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**An Assessment of and Recommendations for
Richardson County, Nebraska
Emergency Medical Services
June 2010**



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Cover Photo: provided courtesy of Nebraska Department of Roads.

Frequently Used Acronyms

The Emergency Medical Services field makes frequent use of acronyms that may not be familiar to many persons. To reduce confusion for the purposes of this report the following acronyms are defined as:

ALS	Advanced Life Support (i.e. paramedic level service)
BLS	Basic Life Support (i.e. EMT level service)
CAH	Critical Access Hospital
CAAS	Commission on the Accreditation of Ambulance Services
CAMTS	Commission on the Accreditation of Medical Transport Systems
CMC	Community Medical Center
DHHS	Nebraska Department of Health and Human Services
DPAT	Nebraska Department of Property Assessment & Taxation
EMD	Emergency Medical Dispatch (pre-arrival instructions for 911 calls)
EMS	Emergency Medical Services
EMT	Emergency Medical Technician certified by DHHS
EMT-B	EMT certified by DHHS at the Basic level (BLS)
EMT-P	Paramedic certified by DHHS (ALS)
eNARSIS	electronic Nebraska Ambulance and Rescue Service Information System
FCRS	Falls City Rescue Squad
NCEMSI	North Central EMS Institute
NRS	Nebraska Revised Statutes
PIER	Public Information, Education, and Relations
PSAP	Public Safety Answering Point
RCEMSAB	Richardson County EMS Advisory Board
STS	SafeTech Solutions, LLP

Richardson County Nebraska EMS Assessment

I. Executive Summary

Out-of-hospital Emergency Medical Services (EMS) are vital to the health, safety and well-being of the residents and visitors of Richardson County, Nebraska. Ensuring and sustaining a high quality of EMS in Richardson County in the future will challenge old ways of thinking and invite new innovative approaches.

This report concludes that the overarching challenge facing EMS in Richardson County is one of creating a unified and sustainable county EMS system while honoring the local dynamics of the people and communities involved. To that end this report recommends:

- The creation of a unified EMS system that includes: a clear organizational structure; clear lines of authority, responsibility, and accountability; and unified leadership, policies, protocols and practices.
- The formalization of an enterprise fund for EMS within the county structure and the establishment of a distinct and unified identity for EMS by creating a governing Board (the Richardson County EMS Board) made up of citizens with specific expertise.
- The hiring of a Richardson County EMS Chief charged with unifying EMS operations and creating a unified vision and strategic plan for EMS in the County.
- Strengthening the clinical care by: defining the role and expectations of the medical director; unifying patient care protocols and clinical practices; creating a quality plan and processes that ensure provider competence and confidence.
- Requiring volunteer associations become properly incorporated, have appropriate federal tax designation and utilize Generally Accepted Accounting Principles based on Financial Accounting Standards Board standards.
- Strengthen volunteer system through incentives, reducing entrance barriers, workforce planning, and strengthening community support.

The rationale and details of these recommendations are spelled out in the following report. The challenges facing EMS in Richardson County are not unique. This is a time of unprecedented change in rural EMS systems all across the nation. Richardson County is to be commended for its foresight in considering the future of EMS for its citizens.

The SafeTech Solutions team thanks all of the assessment participants for their generous time, the EMS Program of the Nebraska Department of Health and Human Services for coordination, and EMS Program Staff Member, Doug Fuller, for coordinating interviews and assisting with research.

II. Introduction

This is a report of an assessment of out-of-hospital EMS in Richardson County Nebraska conducted by SafeTech Solutions, LLP (STS) in late April of 2010.

Background: The provision of reliable, competent, and affordable out-of-hospital EMS is an important ingredient to the health, safety, and security for the residents and visitors of Richardson County Nebraska. Effective EMS provides rapid response, emergency medical care, and medical transportation – important components of any rural healthcare system. Like many rural areas in the United States changes in socioeconomic conditions, demographics, and healthcare are presenting significant challenges to the EMS system in Richardson County.

A desire to ensure that Richardson County has a sustainable high quality EMS system motivated county leaders to seek outside help in learning more about these challenges. Of particular concern is the question of whether Richardson County has enough personnel to meet local 911 emergency response needs as part of increasingly regionalized healthcare and medical services.

Over the last five years the Emergency Medical Services Program of the Public Health Division of the Nebraska Department of Health and Human Services (DHHS) has sought to help local Nebraska communities address EMS challenges. To that end, the program has assisted communities in obtaining funds to finance EMS assessment and development projects and obtain the help of experts who are experienced and knowledgeable in the current challenges faced by rural EMS systems.

Goal of the project: The goal of this project is to provide a comprehensive description and assessment of the EMS system in Richardson County as it appears in 2010, along with recommendations for improvement. The project focused only on the out-of-hospital portion of the EMS system, which provides emergency call taking, dispatch, response and medical transportation. Specifically, the project looked at:

- the design of the system;
- the system's organizational structures;
- leadership, administration and management;
- response reliability and operations;
- finance;
- staffing and personnel;
- clinical care (including medical oversight and direction); and
- quality assurance processes.

Methodology: Data was collected through: a site visit; a review of significant documents; a review of available operational and response data; and more than 40 interviews with key local informants including: EMS providers; organizational leaders; local governmental officials; residents; public safety, fire and emergency management officials; school officials; business and farm owners; medical and hospital staff; regional health and EMS officials; and local users of EMS.

Quantitative data was limited and many of the issues involved in the Richardson County EMS system are rooted in local practices, opinions, beliefs and traditions, so this assessment sought to go beyond gross measurements and understand the subtleties of the local issues and challenges. To that end, the assessment and report draw generously on qualitative data, including the observations, experiences, reflections and opinions of the key informants.

Data was reviewed and evaluated by the SafeTech team looking for themes and trends with an eye toward local challenges and opportunities. Specific recommendations were formed out the data and evaluation.

In evaluating the data and considering recommendations, particular attention was paid to the unique history, personalities and system characteristics of Richardson County. No two EMS systems are identical; each is influenced by its own particular local issues, personalities, needs, resources and leadership.

Limitations: The project was limited by several factors including the EMS system design, limited quantitative data, trust issues and limited time and funding. Because the Richardson County system involves a variety of entities and organizations, quantitative data is scattered and there is no single source for qualitative data for the system. Some data was not easily

accessible nor has data always been collected in the same manner. Some data was not available or had to be pulled together from a variety of sources. For example, obtaining clear data on the total EMS system costs was difficult because of the number of entities involved and the various bookkeeping methodologies. Some informants were reluctant to share information because of trust issues related to conflicts between some of the personalities involved. Finally, the project funding limited the site visit and amount of time available for gathering data.

The Report: This report seeks to present the findings and conclusions in a readable and practical format. In an effort to communicate clearly and make this project useful to all, the report defines terms, explains concepts and utilizes conversational language. The report seeks to honor people's participation and encourage further regional collaboration by respectfully presenting what some might consider sensitive information without identifying individuals.

About the consultants. STS is a leading EMS consulting firm that specializes in rural EMS system assessment and design so is uniquely qualified to provide this assessment and resulting recommendations. Each partner has a broad background in rural EMS issues as providers, administrators, regulators, and consultants. STS has significant experience in assessing and developing EMS systems with a particular focus on emergency medical service policy and finance in rural states and geographies as well as developing EMS leaders and CQI processes in small to medium sized ambulance services. Past projects completed by STS include:

- Performed the North Dakota statewide EMS Medicaid payment rate rebasing project.
- Conducted many EMS organizational assessments at the regional, county, and city level. We have also conducted statewide rural EMS assessments that include a financial component and recommendations for state actions.
- Provided the EMS Management Academy that is especially suited to leaders from rural and frontier EMS agencies and has been held in North Dakota, Minnesota, Michigan, Wyoming, and Florida.
- Developed and assisted in the implementation of rural EMS system designs for counties and regions.
- Developed or contributed to the development of state EMS systems, trauma systems, Quality Management Plans, public health plans, and the reassessment of these plans.
- Developed the budget model spreadsheet for the Rural EMS & Trauma Technical Assistance Center. This tool passed the clearance process and was adopted by the US Department of Health and Human Services. We have instructed ambulance services in using the tool in the states of North Dakota, Montana, Minnesota, Indiana, Michigan, Louisiana, Nebraska and Colorado.
- Performed cost-based charge analysis for ambulance services in Minnesota and Montana.
- Led the strategic planning of contemporary systems for providing health care to the citizens of rural areas throughout North America and Australia including tribal nations.

III. Background on rural EMS

EMS in general but especially EMS in rural and small-town America, continues to be influenced by the unique manner in which it developed over the last 50 years. Modern EMS has roots in the 1960s, when concerns about soaring highway traffic deaths led the federal government to fund a study on accidental death in America. The resulting report, published in 1966, highlighted the need for improved prehospital emergency medical services, especially in rural areas where trauma injuries and deaths were (and remain) most prevalent.ⁱ Congress responded and began funding EMS development through a variety of projects and funding mechanisms.

In 1973, Congress passed the Emergency Medical Services Systems Act, which eventually led to the formation of a plan for the development of geographic EMS Regions across the United States. The framers of the plan wanted to ensure that EMS everywhere met certain standards and envisioned the development of 304 EMS regions that each conformed to 15 “essential EMS components”ⁱⁱ. In the early 1980s, before these regions could be established and become self-sufficient, federal funding for regional EMS development was eliminated, leaving local communities to develop EMS with little or no regional planning and funding. EMS did not develop according to any large scale planning, but simply developed locally and organically where there was need, desire, resources and leadership.

Over the last four decades EMS in most rural communities have been heavily subsidized by volunteers who donate their time to staff response and medical transportation. In the last decade volunteerism in many communities has declined. At the same time, in many communities the demand for EMS has increased. With more regionalization of specialized medical services such as cardiac, trauma, stroke and burn care, EMS is performing more transfers to regional facilities from the more distant rural hospitals. In some areas, rural health clinics and hospitals have closed, creating more reliance on local EMS as a healthcare safety net in medical emergencies. In addition, in many rural areas the percentage of people over age 65 continues to increase.

In 2004, the National Rural Health Association published a vision for the future of rural EMS in the United States and predicted increasing reliance on rural EMS because “rural and frontier settings have limited and shrinking local health care resources”ⁱⁱⁱ. In 2005, a report from the International City/County Management Association described EMS systems as “Bending – and in some cases breaking – under the strain of rising costs, reduced subsidies, and increasing services expectations”^{iv}. In 2006, the federally funded Institute of Medicine’s comprehensive report, *Future of Emergency Care: Emergency Medical Services at the Crossroads*, described rural EMS in America as facing a multitude of challenges. That report stated that “providing adequate access to care presents a daunting challenge given the distances required to provide care and the limited assets available.”^v In 2008, a nationwide assessment of the EMS workforce funded by the federal government and conducted by the University of California, San Francisco Center for the Health Professions, described the recruitment and retention of EMS providers as one of the greatest challenges facing rural EMS.^{vi}

IV. EMS in Nebraska

In Nebraska, as in most states, out-of-hospital EMS is not a service whose provision by local government is mandated by law. The amount of EMS and the level of care provided is a local issue that is often a product of historical precedent and local initiative. This can be a challenge in a state where 89% of the cities and towns have fewer than 3,000 population^{vii}.

The Nebraska State Legislature has enacted a number of statutes designed to protect the health and safety of persons in Nebraska. Monitoring the performance of Nebraska EMS agencies and personnel is the responsibility of the DHHS Division of Public Health, Licensing and Regulatory Affairs. Ambulance services are also licensed and regulated by DHHS. Ambulance services are inspected randomly and as often as annually by DHHS for compliance with minimum equipment standards; proudly the Falls City and Humboldt rescue squads have no recorded deficiencies.

DHHS also oversees EMS education and licenses EMS providers including: First Responders, EMT-Basics, EMT-Intermediates, and Paramedics to provide specific scopes of practice. The licenses of personnel are renewed by DHHS every three years upon each provider completing specific continuing education requirements, and again there are no known deficiencies.

Another service provided by DHHS is a data collection system called the electronic Nebraska Ambulance and Rescue Service Information System (e-NARSIS). This data collection system is used by EMS agencies statewide.

DHHS also provides a medical direction course for physicians serving local emergency medical services the opportunity to become better aware of their responsibilities as a Physician Medical Director for a local service. The training provides medical directors with the opportunity to share experiences as a PMD, to receive the PMD manual for reference and to learn about their role as a PMD.

V. Richardson County, Nebraska

Richardson County is an 553.26 square mile expanse of fertile farm and ranch land and 3 square miles of water in extreme Southeast Nebraska. The county is bordered by Pawnee County to the West, Missouri to the East, Kansas to the South, and Nemaha County to the North. Bisecting the county from east to west is the Nemaha River draining towards the Missouri River which provides the Eastern county border. The County economy benefits greatly from hog farms along with cattle ranches. Corn, alfalfa, and wheat are grown throughout the county while apples are also grown abundantly in the county. The US Census Bureau lists the following industrial classifications and employment numbers for Richardson County:

(US Census Bureau, 2009)	Paid employees	Total establishments
Administrative and Support and Waste Management and Remediation Services	59	6
Manufacturing	297	12
Finance and Insurance	99	15
Professional, Scientific, and Technical Services	20-99	18
Transportation and Warehousing	20-99	20
Health Care and Social Assistance	358	22
Accommodation and Food Services	141	23
Construction	109	25
Wholesale Trade	138	30
Other Services (except Public Administration)	127	33
Retail Trade	336	45
Total (not all are listed)	1928	266

The population of Richardson County was 9,531 in 2000 with a 2009 estimate of 8,125. The leaves the county with an average of 14.7 persons per square mile. The County has the following ten incorporated communities:

(Richardson County)	Population
Barada	24
Dawson	157
Falls City County Seat	4,823
Humboldt	1,003
Preston	40
Rulo	191
Salem	160
Shubert	237
Stella	248
Verdon	242

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Since 2000 the County has experienced a 15% percent decline in population and 21.5% of its population is over age 65 (as compared to 13.6 percent statewide). The median household income is \$29,884 with 10.1% of the population living below the poverty line (compared to 9.7 percent statewide)^{viii}.

The Falls City Chamber of Commerce website highlights the recent accomplishment of the town as the 2009 Nebraska Community of the Year based on local capital improvement investments in Falls City’s \$3 million Library and Arts Center, \$3.2 million Aquatic Center, Jug Brown Stadium/Thomas Field complex, \$21 million new Community Medical Center and the transformation of the Grand Weaver Hotel.

The County Health Rankings website (<http://www.countyhealthrankings.org/>) is a key component of the Mobilizing Action Toward Community Health (MATCH) project. It states, “MATCH is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

This web site provides access to the 50 state reports, ranking each county within the 50 states according to its health outcomes and the multiple health factors that determine a county’s health. Each county receives a summary rank for its health outcomes and health factors and also for the four different types of health factors: health behaviors, clinical care, social and economic factors, and the physical environment. Each county can also drill down to see specific county-level data (as well as state benchmarks) for the measures upon which the rankings are based”.

Based on these reports, Richardson county ranks 75th out of 75 counties in Nebraska that were ranked. The remaining 18 counties were not ranked. These benchmarks are intended for public health officials to use as a comparison against other counties in Nebraska to find areas of the public health that could be improved systematically. The following table details the reported measures for Richardson County:

(County Health Rankings, 2010)					
	Richardson County	Error Margin	Target Value*	Nebraska	Rank (of 75)
Health Outcomes					75
Mortality					74
Premature death [1]	10,168	7,598-13,328	5,093	6,151	
Morbidity					70
Poor or fair health [2]	15%	12-20%	10%	12%	
Poor physical health days [3]	4	2.9-5.1	2.2	2.9	
Poor mental health days [4]	3	1.9-4.2	1.8	2.6	
Low birthweight [5]			4.6%	7%	
Health Factors					73
Health Behaviors					72
Adult smoking [6]	25%	19-32%	14%	20%	
Adult obesity [7]	31%	27-35%	27%	27%	
Binge drinking [8]	19%	12-27%	13%	18%	
Motor vehicle crash death rate [9]	37	22-52	13	17	
Chlamydia rate [10]	150		0	290	
Teen birth rate [11]	29	22-36	16	36	
Clinical Care					50
Uninsured adults [12]	13%	11-15%	11%	12%	
Primary care provider rate [13]	46		159	137	
Preventable hospital stays [14]	74	65-82	56	71	
Diabetic screening [15]	74%	65-84%	88%	83%	
Hospice use [16]	19%	12-30%	40%	27%	
Social & Economic Factors					71

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High school graduation [17]	83%		100%	87%	
College degrees [18]	14%	12-15%	23%	24%	
Unemployment [19]	4%	4-5%	3%	3%	
Children in poverty [20]	19%	15-23%	11%	15%	
Income inequality [21]	42		38	42	
Inadequate social support [22]	16%	12-22%	14%	17%	
Single-parent households [23]	8%	6-9%	4%	8%	
Homicide rate [24]			0	3	
Physical Environment					58
Air pollution-particulate matter days [25]	0		0	0	
Air pollution-ozone days [26]	0		0	0	
Access to healthy foods [27]	25%		60%	35%	
Liquor store density [28]	3.5			0.9	
* 90th percentile, i.e., only 10% are better					
Note: Blank values reflect unreliable or missing data					

VI. Description of Richardson County EMS System

<p>System design and response reliability</p>	<p><i>The design of an EMS system determines how the system provides services and has a significant impact on how reliable the resources are when needed.</i></p>
<p>Description</p>	
<p>1.</p>	<p>The system of providing out-of-hospital EMS in most of Richardson County is designed to be a single tiered system – meaning there is only one automatic level of response to emergencies. This automatic response is the primary responding ambulance to a 911 emergency call. When not providing transfer services, paramedics from Professional Medical Transportation, Inc. (a.k.a. Pro-Med EMS) will often co-respond to emergency calls in the Falls City area. In many systems the fire department will respond for extrication or manpower augmentation. In Richardson County, no first responder resources are routinely dispatched, except in Verdon, which maintains the county’s last remaining Quick Response Unit.</p>
	<p>Calls for help in Richardson County are made by way of a basic enhanced 911 call system (meaning location information is limited to the address the phone is registered to) received at the Falls City Police Department’s Public Safety Answering Point (PSAP) or dispatch center. When a call comes in, an ambulance from Falls City or Humboldt responds; approximately 450 times per year. Each ambulance service has a designated primary response area, although both services provide mutual aid or backup response in each other’s service area when requested. Response distances can easily be up to 20 miles.</p>
	<p>The Falls City Police Department has operated the only 911 PSAP in the county since at least 1974 with increasing responsibilities. Falls City dispatch staffs one dispatcher 24 hours per day and receives \$1 per month from each telephone line to which it provides 911 service. Until recently, calls from the 862 prefix, covering the Dawson and Humboldt areas, were routed to Tecumseh in Johnson County. Johnson County received 50 cents per line for providing 911 services. Wireless 911 calls in the Humboldt area are still routed to Tecumseh, which has created documented problems. There are pending changes to fix the wireless calls so they will also come to Falls City. Falls City is considering eliminating power plant staff at night and rolling the loss of power calls to the PSAP due to their 24 hour staffing.</p>
	<p>The Falls City PSAP is in transition to advanced enhanced 911. Mapping is one key advanced enhanced 911 component that is not yet completed. Dispatchers must still rely on callers knowing their exact location, which is especially difficult with cell phone calls. Dispatchers match the information received via telephone to a map on the wall that has colored sections for each fire district and a blue line separating the Falls City and Humboldt ambulance areas. It is unclear how these response zones were established, what individuals or groups provided input to them, or what process there is for changing them.</p>
	<p>With only one dispatcher handling multiple calls on some medical emergencies, the concept of providing pre-arrival instructions via Emergency Medical Dispatch (EMD) protocols is often not possible. As a result, there are no written uniform dispatching protocols, except that ambulances are dispatched to all fires. According to one key informant, each rescue squad and fire department has a slightly different protocol for how they are dispatched and how much time elapses between each page that is necessary before there is sufficient manpower to respond.</p>
<p>There is great confusion among the dispatchers, ambulance services, fire departments and individual EMTs and firefighters regarding how many minutes should pass from the initial page requesting response and subsequent pages. We heard from key informants who expressed being certain they knew the amount of time between pages and they provided numbers that varied from one to nine minutes, some of them believing the time escalated between subsequent pages, others believing it diminished while another group insisted it was consistent.</p>	

“We use the BLUE line”
Richardson County Key Informant

The Falls City Rural Fire Department proactively sought government grants and provided radios to all of the emergency services in Richardson County. This provides uniform communications capabilities throughout the county, allowing responders from all agencies to communicate with each other. The exceptions to this are the Falls City Police Department and the Stella Fire Department. Falls City police communicate on UHF frequencies, while the remainder of the county is on a single narrow band VHF frequency. Stella Fire Department is using a separate frequency because the VHF frequency does not work in Stella. We also received reports that the county's Emergency Alert System also does not function in Stella. There were also communication issues brought up concerning the inability for the Salem area to hear storm chaser reports from Falls City, although they were able to pick them up from down in northern Kansas.

Falls City and Humboldt ambulance services use the "all-call" paging system, meaning no volunteers are specifically assigned to time blocks for a guaranteed response. Dispatchers were not aware of a meaningful difference in the amount of time it takes Falls City or Humboldt to begin responding for emergencies although it was widely reported in the community that there are major differences in response times. It is also widely reported that Falls City has difficulty staffing the ambulance for non-emergency calls while Humboldt is able to respond for emergencies and non-emergencies equally.

In addition to the PSAP operated by the Falls City Police Department, the Richardson County Sheriff maintains a dispatch center to dispatch its deputies. The sheriff's dispatch maintains control of the deputies, allowing the PSAP to dispatch deputies to vehicle crashes.

When help on a scene is needed the fire and the public safety departments are always willing to respond and help. Fire and EMS personnel work well together on scenes and firefighters will assist with driving or patient care duties when asked. Pro-Med EMS provides transfer service out of the Falls City Hospital, which relieves a significant call demand from FCRS.

The Falls City Police Department and the Verdon Quick Response Squad are the only public safety agencies that routinely provide first (medical) response. While enroute to calls or on scenes, ambulance services may request help from another ambulance crew in their community, the other ambulance service, the fire departments, or public safety departments.

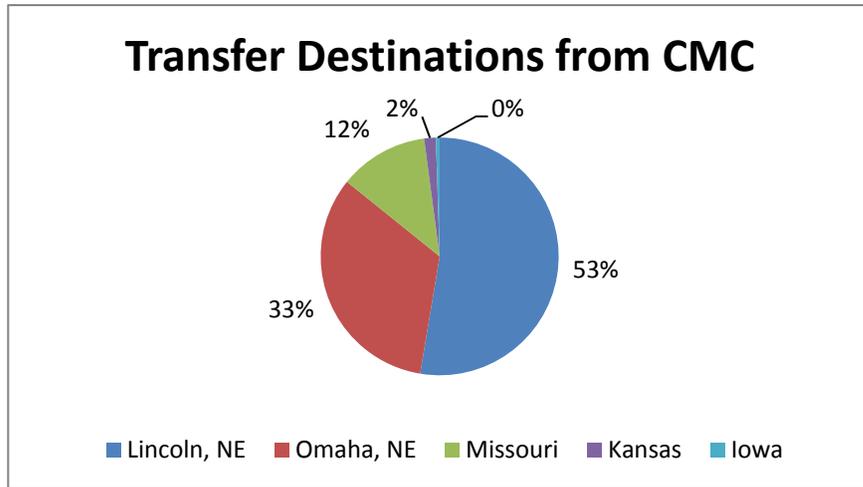
Ambulance services routinely respond with two ambulances to motor vehicle crashes providing enough volunteers are available. The Humboldt fire department and the Falls City Rescue Squad (FCRS) have extrication equipment and provide a variety of special services including water rescue, dive team, ropes team and hazmat management.

County disaster planning is coordinated through the county's emergency management office. The town of Salem reports having an ongoing problem with trains stopping on the tracks and blocking the access road into and out of town that medical staff of the hospital use to respond to call-backs and that the rescue squads would use for responses. It was not identified that a dispatch policy is in place that would allow for the 911 center to contact the affected railroad dispatchers.

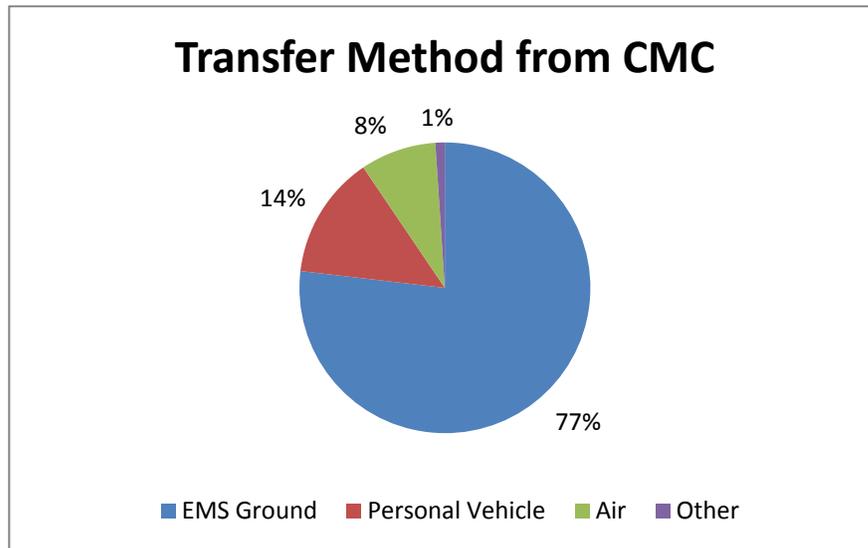
Humboldt Rescue Squad (HRS) operates out of a building on the main street of Humboldt with two ambulances. It responds to approximately 130 calls per year including cancelled calls and stand-bys. HRS uses a system where approximately four volunteers are identified for a week's worth of on-call. The EMTs from that group are expected to respond, although an all call system page is utilized in which all members are contacted via radio. If a driver is needed the fire department is paged. They have good daytime coverage and report no problems in mobilizing personnel for their emergency responses. The county provides workers compensation and insurance while a non-EMT volunteer provides the billing services.

Located 26 miles Northwest of Falls City in Western Richardson County, Humboldt transports patients to Pawnee City (15 miles Southwest), Falls City (26 miles Southeast), Auburn (21 miles Northeast), Tecumseh (26 miles Northwest) and Sabetha (41 miles South into Kansas). There is widespread misperception from this area of the county that if patients are transported to Community Medical Center (CMC) and require an interfacility transfer to a specialty care center, they will be transported to Heartland Hospital in St. Joseph, Missouri. In reality, only 11% of the transfers out of CMC are destined for St. Joseph while most patients go North.

These data are represented in the following two graphs. Graph 1 shows the percentage of 2009 interfacility transfers out of CMC by regional destination. Graph 2 shows the percentage of 2009 interfacility transfers out of CMC by method of transportation.



Graph 1



Graph 2

The FCRS service operates out of a station on the main street of Falls City with four ambulances and a rescue vehicle equipped with extrication tools. Staffed with 25 volunteers FCRS responds to approximately 300 calls per year including cancelled calls and stand-bys. Patient care is provided at a basic life support level and patient care reports are completed electronically and submitted to eNARSIS (the electronic Nebraska Ambulance Rescue Services Information System).

The FCRS does not schedule volunteers for shifts. However, during a period in 2009 when they were managed by Pro-Med EMS because of an insurance issue, crews were scheduled.

Discussion

Optimum EMS system design should ensure that response to the patient is as rapid as possible, there is enough depth in the system to ensure that the community is never without response and level of care matches the patient's needs. Absent a written and enforced policy, the key informants who recited various time lapses between paging the rescue squad staff are likely all correct. Exacerbating this problem and others, there is no uniform standardized dispatcher training in the PSAP. All new dispatch hires receive only on-the-job training in their orientation.

Informants reported that there is an occasional "over response" by the ambulance services in sending multiple vehicles when only one is needed. This is especially true for response to motor vehicle crashes where the number of vehicles and responders can challenge the ability of law enforcement to keep the non-involved motorists moving. Despite shortages of volunteers the system is able to keep at least one staffed ambulance available in the county at all times. Informants describe that there does not seem to be clear delineation as to when Pro-Med EMS should make a response in conjunction with the local ambulance service, and several reports from community members are confused as to why two different ambulances responded to the same house.

The Richardson County EMS system is meeting current demands for service. The system is not missing calls but occasionally experiences response delays with rare significant delays. Dispatch reports that both the Falls City and Humboldt ambulances are often enroute within two pages for emergency service. Humboldt receives high praise from residents and public safety officers on its rapid response and response reliability. Falls City received criticism for slow responses especially when requested for "unexciting calls" while a few isolated incidents that required numerous pages to get a response have been generalized as if it were the norm.

The system is well equipped. Ambulances are reported to be adequate and EMS equipment is reported by the volunteers to be excellent. There were no reported shortages of special rescue services such as dive teams, heavy rescue, hazmat, etc. The current basic life support care level with occasional paramedic response by Pro-Med EMS appears to be meeting needs and community expectations.

Currently there is no comprehensive EMS plan for Richardson County nor is there a mechanism or single coordinating body for system evaluation, planning, development or improvement. Coordination between the two ambulances services is limited and there is no process for addressing system weaknesses and failures.

While the Richardson County EMS system has enough resources to meet the current call volume, its single tiered system design increases dependence on the ambulance services for prompt response to all calls outside of Falls City. Patient care is always dependent upon and awaiting the arrival of the ambulance. For example, if two FCRS members respond to a car crash in Preston and another call comes in for chest pain in Salem, the system does not have first responders available. The patient would have to await ambulance response from Humboldt before receiving oxygen and basic care.

The two rescue squads are separate organizations and they do not cooperate for items such as joint training but they do provide mutual aid backup. There is no joint planning, system-wide quality planning, development or problems solving between the organizations.

Because EMS in Richardson County developed locally and has been sustained by local volunteers with a deep pride in their communities and their ambulance services it is important to recognize and honor the local roots of EMS. There is an important sense of security that comes to a community from having its own ambulance staff with local people who are known. We have found that many of these important local elements of EMS can be preserved while taking a more regional approach to the EMS system.

With so few volunteers and limited resources much can be gained if Richardson County EMS begins to think and operate more like a unified system with unified, policies, procedures, protocols and practices. We are convinced that the ultimate desire of residents and community leaders in Richardson County is to have the best possible EMS system both now and in the future. We are also convinced that this can be done in a manner that honors the local communities, the independent non-profit rescue squads and the contributions of their volunteers. However, change is difficult. Uniting an EMS system demands a vision and leadership that sees above the fray

and can inspire followers.

In addition to these rescue squad issues, there is concern among dispatchers whether the increased workload during a storm emergency, which already produces multiple 911 calls, will be manageable with a single staff position, especially if the power plant is no longer staffed at night. One dispatch process deficiency is that once an ambulance is staffed and en route, there is no follow up page so the rest of the volunteers know to stand down and cease their response to the station.

Recommendations

1. Richardson County should create a unified response system under which the rescue squads operate under uniform protocols, and practices and share precious training resources. A county EMS system should have a clear organizational structure, organizational chart and strategic operating plan. Its leadership should be prepared, educated in organizational leadership and people management. Its agreements should be current and executed properly. It should not make assumptions nor commit the operation of the system to vague verbal agreements or inadequate funding.
2. There have been discussions locally about trying to consolidate the Falls City Police and Richardson County sheriff's dispatch centers into a single shared operation. When the current enhanced 911 is fully operational, those discussions should resume. Lack of a formal training program and written protocols and processes are serious deficiencies that should be corrected as soon as possible. Consideration should be given to providing mandatory completion of the state dispatch course at the state Law Enforcement Academy.
3. The county Emergency Manager should immediately be tasked with evaluating the radio frequency issues in Stella and Salem and the commissioners should require a written mitigation plan within 90 days.
4. Dispatch should issue a follow up page when rescue squads go enroute so that volunteers still enroute to the station can stand down and remain available for subsequent emergencies.

2.	Organizational structure and leadership	<i>Clearly understood organizational structure and leadership are essential for the effective and efficient operation of an EMS system.</i>
	Description	
<p>Dating back to at least 1974 the organizational structure, leadership and lines of responsibility and accountability for the Richardson County EMS system are loosely distributed among five separate entities: Richardson County; the City of Falls City; the City of Humboldt; the HRS; and the FCRS. Each entity contributes and performs various services and roles for the EMS system.</p> <p>Richardson County provides:</p> <ul style="list-style-type: none"> • workman’s compensation insurance; • vehicle insurance; and • liability insurance; <p>The City of Falls City provides:</p> <ul style="list-style-type: none"> • funds for fuel, oil and maintenance of vehicles; • a building for ambulance, crew quarters and training space; • utilities and propane for building; • building repair and maintenance; and • communications (pager phone bills). <p>The City of Humboldt provides:</p> <ul style="list-style-type: none"> • funds for fuel, oil and maintenance of vehicles; • vehicle insurance; • heated housing for ambulances; • office space, meeting space, record storage and library; • funds for training, library and reference materials; and • Billing <p>The FCRS provides:</p> <ul style="list-style-type: none"> • pagers and radio equipment; • wages and payroll expenses for EMT; • partial funding for ambulances; • funds for EMS equipment; • funds for medical supplies; • an organizational structure and by-laws; • a current ambulance license with the State of Nebraska; • qualified volunteers to staff ambulances; • coordination of volunteers to staff ambulances; • some training of volunteers; • some equipment and supply purchases; • billing and collection services for patient billing; • quarterly reports to the organizational activity and meeting minutes to the Richardson County Board of Commissioners; and, • a structure to receive donations and gifts. <p>The HRS provides:</p> <ul style="list-style-type: none"> • pagers and radio equipment; • wages and payroll expenses for EMT; 		

- partial funding for ambulances;
- funds for EMS equipment;
- funds for medical supplies;
- an organizational structure and by-laws;
- a current ambulance license with the State of Nebraska;
- qualified volunteers to staff ambulances;
- coordination of volunteers to staff ambulances;
- some training of volunteers;
- some equipment and supply purchases;
- billing and collection services for patient billing;
- quarterly reports to the organizational activity and meeting minutes to the Richardson County Board of Commissioners; and,
- a structure to receive donations and gifts.

The rescue squads collect and keep all revenues from transport reimbursements from Medicare, Medicaid, insurance and patients.

Discussion

The organizational structure of EMS in Richardson County is not unique. Many counties and communities across the nation are discovering that the informal and loose organizational structure that has been a historic part of the local and organic development of rural EMS now needs to change. As EMS faces new challenges and becomes more recognized as an integral part of the local and regional healthcare delivery system, its organizational structures need to be updated. In addition, there should be written agreements between each responding agency and the county.

Currently the organizational structure and leadership of EMS in Richardson County allows for too much ambiguity in terms of responsibility and accountability. Leadership of some of the components of the EMS system is provided by the county; directly by appointing hospital trustees or indirectly through providing funding.

We found the HRS fully functioning, properly registered with the state of Nebraska, reporting 990 forms to the IRS, close knit as a group and with capable and competent leadership. While we do not normally find all call paging a desirable attribute, it is working in Humboldt, especially with the weekly shifts they strive for. We would have been pleased to find the HRS taking the EMS leadership role in Richardson County but they have not attempted to do so. In the past they were not directly connected to the Falls City dispatch which hampered collaboration in the county but that barrier no longer exists and they should fully participate in improving EMS in Richardson County.

We also found the individual members of the FCRS engaging, filled with good will and genuinely likable. The FCRS was impressive in their desire to create change, although they lack the proper tools to do so. Individually the members understand the issues. Our meeting with them was unique in that it was more of a strategic planning session than an interview. When presented with basic facts they were capable of root cause analysis and eager to brainstorm solutions.

The FCRS is a properly registered Nebraska non-profit corporation licensed by DHHS to provide rescue squad services with no pending complaints and no prior discipline. For decades they have functioned in the club environment and are skilled fundraisers; however they suffer from some specific organizational deficiencies that will become more important and bigger problems as their call volume increases.

The FCRS is a health care corporation that has outgrown club status, yet still functions as a club with a serious leadership deficiency. They have an internal board of directors without external oversight. While officers are elected every two years, they have resisted turning over key positions every election cycle. Nonetheless, FCRS lacks a "chief" – a key and constant executive who can effectively speak for and lead the organization.

A desire to have sufficient numbers has clouded FCRS elected leaders from realizing the real workers in the organization are extremely limited in numbers. According to records at DHHS, while FCRS has 24 names on its roster, only six are committed (responding to two or more calls per month) with another four that are active

(responding to at least one call per month) and the balance are not participative enough to be useful (responding to less than 12 calls per year, most of them less than one call every two months).

Because they are committed and active volunteers – only 40% of the organization – are effectively picking up 100% of the calls, they are suffering from burn out, while the other 60% of the organization is suffering from rust out.

The FCRS board spends too much of their time either reacting to criticisms or transporting patients to fulfill their board leadership obligations. The number of committed and active staff in FCRS must increase, either through increasing the number of committed volunteers or by hiring one or more full time staff. Continued use of an all call out paging system is detrimental to the organization because those members of the squad that feel ownership in the organization will continue to respond to all the calls, while the other squad members have no expectations to live up to.

CMC expressed a desire to assist FCRS to the extent they had capacity or talent to do so. FCRS could benefit from structured strategic planning provided by CMC.

The EMS office at the state of Nebraska regularly conducts volunteer ambulance manager leadership training. This training focuses on administrative and management information and skill development. There are other national EMS development programs available to attend, such as the Ambulance Service Manager course of the American Ambulance Association and the EMS Performance Improvement Academy and leadership boot camps of the North Central EMS Institute.

Recommendations

1. A basic responsibility of city and county government is to assure the safety of its citizens. Even though the FCRS is an independent non-profit organization, the City of Falls City should immediately make their two full time fire department staff members available to FCRS as drivers especially during daytime weekday hours. It may be possible to transition the fire fighters out of this role at some future date when staffing issues are resolved by FCRS.
2. Richardson County should create the Richardson County EMS Advisory Board (RCEMSAB). FCRS and HRS should each have representatives on the board along with a Richardson county employed physician EMS medical director who should chair the board, and two elected officials - one representing Falls City and the other representing Humboldt.
3. The RCEMSAB should be charged with developing a unified vision and strategic EMS System Plan for Richardson County. The EMS System Plan should unify the rescue squads under uniform protocols, procedures and practices. Volunteers should be heavily involved in the planning processes and outside consultants should be utilized if needed in visioning, planning and implementation.
4. The RCEMSAB should provide the Richardson County Board of Commissioners with regular updates as to the progress of the system that serves its constituents. The County Commissioners should limit their engagement with EMS as it does with the hospital trustees; by focusing on attainable outcomes and not on direct operations.
5. The board of FCRS should engage the services of a professional strategic planning consultant. If CMC has an appropriate staff member with expertise to fulfill this role, CMC should provide the strategic planner.
6. FCRS and the citizens it serves could benefit from a stronger relationship between FCRS, CMC and Pro-Med. It is not within the bounds of our assessment to define a relationship other than described in recommendation 4, but all parties seem willing and interested. A good beginning would be a series of meetings to understand mutual patient-centered goals, and then to plot a course forward.
 - a. At a minimum, written agreements should be executed that identify the roles and responsibilities of each agency, each participating town, and the county.

Clinical Care

Quality rural clinical care demands a regionalized accountable system consisting of components of an EMS system that are fully functional and integrated.

Description

Volunteer EMTs receive training and continuing education locally from Southeast Community College. EMT refresher and continuing education are provided as needed. Extrication and rescue training are conducted with fire departments and both rescue squads participate in disaster drills and training with county emergency management.

The ambulance services utilize EMS patient care protocols approved by a physician medical director (PMD), who has adopted the model state protocols. While on calls, crews may make contact with the PMD at the hospital via cellular phone for Online Medical Control. The PMD for FCRS is Dr. Allan Tramp and Dr. Richard Jackson for Humboldt. Neither doctor has a job description, a contract for their services, have completed a state or national EMS medical director training program, nor are they compensated.

“Confidence in care, dissatisfaction with response times”
Key informant

Dr. Tramp approves the ambulance service’s offline medical protocols, a set of written policies, procedures, and directions from a physician medical director to an out-of-hospital emergency care provider concerning the medical procedures to be performed in specific situations^{ix}; reviews patient care reports; educates volunteers; and ensures that the responder’s skills are adequate.

While Dr. Tramp has not received any run reports or skill checklists to review from FCRS in 18 months, the medical staff says the quality of care provided by FCRS is good. The squad members will stay around to assist the ER staff with critical patients. Most patients arriving at CMC by FCRS ambulance.

3.

There are no air medical resources based in the county. Air medical resources from outside the county are generally not utilized for scene response and there are no auto-launch protocols for helicopters. The closest helicopters respond from St Joseph, MO (42 miles); Lincoln, Nebraska (77 miles); and, Omaha, Nebraska (86 miles). Helicopters from all three locations are rarely used by CMC as most patients are transported by Pro-Med EMS. With less than a dozen interfacility flights made in 2009 by all air medical services combined, that is well under the national utilization rate.

The majority of Falls City patients are transported to the CMC although some patients are also transported to hospitals in Pawnee City, Sabetha, and Auburn. CMC is a Critical Access Hospital designated as a Level IV trauma center with six physicians and four midlevel providers. Registered nurses and licensed practical nurses are available in house around the clock and physicians are called into the emergency room as needed.

“The hospital is an economic engine.”
Key Informant

CMC is located in a new building on the north side of town finished in the fall of 2009. Having a new facility has helped the hospital’s retention of staff and may also help in recruiting new providers.

Pro-Med EMS was started several years ago by the hospital to meet its advanced life support transfer needs. Pro-Med EMS is staffed by paramedics and EMTs, some of which are also volunteers for FCRS. While not specifically dispatched to 911 calls, Pro-Med EMS crews may monitor the Falls City dispatch frequency and respond with FCRS for emergency calls when they are at their station not engaged in a patient transport or covering for their other unit based in Auburn. Pro-Med EMS does 20-25 intercepts per month with FCRS. Humboldt does not intercept with Pro-Med EMS when patients are going to destinations south or west of the Humboldt service area.

“It would be wonderful to have a paramedic in the area at all times.”
Key Informant

The addition of Pro-Med EMS has been good for CMC. Paramedics are trained to work in the enclosed ambulance environment for extended periods and by being available for intercepts, some patients lives have been saved. Recently, though, the hospitals that were co-owners spun Pro-Med EMS off and it is now operated by an

independent private organization. This was necessary because of accounting shifts that occurred in federal government accounting rules related to the capital cost of the new hospital building.

The state's eNARSIS system is relatively new. Richardson County is using the eNARSIS system but does not use it for internal reporting or strategic planning. Ambulance services typically use it to generate reports about response times and number of calls but it is capable of providing much more information. Standardized reports can be saved into the system for use in future periods. The system can track, for example, the number of times each EMT or paramedic is involved in caring for severely traumatized people and how often they provide specific skills. This source of data and information can drive a program for continuing education within the service.

Discussion

The out-of hospital EMS clinical care in Richardson County receives high praise from hospital and medical staff and from patients and families who have used the services. It also receives some criticism, usually attributed to specific volunteers in both rescue squads. It is difficult to assess the effectiveness of the clinical care because the system does not have any defined clinical performance measures nor does it routinely conduct system-wide evaluations. There is no formal system-wide established quality plan to ensure that clinical care is consistently and continually being evaluated. System performance data is not routinely provided to the city councils or the county commissioners.

Medical oversight is a term coined by the National Association of EMS Physicians used to describe the physician's important role as having "the ultimate medical, legal, and moral responsibility for the medical aspects of prehospital care"^x. The medical director is the physician who provides medical oversight and is defined by the State of Nebraska as "a qualified physician who is responsible for the medical supervision of out-of-hospital emergency care providers and verification of skill proficiency of out-of-hospital emergency care providers"^{xi}.

There are unresolved communication and expectation issues between Dr. Tramp and FCRS. This can frequently happen when there is no written agreement or contract between the rescue squad and their medical director because expectations are not known by either party. Dr. Tramp is genuinely interested in filling the role of medical director and prefers to do it for no fee.

An important indicator of an EMS system's quality is its reliability and prompt response times. Data is key to a successful, sustainable and effective EMS operation. Key data that EMS system should be collected and evaluated on the following areas:

- Clinical data
- Response data
- Staffing data
- Fleet data
- Financial data

Pro-Med EMS's service is an asset to the community that it does not have to pay for or subsidize. While this is a blessing, the FCRS volunteers have become complacent about responding when they know Pro-Med EMS will be there, often before they even arrive themselves. There are questions in the community about why two ambulances show up – with confusion and concerns about duplication of services. This is a "not knowing" issue that can easily be resolved through good communication. Pro-Med EMS is capable of providing a higher level of service and they should be used appropriately whenever available. Pro-Med EMS now responds with an SUV instead of an ambulance, which should alleviate perception questions about two ambulances responding.

Recommendations

1. A targeted communication plan regarding the relationship between FCRS and Pro-Med EMS and the value of paramedics should be developed and used throughout the FCRS service area.
2. RCEMSAB should develop and maintain an EMS Quality Assurance Program that includes physician oversight, a written plan, a quality assurance committee, and adequate time and attention. Maintenance of the hospital's radio and related connections should be assigned to the county emergency manager by the county.
3. CMC and the county should address the issues the rescue squads have with the new facility, two of

which (driveway width and lack of a garage) may require capital planning or bonding by the hospital or county.

4. Richardson County should have uniform clinical care throughout its system including training, continuing education, protocols and care delivery components. The continuing education module of eNARSIS should be used to track training records. Uniformity can best be established by creating the RCEMSAB and by creating a County funded position for the EMS physician medical director who will serve as medical director of FCRS, HRS and the Verdon QRT. The system could benefit from a single medical director that would also provide medical direction for Pro-Med. CMC should sponsor an annual "skills fair" in cooperation with RCEMSAB and the medical director to assess continuing competency of the pre-hospital EMS staff in Richardson County, as well as the additional competencies of Pro-Med staff.
5. The medical director (and any surrogates) should complete both the Nebraska specific and the national medical director's course within 24 months of appointment. The medical director should receive basic awareness level training on e-NARSIS and develop enough competency with the system to run various reports.
6. The medical director should also work with the local medical community in an effort to integrate the feedback of local providers into the quality improvement activities conducted for the agencies.

The DHHS EMS/Trauma Program has a sample medical direction contract available on their website which can be adapted to meet individual department needs. The sample contract and a number of other useful policies are available at <http://www.hhss.ne.gov/ems/PolicyResources/Model-Policies.htm>.

The roles and expectations of medical directors should be defined in writing, and they should be compensated for providing the service. The EMS medical directors should have a written agreement with the EMS agency(s) that includes the following responsibilities:

1. Approving the planned deployment of personnel resources.
2. Approving the manner in which licensed EMS personnel administer first aid or emergency medical attention without expectation of remuneration.
3. Documenting the review of the qualification, proficiencies, and all other EMS agency, hospital, and medical clinic affiliations of EMS personnel prior to credentialing the individual.
4. Documenting that the capabilities of licensed EMS personnel are maintained on an ongoing basis through education, skill proficiencies, and competency assessment.
5. Developing and implementing a program for continuous assessment and improvement of services by licensed EMS personnel under their supervision.
6. Reviewing and updating protocols, policies, and procedures at least every two (2) years.
7. Developing, implementing and overseeing a Medical Supervision Plan
8. Collaborating with other EMS medical directors, hospital supervising physicians, and medical clinic supervising physicians to ensure EMS agencies and licensed EMS personnel have protocols, standards of care and procedures that are consistent and compatible with one another.
9. Designating other physicians to supervise licensed EMS personnel in the temporary absence of the EMS medical director.
10. The Richardson County Rescue Squad medical director should collaborate with the state EMS medical director to write an effective auto-launch dispatch and helicopter transport use protocol that is consistent with Nebraska practices and based on nationally developed position papers from the National Association of EMS Physicians and others.
11. Each EMS provider's skill competence should be evaluated annually and countywide clinical performance measures should be established and evaluated continually. Operationally, scene management, authority and control must be clarified and taught to all public safety responders and routinely evaluated. Professionalism in operations is essential to public trust.
12. Run data should be continually monitored by designated quality personnel using eNARSIS and the full set of data points. The medical director should evaluate scene times for appropriateness to the nature of the call and an EMS helicopter auto-launch dispatch and transport protocol should be created and implemented. Portable radios should be secured for all EMS personnel.

Financial	<i>Ensuring appropriate funding for emergency services demands a clear understanding of current costs and revenues. Transparency is essential in this area.</i>
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Description

Currently the EMS system is funded by the rescue squads primarily through ambulance revenue received from patient billing with additional in kind support from the cities in providing housing and other limited funds or services and the rescue squads covering some limited costs. Historically, Richardson County has fully or partially funded the acquisition of ambulances. FCRS is currently running self-sufficiently and the county has not subsidized ambulances for them. HRS is in the process of purchasing a new ambulance with the city covering 80% and the county covering 20% of the cost.

The total costs of the system are unclear.

Discussion

Reliable EMS system financing must be viewed from the perspective of future users and related to past experiences. The future users of the EMS system in Richardson County will be older and will be home bound with a variety of medical devices. They will need a sophisticated and well financed ambulance service. While federal and state grants were abundant following 9/11, they are ever decreasing today. The billing system of 10 years ago was simple with more line items, while the system of today has less line items but ever increasing and confusing rules in an attempt to combat fraud and abuse.

FCRS uses a professional billing service based in Omaha. HRS uses the services of a non-EMT volunteer for their billing. The current allowed Medicare charges are contained in the table below. The rural rates are displayed for comparison purposes. Richardson County is entirely contained in a Super Rural area as defined by Medicare. In order to maximize reimbursement, both rescue squads should be billing amounts at least equivalent to these allowed rates, or higher, if costs exceed revenue.

4. In order to keep up with ever changing Medicare regulations (which most insurers eventually adopt as their own) it is necessary for an ambulance biller to be well connected to industry trade associations both inside the state and nationally. Attaining and maintaining the credential of Certified Ambulance Coder through the National Academy of Ambulance Coding should be considered an entry level requirement for performing the function.

Additionally, the federal Medicare program is changing the methodology used to for payment of services it purchases. Hospitals, clinics, home health and other services are being or have been transitioned to “Pay for Performance” or “Value Based Purchasing”. These payment practices reward healthcare providers for reporting quality measures to the federal government. Hospitals are not required to report quality measures, but failure to do so results in a reduced cost of living adjustment.

Medicare is experimenting with physician payment “incentives” for reporting. Industry experts predict that quality measure reporting will soon become mandatory for government programs and private insurers are following suit.

EMS industry participants are hopeful the EMS outcome measures developed by the North Central EMS Institute will be integrated with Medicare’s future reimbursement system. Preparing for this inevitable change before it becomes mandatory, Richardson County will build a stronger EMS system and will be better prepared to receive maximum reimbursement under a pay for performance plan if this becomes a reality.

The NCEMSI also provides a benchmarking service for EMS agencies to compare EMS operations with their peers. This service compares business processes, such as cost per mile of fleet operation, not clinical processes, and greatly empowers decision makers with more information for everyday EMS management. Richardson County rescue squads should be encouraged to participate in the benchmarking project.

The following table provides a reference to the Medicare billing rates for Richardson County:

Type of Service	Rural Base Rate, Miles 17+	Super Rural Base Rate	Miles 1-17, Comments
Mileage	\$6.94		\$10.41
Basic Life Support – Non-Emergency	\$199.31	\$244.35	Would be rarely billed by FCRS or HRS.
Basic Life Support – Emergency	\$318.90	\$390.97	Most of the 911 calls fit this category.
Advanced Life Support – Non-Emergency	\$239.17	\$293.22	Would be rarely billed by FCRS or HRS.
Advanced Life Support – Emergency	\$378.69	\$464.27	Used for 911 calls when Pro-Med EMS performs advanced skills and in certain other cases.
Advanced Life Support – Level 2	\$548.11	\$671.98	Would be rarely billed by FCRS or HRS. May be common for Pro-Med EMS for transfers of critical patients
Specialty Care Transport	\$647.76	\$794.15	May be used by Pro-Med EMS in those limited cases where nurses are in attendance during transfers.

Recommendations

1. Richardson County should require independent audits of all accounts held by the Falls City and Humboldt EMS associations and ensure compliance with applicable state (NRS 35-901 as revised and signed into law February 11, 2010) and federal law.
2. Richardson County should establish an EMS budget to pay for contracted medical direction, and if needed, the creation of a Richardson County Taxing District should be explored to support it. All practices related to the stipends paid to volunteers should be transparent, equitable and benefit from the provisions of the Volunteer Emergency Responders Recruitment and Retention Act of NRS 35-1302 if possible.
3. FCRS and HRS should exhibit fiscal responsibility by using Nebraska state contracts when they qualify and by purchasing using national contracts maintained by the North Central EMS Cooperative (NCEMSC) or others.
4. HRS should require and pay for Certified Ambulance Coder training for its billing volunteer, or consider using the billing service under contract with the North Central EMS Cooperative. The current NCEMSC contract provides for a fee of \$15 per claim processed which is a significant value as compared to national firms providing similar services.
5. Richardson County can join NCEMSC by paying a \$75 annual fee or through joining the Rural Nebraska Regional Ambulance Network based in Kearney.

Staffing *Ensuring adequate staffing by level of licensure and skillset are imperative for an EMS agency to be prepared to respond.*

Description

All primary 911 ambulance staffing in Richardson County is currently done by volunteers at two rescue squads that report experiencing declining volunteerism due to their difficulty recruiting, and a general lack of interest in volunteering by community residents, although in varying degrees.

The use of an “all call” system for activating FCRS is a critical system weakness although it is working well in Humboldt. While ambulance volunteers attempt to stay in touch with each other to ensure there are always volunteers in town at all times, this “non-scheduling” system is one without responsibility or accountability and has demonstrated failures in getting an ambulance to respond appropriately at times. Falls City is especially vulnerable because there are less than eight committed and six active volunteers on the service’s roster. While Humboldt also uses the all call paging system, their volume is significantly less than Falls City’s, and they are always able to create an immediate response.

County residents, governmental officials, public safety officers and business owners all reported being concerned about declining volunteerism. Informants consistently mentioned volunteerism as one of lead challenges facing the EMS system. Most key informant reported that finding enough volunteers in Falls City has been a long-term problem.

“I heard there was a past need for volunteers when I saw something in the newspaper, but since it hasn’t run lately, I guess they’re in good shape now.”
Community Stakeholder

Data on the EMS system in Richardson County is limited and fragmented due to the various entities involved. An example of fragmentation is the fact that Falls City volunteers are entering patient care reports electronically, while Humboldt is not. While there may be enough data collected the data is not centralized in any meaningful way in which it could be utilized for system evaluation, improvement and planning.

5.

There are no uniform policies and procedures and both operate as distinct and separate organizations. Joint training and clinical reviews are rare. Reliable data on the exact patient complaint and provider impressions were not available but volunteers reported that a significant number of calls are for trauma and cardiac related problems.

Discussion

As the pool of available volunteers declines volunteers report increasing pressure on a small group of available active volunteers. A smaller group of volunteers must take more call, restrict out of town activities, experience more interrupted nights, and negotiate for free holidays.

Issues of recruitment and retention of volunteers are not unique to Richardson County. Volunteer staff ambulance services in many regions of the country are experiencing similar challenges as socioeconomic factors, demographics, attitudes toward volunteerism, and the demands of EMS work change. In some communities volunteerism cannot be sustained and in other communities volunteer EMS systems are thriving. However, the national trend over the last 10 years has been one of declining volunteerism and there is nothing that suggests that this trend will change in the near future. It is important to understand that factors that impact the success and failure of volunteer systems.

In Richardson County, like the rest of rural America, there are considerable differences between being a volunteer firefighter and a volunteer EMS worker. Over the last several decades the number of structure fires has steadily declined due to the success of national life safety codes and fire prevention campaigns. Conversely, as the population ages and rural healthcare consolidates and regionalizes the demands on EMS have increased. As a result, the number of medical calls in a community can be 8-10 times the number of fire suppression events. In addition, the individual responsibility, accountability and time commitment for the EMS volunteer general of the long haul typically exceeds that of the firefighter, and typically EMS rosters are significantly smaller.

Recruiting efforts (primarily through word of mouth or newspaper articles or notices) have increased community

awareness of the need for volunteers but have not produced a significant number of volunteers. Recruiting young people was reported to be difficult. County residents and public officials reported being aware of the needs but also reported some barriers to becoming volunteers including:

- time commitment;
- financial commitment for EMT education;
- current leadership and culture of volunteer associations;
- the nature of the work;
- not want to be committed to long shifts; and
- lack of certainty about being suited for emergency work.

A reliable and sustainable volunteer EMS staffing system requires that there be enough active volunteers so no one is taking an excess of call time or calls. While certain volunteers may be enthused and enjoy being on calls and taking a significant number of calls, over the long haul, the best volunteer systems are ones where there are enough volunteers so each volunteer has ample time in which they are not on call.

We have found that the best volunteer services utilize a call schedule in which at least two people are scheduled and responsible for being available to respond or find a replacement. To be sustainable and safe, volunteer rosters must contain at least 14 committed and active people for every 24 hour staffed ambulance. These fourteen people must regularly take call. Ideally a volunteer (who may have a fulltime job and other responsibilities) would take no more than an average of 24 hours of call per week. This ensures that no single volunteer is up too many hours or driving or providing care after an extended period of being on call or responding. Having less the 14 active members creates a situation where volunteers are taking an excess of call, severely restricting their non-EMS life and creating an unhealthy volunteer organization culture.

The most successful volunteer organizations have a culture that is inviting and provides significant positive and meaningful feedback to the volunteer. Many of the successful volunteer EMS organizations find a balance between being a professional, well organized and led health and public safety operation, and being an inviting, fun and rewarding social organization in which members finding fun and meaning beyond simply going on calls.

We have found that the most important ingredient to volunteer success and the creation of an inviting culture is respected and competent leadership. Unfortunately, in volunteer EMS organizations leaders are often not selected based on ability, experience and preparation but by popular election or a simple passing of the role to various members. Often communities expect much for their EMS system but do not select leadership based on qualifications as a city administrator, police chief or school superintendent might be selected. Often volunteer EMS leaders have no preparation or experience in leading organizations and people.

Often when volunteer organizations begin to lose members and a small number of people are taking more of the call load the active members become burnt out and the culture of the organization becomes toxic. Just ensuring that ambulances get staffed takes all of the organizational energy. The organization ceases to be a source of pride, enjoyment, camaraderie and satisfaction and is not inviting to potential members. This situation is difficult to reverse and demands skilled leadership that can see both the immediate response needs and the long term needs of the organization.

In addition, the most successful volunteer EMS organizations have high standards for membership and have an internal set of rules and expectations of their members. Without clear structure and rules volunteers flounder and there is no measuring stick with which to monitor and reward good service. The organization gets a reputation for its lack of order and professionalism and would-be volunteers do not want to join.

Volunteer staffing demands a sense of workforce planning. Workforce planning is the process of understanding how many people are needed, how to get them, keep them, replace them and all of the factors that impact their recruitment and retention. This means that there must be a clear understanding of:

- how many volunteers are (and will be) needed;
- how volunteers are brought into the pipeline;
- how to identify potential volunteers within the community;
- the barriers to volunteerism;

- how to plan a successful recruitment campaign;
- the staffing trends over several years; and
- when volunteerism is not longer a sustainable staffing method.

The EMS office at the state of Nebraska regularly conducts volunteer ambulance manager leadership training. This training focuses on administrative and management information and skill development. There are other national EMS development programs available to attend, such as the Ambulance Service Manager course of the American Ambulance Association and the EMS Performance Improvement Academy of the North Central EMS Institute. Making this type of training available to the rescue squad captain and the fire chief is recommended.

The DHHS EMS/Trauma Program has made available a “Jump Kit” to serve as a resource for emergency medical services who wish to develop a Recruitment and Retention Program or have internal issues that may be resolved through Team Building exercises. The kit is designed to help communities maintain an adequate number of EMTs who function as a cohesive organization to meet the emergency health care needs of their community. The training provides suggestions and models for communities to develop and maintain a solid foundation that is support by adequate membership working as a team to meet the emergency health care needs of their community.

It is conceivable that total volunteer staffing may not be sustainable in Richardson County. Typically, as rural volunteer ambulance services become busier or there are no more volunteers to recruit, it is common for the system to begin by hiring paid staff for the times of day and week where there is the great. For example, an EMT or paramedic may be hired to staff the ambulance during daytime hours Monday through Friday or an administrator skilled in managing volunteers may be employed.

In low run volume areas such as Richardson County EMS taxing districts are created. Nebraska state statute 13-303 allows each county to provide emergency medical services as a governmental function and that “Any county board of counties and the governing bodies of cities and villages may pay their cost for such service out of available general funds or may levy a tax for the purpose of providing the service”.

Following additional requirements, Richardson County may establish an EMS Taxing District with a levy that, “shall be in addition to all other taxes and shall be in addition to restrictions on the levy of taxes provided by statute, except that when a fire district provides the service the county shall pay the cost for the county service by levying a tax on that property not in a fire district providing the service”. This discussion is not intended to be construed as legal advice and Richardson County should consult with legal advisors regarding the specific provisions of Nebraska law to generate adequate funding for an effective EMS System.

Recommendations

1. The “all call” system in Falls City **must** be replaced by a scheduled on-call system.
2. FCRS should create a position for a skilled EMS Chief that is empowered to lead the organization. The EMS Chief should seek to create a volunteer culture that is inviting, rewarding, inclusive of input and fun, while being charged with increasing and maintaining a dedicated workforce a top organizational value.
3. The Chief should create and maintain a posted call schedule. The schedule should be a product of both internal and external input and ensure that at least two persons are scheduled to respond 24/7 and available in town while on duty.
4. Policies should be created that outline a process for trading shifts and filling shifts on short notice. If current members are unable to fill a portion of the schedule because no one can commit to being available the EMS Chief should notify the communication and dispatch center.
5. Accurate records should be kept of uncovered hours and missed calls. FCRS should consider the use of an electronic scheduling and credentialing program to maintain the schedule and continuing education records such as that offered by www.emsmanager.net (STS is familiar with but unaffiliated with this company).
6. A policy that limits call shift length to what is reasonable and safe should be created. Personnel should not be on call for days at a time and should have adequate time off between scheduled shifts.
7. Evaluation of the current volunteer situation should begin with applying the principles of workforce planning which include:
 - a. understanding how many volunteers are needed;

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| | <ul style="list-style-type: none">b. understanding why volunteers are leaving or inactive;c. understanding what is needed in terms of incentives to attract and retain volunteers;d. understanding how many potential volunteers there are in the community and how to reach them; ande. making an evaluation of the extent to which the system can rely on volunteers going forward. <p>8. Outside experts from SafeTech Solutions or others should be consulted on workforce planning.</p> <p>9. The Chief should create a realistic plan for staffing that may include a combination of volunteer and paid resources, while making a comprehensive staffing report to the county commissioners a part of the Richardson County EMS Plan.</p> <p>10. Examine member participation requirements to ensure that members actively participate on a monthly basis, maintain their skills and are scheduled for a reasonable amount of call. Members who are not active should be acknowledged and thanked for service and removed from the roster.</p> <p>11. Eliminate barriers to volunteering by fully paying for the recruits EMT tuition and testing fees where such costs are not currently covered.</p> <p>12. The Richardson County Board of Commissioners should develop community support for all Richardson County EMS volunteers by offering volunteer incentives such as:</p> <ul style="list-style-type: none">a. local property tax exemptions;b. municipal service discounts;c. public retirement plans;d. free training;e. paid National Registry exams;f. reimbursed conference travel;g. free clothing (patches, hats, jackets, and T-shirts); and,h. paid subscriptions to EMS trade journals. |
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