (CAAS) for its compliance with national standards of excellence. Rural/Metro is the only accredited ambulance service in South Dakota and was the eighty-ninth nationally to receive this recognition. Rural/Metro is in the process of review and application for reaccreditation. REMSA is pleased that Rural/Metro maintains such a high level of achievement in our community.

Ambulance quality improvement meetings are scheduled monthly with ambulance management and staff. The ambulance service utilizes extensive internal training programs, including advanced cardiac life support, pediatric life support, and prehospital trauma life support, with the supervision of the Medical Director. The

Medical Director participated in advanced life support skill validations for all paramedic staff in 2006.

The ambulance service maintains a record of each patient contact. REMSA staff review all ambulance records and track compliance with established guidelines for patient care and compliance with quality indicators as established by the Medical Board. The Quality Improvement reports are reviewed by the Medical Director and Medical Board, who institute policy changes and/or training programs to improve patient care.

Improvements to ambulance service in 2006 included updates and additions to the medications and equipment carried on each ambulance, revision of several patient care guidelines to reflect current standards of care, and development of new policies for various types of patient care situations.

Rural/Metro utilizes a computerized scheduling system that is an excellent means of tracking credentialing information, so that we can be assured that every paramedic who is working has all currently required certifications, licensure, and continuing medical education. Rural/Metro maintains a durable medical equipment replacement schedule to assure that equipment replacement is continually addressed in their budget cycle. They are also in the process of refurbishing several of their existing ambulances.

New ambulance equipment added in 2006 included medical dopplers, used to measure very low blood pressure, to verify the absence of heart sounds, and to monitor and fetal heart sounds. Also, Rural/Metro upgraded their cellular capabilities for use with LifeNet receiving stations, which allow transmission of 12 Lead EKGs to the hospitals. Rural/Metro and the City implemented a pilot electronic charting program in 2006. Homeland Security grant funding was used for this system, which will allow faster and more accurate tracking of victims in mass casualty events as well greatly enhance our ability to analyze quality improvement data.

Rural/Metro supports Explorer Troop 900, twelve Boy Scout Explorers, ages 14 to 20. They are trained by Rural/Metro in CPR, First Aid, and the use of Automated Defibrillators. They ride along with the ambulance and also provide assistance at standbys and events. Rural/Metro hopes that their involvement with this Explorer Troop will eventually result in some of these young people choosing EMS as a career path.

Rural/Metro utilizes a General Manager from their Omaha operation with local day-to-day management provided by three local Operations Managers. We find both the local and regional management team members to be responsive to issues and concerns.

Besides EMS calls that come in on both 911 and private phone lines, Rural/Metro also responds to those in the community who call 911 requesting personal assistance such as lifting assistance, turning and moving,

and other personal care, even though such response is not contractually required. Most of these calls for service come from the elderly and disabled who call 911 as a last resort when needing lift assistance or other personal care. Rural/Metro provides this service hundreds of times per year at no cost to either the caller or to the city.

Ambulance rates did not change in 2006. We closely monitor changes and trends in third party reimbursement, including the effects of the Medicare ambulance rate schedule. REMSA's goal is to allow Rural/Metro to remain profitable locally without government subsidy, resulting in the continuation of high quality service.

## **Direct Medical Control**

Direct (on-line) Medical Control is provided by Emergency Physicians at the local acute care hospitals within the City. All patient care guidelines are on file at the hospitals, readily available to the emergency physicians. We provide information to the emergency department staff and physicians on all changes in pre-hospital policies and guidelines.

Base hospital agreements are in place with Sioux Valley Hospital, Avera Heart Hospital and Avera McKennan Hospital that formalize roles and expectations in on-line Medical Direction and allow quality assurance activities over this phase of prehospital care.

## **Receiving Facilities**

Patients transported by ground ambulance are taken to the acute care hospital of their preference, or if they have no preference, to the acute care hospital in the part of the City where the call originated. This is spelled out in a Destination Policy that was developed with input from the ambulance provider and all three hospitals. A new behavioral health hospital opened in 2006, bringing new issues regarding hospital destination.

Our goal is to have excellent communication with the local receiving facilities. Emergency Physicians from the hospitals serve on the REMSA Medical Board. Emergency Department managers are also invited to each Medical Board meeting to encourage ongoing communication.

We have access to hospital records for purposes of quality assurance studies based on patient outcome. We study outcomes of trauma and cardiac arrest patients within the City.

## **Indirect Medical Control**

Dr. Jeff Luther is REMSA's Medical Director. He is responsible for the quality improvement program, care audits, development of protocols, credentialing, and certifying providers. Quality improvement activities include both on-scene observation and review of records after a call. The Medical Director and Quality Improvement Officer do on scene observation both by riding with crews and by random response to calls.

We believe that changes to our EMS system must be based on evidence that change will improve patient care and outcome. Quality improvement and data collection form the basis on which we analyze all aspects of our EMS system. Based upon this data, the Medical Director recommends changes and improvements to the EMS system.

The Medical Board's Quality Assurance Committee, made up of representatives from Metro Communications, the Police Department, the Fire Rescue Department, Rural/Metro and the hospitals, as well as the Medical Director, QI Officer, Executive Director, the Medical Board Chairman and Vice Chairman, meets to review cases with implications for the system, both positive and negative. This has been an excellent forum to discuss concerns and to bring about improvements in patient care.

The REMSA Medical Board has an ongoing certification program for all providers within the EMS system. The purpose of certification is to standardize training and required experience for providers as well as to give the Medical Director essential authority over patient care given on his license. Certification is based upon training, testing and Medical Director recommendation. Certifications in 2006 included nine new emergency medical dispatchers at Metro Communications. At Rural/Metro, there were four new staff paramedics and four new senior paramedics certified.

REMSA implemented a new Guideline for EMS Branch Operations in 2006 in order to standardize EMS operations at mass casualty events. There were no large scale mass casualty incidents in the city in 2006, but the guideline was tested at several smaller events and at a drill.

## **Summary**

REMSA continues to work to improve the EMS system in the City of Sioux Falls. The ambulance contract, with appropriate performance requirements and built in performance security, provides a high level of security to the citizens of Sioux Falls. Change and challenges are inherent in emergency medical services systems, and they will only increase as we deal with market forces, population and other growth as well as political realities that will surely change with time.

REMSA remains committed to assuring that the citizens of Sioux Falls receive the best possible prehospital care.

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Janet Kittams-Lalley

**REMSA Staff**

Dean Trumbull, Quality Improvement Officer

Dr. Jeff Luther, Medical Director

Julie Charbonneau, Executive Director