

History

St. Vincent Hospital (Hospital), a 25 Bed Critical Access Hospital and Level IV Trauma Center is a quasi-municipal governmental entity governed by the laws and regulations of the State of Colorado, the Colorado Department of Public Health and Environment and the Centers for Medicare and Medicaid. Directed locally by an elected five member Board of Directors, the Hospital owns and operates St. Vincent Ambulance Service (Ambulance). Serving a population base of 8,500, the Ambulance is the sole transport agency for the Leadville/Lake County region providing 911 response and inter-facility transport between St. Vincent Hospital and other facilities within the State of Colorado.

The Ambulance became a dedicated professional emergency response agency in 1988 as part of, yet not inclusive of, the formation of the St. Vincent General Hospital District. The Silver King Ambulance Team was struggling financially, having difficulty staffing a 24 hour 911 response crew, and providing the inter-facility transfers so critical for all rural communities. With the formation of the Special District, the ambulance was absorbed by Hospital operations.

Today, the Ambulance employs 17 Emergency Medical Technicians (EMT's) with nationally recognized credentials of Basic, Intermediate, Paramedic and Critical Care Paramedics. Staffing a minimum of one Advanced Life Support Ambulance (ALS), 24 hours a day, with the capacity in staffing to increase for inter-facility transfers provides flexibility to efficiently serve our community.

Improved Service Plan

In 2006, the Hospital recognized the need to improve the professional skill set of the EMT's and working relationship with the other first responding agencies within the county. The first step was to address medical direction and physician control of the Ambulance. In June, Apex Emergency Physicians (Apex) agreed to become the primary physician medical advisors for the Ambulance. Shortly thereafter, Apex also agreed to provide Medical Control for the Leadville/Lake County Fire Department, providing consistency in medical control from pre-hospital care through inter-facility transport. Based at St. Anthony Central, Apex currently provides medical control for over 35 Colorado agencies including ambulance, fire, ski patrol and Colorado Flight For Life.

In May 2007 the hospital hired a full time Board Certified Emergency Room Physician with many years experience providing care at a Level I Trauma Center in Ohio. Working in conjunction with the Ambulance and Apex, processes from pre-hospital patient contact through evaluation and treatment in the Hospital and inter-facility transport were further refined. This change in direction brought about changes such as improved patient care, improved response times, improved patient satisfaction and a higher level of medical professionalism.

To complete the reorganization of the Ambulance, a new Director of Emergency Medical Services was hired in July 2008. The credentials this new director brought to the Hospital included a BS in EMS Management, Certification as a Critical Care Paramedic, is a Nationally Registered Paramedic with Advanced Trauma Life Support, Advanced Cardiac Life Support, Pediatric Advanced Life Support and numerous Disaster Planning Certifications.

Staffing and Services

The current Ambulance staffing model was put in place in order to provide the best possible service to the community, as well as, provide opportunity for the EMT's to maintain their certifications and skill level. The EMT is not only responsible for providing pre-hospital patient care in an EMS capacity; they are also Emergency Room Technicians providing continuity of patient care within the hospital. This expanded job description affords the EMT the opportunity to work next to Emergency Department Physicians performing invasive skills which EMT's are required to maintain competency for their level of certification. Along with practical experience, the Hospital provides over 50 hours of annual training to maintain national certifications.

Another important aspect of the staffing model is the ability to transfer the critically ill or injured patient to a higher level of care. EMT's providing inter-facility transport need greater skill sets to maintain these patients while in route to out-of-area hospitals. Typically these patients require treatment and service, at a higher level of care, while being transferred to the facility.

At times, patient condition dictates coordination of care with our partners at Flight for Life. However, due to the geographic location and winter weather at this altitude, flight service or ground based Critical Care Transport transfers are inoperable or exhausted quickly. The responsibility of the inter-facility transport remains that of the Ambulance.

Patient care is not the only service provided to the community. In conjunction with local partners numerous programs have been instituted in the county. Programs such as car seat fittings, bike rodeos, free ski and bike helmet programs and the "Vial of Life." The Ambulance also participates in assisting our regional neighbors as part of a state wide mutual aid response program.

Statistical Analysis – Response Times

The Health Facilities and Emergency Medical Services Division under 6 CCR 1015-4 Chapter 2 defines acceptable response times in three categories; high density (metropolitan) areas, mid-density (urban) areas and low density (rural) areas. Lake County, with its population of less than 12,000 people falls into the low density category mandating acceptable emergency response times as less than 45 minutes 90% of the time. In 2009, the Ambulance performed a response time study going back to 2006. The following table depicts the results:

Average Response Times (in minutes)

	Lake County	Twin Lakes
2006	6.5	19
2007	6.5	22
2008	6.8	22
2009	6.2	24

In the four years surveyed, the City of Leadville and Lake County was afforded an average regional response time of 6.5 minutes 90% of the time and specifically to the southern end of Lake County - Twin Lakes, an average of 22 minutes 90% of the time. Of note, 97% of all Ambulance responses are in the Northern and Central portions of Lake County.

Annual Ambulance Call Volume

	Lake County	Twin Lakes
2006	410	6
2007	480	7
2008	472	7
2009	389	6

Since its inception Saint Vincent Hospital Ambulance Service has worked hard to formulate the proper “matrix” of responders and allocation of resources within the service model. By following the national first response model, used throughout the State of Colorado, the proper staffing levels are provided allowing for safe scene operations and patient care. This model is both effective and scalable to an appropriate level for handling the single emergency up to the mass causality incident.

Idea Paper on Outcomes of February 6th, 2010 Meeting

1) Work Together

Plan

In order for agencies to work in a cohesive and coordinated manner the emergency operations plan has to be developed and accepted by the agencies tasked with execution of the plan. The plan needs to be developed in a consensus manner, such that all entities have a vested interest in the success. It is at that point the plan would be presented to the community for their input and direction. This plan should not only definitively address the community's views of Emergency Services, but also provide equity for the agencies and citizens alike.

CQI – Continuous Quality Improvement

In a complex, medical-legal environment the emergency operations plan needs constant review and refinement. Within the past year a full CQI program was developed for Lake County Emergency Services with all involved entities stating their commitment to review and discuss cases brought before the committee. The mechanism in place is nationally recognized as a solid process for the continual evaluation and refinement of emergency operations. It also serves as a platform for education and training of the first responders from all agencies. The CQI process acknowledges positive efforts and works to provide guidance for difficult situations.

Data

All data points need to be accurate, statistical significant, and annualized for proper evaluation and analysis. Anecdotal information has no place in this environment. To properly identify issues for an event the following information should be made readily available and used in the CQI process:

- Call Times
- Dispatch Recordings
- Scene Personnel
- Event
- Treatment
- Disposition
- Hospital follow Up
- Agency/Medical Director comments

Quality Product

Issues identified in the CQI process need to be developed into action plans, assigned and executed with the results tracked to the data points identified. The CQI process is also a documentable means of providing a mechanism to plan county wide and regional drills. Points brought forward from the CQI process which are documented in a well thought out After-Action-Report can also be used to show need when applying for grants. If followed, this process will allow for continued skills training, continuous re-enforcement and adequate exposure to promote the skills necessary to build a quality product and instill community trust in all emergency services.

2) Effective Communications

Effective communication comes from honesty. The current issue surrounding effective communications is based upon multiple agendas from multiple agencies. With hidden and personal agendas, communication and information sharing becomes a weapon instead of a tool to promote facilitation. By building a plan based upon consensus of the group, the plan is owned by the group and

they become invested in the success of the plan. This builds trust as everyone works toward execution of the plan and communication improves.

3) Evaluate Current Emergency Services for Best Level of Care

Currently the Emergency Service System in Lake County closely follows the national response model for this type of system. As a first response to all 911 calls, a Basic Life Support (BLS) engine backed by an Advanced Life Support (ALS) ambulance responds to the needs of the caller.

A significant issue for first responders is that of information. 911 callers are panicked and can provide incomplete information to the dispatch agency. That information is then filtered through a dispatcher and can become even less reliable. Having a BLS and ALS response in the county assures that most calls are handled in an efficient manner. Some critics would say that it makes no sense for the engine and ambulance to respond and arrive together; in many cases they do not respond together. However, for scene management, initiation of good patient care it is appropriate to have a first response engine and ambulance. In most 911 calls, the real information regarding the reason for the call and the variables surrounding the call are not determined until the providers arrive on scene.

Event Process

- 911 Call into Dispatch
- Dispatch Analysis of Call
 - Initiates Paging per Response Protocol
 - Could also include law enforcement
- Fire and Ambulance Response
- Arrival on Scene
- Scene Evaluation
 - Responding Agencies Stood Down
 - Additional Assets are Ordered
- Scene Command and Control

Overall, the current system Leadville and Lake County operates is the best system to provide the best care for the community. As with any complex system, there are items that need to be addressed, refined and re-evaluated. The solution to this issue is to truly identify the issues then develop and execute a consensus based action plan and execute the plan.

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Ambulance

	2009			2010	
	YTD October	Projected Year End	Yearly Budget	Actual Year End	Final
Revenue					
Inpatient	-	-	-	-	-
Outpatient	726,517	871,820	790,000	812,946	975,000
Gross Revenue	<u>726,517</u>	<u>871,820</u>	<u>790,000</u>	<u>812,946</u>	<u>975,000</u>
Deductions	(435,910)	(523,092)	(474,000)	(487,768)	(585,000)
Total Revenue	<u>290,607</u>	<u>348,728</u>	<u>316,000</u>	<u>325,178</u>	<u>390,000</u>
Expenses					
Salaries	318,020	381,624	332,102	373,733	387,299
FICA	23,507	28,208	25,406	27,581	27,305
Benefits	27,188	32,626	49,815	29,308	387
Contract	-	-	-	-	-
Minor Medical Equipment	1,796	2,155	1,000	1,796	1,000
Supplies Medical	5,001	6,001	5,000	5,240	2,500
Supplies General	2,384	2,861	3,000	2,603	2,500
Physician Fees	-	-	-	35	-
Dietary	499	599	1,000	649	1,000
Fuel	5,408	6,490	9,000	6,137	8,000
Purchased Services	(513)	(616)	-	748	-
Maintenance	20,798	24,958	15,000	12,778	15,000
Phone	455	546	1,800	576	600
Electricity/Gas	381	457	-	381	600
Train. & Meetings	4,059	4,871	3,500	4,059	5,000
Dues	-	-	1,000	-	-
Insurance - Auto	7,461	8,953	15,000	9,348	11,000
Uniform	2,896	3,475	4,000	3,156	4,000
Total Expenses	<u>419,340</u>	<u>503,207</u>	<u>466,623</u>	<u>478,128</u>	<u>466,191</u>
Margin	<u>\$ (128,733)</u>	<u>\$ (154,479)</u>	<u>\$ (150,623)</u>	<u>\$ (152,950)</u>	<u>\$ (76,191)</u>