

Union Emergency Medical Services

Annual Report

July 1, 2008 – June 30, 2009



Carolinus Medical Center-Union
Carolinus HealthCare System

Executive Summary

Fiscal year 2008-2009 marked the twelfth year of Union Emergency Medical Services' (Union EMS) affiliation with the Carolinas HealthCare System. During fiscal year 2008-2009, Union EMS responded to over 16,000 requests for service resulting in 10,858 patients being treated and/or transported. The median response time for all calls during the period was 8:00 minutes and the average response time on all calls was 8.39 minutes. Eighty-nine percent (89%) of all emergency calls were answered in 12 minutes, 59 seconds or less while the median response time to all emergency calls was 7.47 minutes.

Union EMS responses are determined by nationally recognized medical priority dispatch protocols adapted to our system and utilized by the Union County Emergency Communications Center (C-Com). As a result of the medical priority dispatch system, 18% of Union EMS' calls were categorized as "Routine (non-emergency) or Scheduled", 13% were categorized as "Routine Without Delay," and 70% were considered "Emergency" at the time of dispatch.

The highest concentration of requests for Union EMS were for Traffic Crashes (13.1%) followed by Breathing Problems (11.4%), Inter-facility Transfers (9.5%), Falls with Injury (9.1%), General Sickness (8.3%), and Chest Pain (8.1%). The remaining forty percent (40%) are distributed among 27 other dispatch categories.

EMS Gross Collection Rates for the period were 51%, up 13% from the base year (1997-1998) and a three percent (3%) decrease over the 2007-2008 fiscal year. These long-term increases are attributed to more accurate data collection by our paramedics utilizing an electronic medical record system, continued efforts of our billing office, and the timely turnover of delinquent accounts to a collection agency. The short-term decreases reflect the current state of our economy and timing of payments from all sources. Details on the collection rates are provided later in this document. Please refer to Quarterly Financial Reports for the most recent EMS financial data. An external financial audit report for the period will be available later this year.

Other notable events during the reporting period include:

- Improvement of EMS response times resulting from the addition of budgeted personnel and equipment to deploy an additional ambulance to enhance EMS availability and response 12-hours per day, seven days per week in Western Union County
- Documented improvement of EMS response times through incremental improvements in dispatch/communications policy, response procedures, ambulance turn-around time
- Full implementation of CrewScheduler online scheduling software to improve the process, consistency, and employee access to scheduling, time-off requests, employee shift trades, and documentation of time and labor records
- Deployment and testing of wireless mobile gateway devices for EMS vehicles to provide continuous wireless computer network connectivity between our EMS vehicles and the hospital and county computer networks – paving the way for implementation of GPS vehicle tracking, mobile CAD, wireless electronic medical record upload, and wireless transmission of patient care data (EKGs)
- Continued improvement of EMS employee satisfaction through improved employee communication and addressing other key areas of employee satisfaction by using survey feedback to implement action plans
- Maintained and improved patient satisfaction – resulting in 98% favorable results on EMS patient satisfaction surveys
- Achieved a one-year extension to the existing EMS contract with direction to begin work on a new contract for consideration for future terms.

The following pages provide a more detailed look into the operations and management of Union EMS for the fiscal year ending June 30, 2009.

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PURPOSE OF REPORT

The purpose of this written report is to quantify response times and collection rates and to summarize activities and operations of Union Emergency Medical Services for the period beginning July 1, 2008 and ending June 30, 2009.

The purpose of involvement of the Carolinas HealthCare System and Carolinas Medical Center-Union in the provision of emergency medical services in Union County is multi-faceted. The following list represents specific components that are included but not limited to the total purpose of this undertaking.

1. With proper funding from Union County and in cooperation with other patient transportation providers, Union EMS has been charged to:
 - Provide effective and efficient total pre-hospital patient care and transportation service for the citizens of Union County
 - Meet or exceed existing response times as presently determined or as generally accepted within the EMS industry
 - Respond to every request for emergency ambulance service originating within Union County
 - Respond to medically necessary and other appropriate requests for non-emergency ambulance service originating within Union County
 - Oversee the maintenance of vehicles, equipment, and personnel in a state of readiness 24-hours-per-day
2. Evaluate and identify system needs appropriate to effectively serve the needs of the citizens of Union County based upon mutually agreed performance standards with regards to:
 - Central and satellite facilities
 - Vehicles
 - Medical equipment
3. Develop and implement a quality improvement system that includes:
 - A protocol-driven call review and random sampling program
 - Establishment of standards relative to patient care and pre-hospital times
 - A system status management program
4. Provide written reports as scheduled by contract which shall include the following components:
 - Response times
 - Collection rates
 - Dispatch data
 - Annual un-audited revenues and expenditures report
 - Billing and collection data
 - EMS performance
 - Other items mutually agreed upon
5. Assume the duties of the County in administering and managing the First Responder Program including but not limited to:
 - Taking actions to improve or enhance the First Responder Program
 - Exchange supplies with First Responders to replenish supplies used while providing care
 - Provide monthly continuing education to First Responders, including assisting with anaphylaxis recertification, bloodborne pathogens, and hepatitis B vaccinations

MISSION AND VISION

MISSION

Why We Are Here

Our mission is to provide quality pre-hospital emergency medical care and transportation to the people of our region by maintaining timely, compassionate, and professional responses to all requests for our services and by reducing the incidence of illness and injury through community outreach and education.

VISION

What We Want To Be

Our vision is to be the preferred pre-hospital care provider in our region by providing superior service, increasing public awareness, implementing innovative advancements, and by enhancing accessibility to a continuum of care while reducing the incidence of illness and injury through community outreach and education.

ORGANIZATION

Staffing and Placement Overview:

Union Emergency Medical Service is the primary provider of *emergency* and *non-emergency* pre-hospital medical care and transportation for the geographical area of Union County. These activities are accomplished by providing 24-hour coverage including nine Paramedic-staffed ambulances and four Paramedic-staffed Quick Response Vehicles (QRVs) 24-hours per day, supplemented by two additional Paramedic staffed ambulances operated during times of peak demand seven days per week. EMS resources are placed in strategic locations throughout Union County to achieve optimal responses.

These locations include three ambulances based at our headquarters (located on the campus of Carolinas Medical Center-Union), two ambulances based in Stallings, and one ambulance each, located in West Monroe (Old Charlotte Highway), and in the communities of Unionville, Marshville, Sandy Ridge, Waxhaw, and Weddington.

Paramedic coverage is enhanced in geographically remote areas by Quick Response Vehicles (QRVs) which are Sport Utility Vehicles staffed by one Paramedic and equipped with Advanced Life Support (Paramedic) equipment. QRVs are located in New Salem and Lanes Creek Communities. This arrangement quickly puts a Paramedic on the scene of an illness or injury in the more remote areas and permits advanced life support measures and patient stabilization to begin on the scene while the closest ambulance is en-route for transport. Additional QRVs are operated out of our headquarters and our Stallings locations by supervisory personnel to provide on-scene leadership and support to primary crews and to supplement responses during periods of high call volume.

To maintain this level of coverage, a full-time staff of 78 employees is required to staff the three 24-hour shifts of 22 employees and the two (prime-time) ambulances. The Paramedics are led by a Shift Supervisor, Assistant Shift Supervisor, and Field Training Officer on each shift. The shift operations are supported administratively by the Director, Operations Manager, and Training Officer who each work a traditional 40-hour work week. One EMS secretary works approximately 30 hours per week to handle a wide variety of office, administrative, and clerical functions. It should be noted that staffing is supplemented by a roster of 35 PRN employees who work in the absences of full-time employees due to vacation, illness, and continuing education.

ORGANIZATION, CONTINUED

Vehicle Fleet

Union EMS currently maintains an active fleet of 24 emergency vehicles including 16 ambulances, five Quick Response Vehicles, and three administrative/quick response vehicles. All ambulances and primary quick response vehicles are equipped at the advanced life support–paramedic level and undergo regular state inspections to maintain their “permits” for operation by the State Office of EMS. Union EMS logged 447,056 miles on the fleet during fiscal year 2008-2009. The fleet is maintained according to regular and on-going preventive maintenance schedules and vehicles are replaced on a regular replacement schedule which considers mileage, repair costs, and mechanical reliability.

Hospital Transfers

While Union EMS exists primarily for the benefit of citizens and visitors calling 911 for medical and traumatic emergencies, Union EMS also serves the emergency and non-emergency ambulance transfer needs of our local hospital, Carolinas Medical Center-Union. Patients who require diagnostics or medical interventions not available at Carolinas Medical Center-Union are transported by ambulance to a variety of tertiary care and specialty hospitals in Mecklenburg County and on occasion to specialty hospitals in Durham and Chapel Hill. These types of transports represented 9.5% of Union EMS’ calls during the 2009-2009 fiscal year.

Non-Emergency Transports:

While the majority of ambulance service in Union County is of an emergency nature, there are requests for ambulance service that are clearly non-emergent. Union EMS provides routine, non-emergency, but *medically necessary* ambulance transportation between nursing facilities, hospitals, doctors’ offices, and patients’ residences. These type calls represent approximately 18% of our total call volume.

Funding:

Funding for the cost of Union EMS is derived from fees for service and a county funding subsidy for the difference in revenues and expenses. The billing and collection functions of Union EMS are out-sourced and handled by National Reimbursement Group (NRG), a private firm specializing in ambulance service billing. Amid the explosive growth, the amount of Union County’s subsidy to Union EMS as a percent of total operations has decreased from 93% in 1997 to 53% in 2009. The 2008-2009 operating budget for Union EMS was \$6,671,250 and the county subsidy amounted to \$3,554,321 with budgeted capital expenditures being funded from EMS reserves.

Medical Control:

Medical Control is provided through a contractual arrangement with a physician who serves as the EMS Physician Medical Director. Paramedics are primarily sponsored by our Physician Medical Director who performs administrative medical control functions such as protocol review, oversight of quality management processes, skill performance evaluations, and state boarding examinations. Paramedics operate very autonomously using an extensive set of protocols and standing-orders developed in conjunction with the Medical Director. On-line medical control is provided by on-duty emergency department physicians at receiving hospitals for cases where paramedics need additional direction or need to deviate from a standardized protocol to meet the needs of unique patient situations.

Dr. Christopher R. Rosanova was appointed EMS Medical Director on July 1, 2006 and continues to actively serve as the Union EMS Medical Director. Dr. Rosanova is board certified in emergency medicine and maintains active practice in the Emergency Department setting. The Medical Director’s leadership in conjunction with the duties of the Union EMS’ Education/Training/Quality Division insures that Union EMS serves Union County with competent EMTs and Paramedics administering the most up to date clinical care.

ORGANIZATION, CONTINUED

Continuing Education:

Union EMS is recognized by the North Carolina Office of EMS as an approved EMS Training Institution. Continuing Education for Union EMS Paramedics and EMTs is coordinated by the EMS Training Officer and provided in-house. Continuing Education is provided monthly in a variety of mandatory and optional topics to maintain the Paramedic's knowledge of core material and to keep personnel abreast of new and changing technology. The Paramedics' technical skills are evaluated regularly utilizing mannequins and anatomical models to simulate the human body. The Union EMS Continuing Education Program is approved by the State Office of EMS and meets or exceeds objectives and requirements for North Carolina and the National Registry of EMTs.

Communications:

Union Emergency Medical Services is dispatched by Union County Emergency Communications (C-COM), which is the central public safety answering point (PSAP) for 911. As Emergency Medical Service units are dispatched, telecommunication is maintained on a "repeated" VHF radio frequency that utilizes additional non-repeated VHF frequencies. Cellular telephones are also available to ambulance crews for operational direction, sensitive information transmissions, and medical communications with hospitals.

C-COM provides certified Emergency Medical Dispatchers to take calls for assistance, dispatch the appropriate EMS and support units while providing medical instructions to the civilian caller. Information about the patient's condition and the scene are gathered by the dispatchers and relayed to responding units. The emergency medical dispatch functions of the dispatchers are overseen by the EMS Medical Director and monitored for quality improvement by the Union County Dispatch Review and Dispatch Steering Committees as well as the Union EMS Quality Management Committee. C-COM provides a valuable service and is considered by EMS to be a strategic member of the Union EMS Team.

Union EMS is actively involved with Union County's Radio Communications Council and is supportive of its work toward implementing the 800Mhz trunked radio system to improve radio communications interoperability within Union County and the Metrolina region.

First Responders:

Union Emergency Medical Services is supported by the response of the Monroe Fire Department. Monroe Fire Department began providing Medical First Responder services to the citizens in the City of Monroe on July 1, 2001 and continues to be a huge asset to EMS within the Monroe city limits. Monroe City Firefighters are all certified at the EMT level and bring automated defibrillation capabilities to all their medical responses in support of EMS in the City of Monroe.

Union EMS is also supported in the rural areas of the county by eighteen (18) volunteer fire departments. These volunteer firefighters have completed the minimum of a 60+ hour Medical Responder course, and many have fulfilled the requirements and are credentialed as Emergency Medical Technicians (EMTs). In addition, all departments have gone beyond the traditional requirements have obtained instruction in the use of Automatic External Defibrillators (AEDs). Each department has at least one AED for use to aid victims of cardiac arrest in their district.

To maintain the first responders' skills and knowledge, Union Emergency Medical Service, in cooperation with South Piedmont Community College, oversees and coordinates a state-approved monthly continuing education program consisting of classes to review and enhance skills and knowledge for first responders throughout Union County. EMS coordinates annual Infection Control Training and assists in the administration of Hepatitis B Vaccine for the volunteers.

To further support the first responders and their departments, Union Emergency Medical Services replaces expendable supplies utilized during the first responders' care of patients.

ACTIVITY LEVEL

Call volume for fiscal year July 1, 2008 to June 30, 2009 totaled 16,101 responses and resulted in 10,858 billable transports. In addition to the “responses” quantified here, EMS maintained 24-hour readiness for response throughout the year and conducted a number of medical standby activities, community relations events, and injury prevention activities.

The following table represents the distribution of ambulance calls by time of day and day of week for fiscal year 2008-2009. This analysis aids EMS leadership in planning shifts and staffing resources to better match the demand for services.

Demand Analysis									
Date IS BETWEEN 07/01/2008 AND 06/30/2009									
Hour of Day	1.SUN	2.MON	3.TUE	4.WED	5.THU	6.FRI	7.SAT	Total	Percent
00:00 - 00:59	76	59	57	48	51	61	70	422	3%
01:00 - 01:59	72	47	36	50	61	47	60	373	2%
02:00 - 02:59	75	52	44	46	42	45	47	351	2%
03:00 - 03:59	52	38	31	31	48	43	48	291	2%
04:00 - 04:59	52	43	34	27	41	23	53	273	2%
05:00 - 05:59	47	52	35	30	33	46	42	285	2%
06:00 - 06:59	44	76	49	51	59	71	46	396	2%
07:00 - 07:59	60	88	76	90	83	70	69	536	3%
08:00 - 08:59	73	81	114	87	89	105	90	639	4%
09:00 - 09:59	104	118	106	127	113	99	103	770	5%
10:00 - 10:59	117	113	132	128	126	107	120	843	5%
11:00 - 11:59	126	149	140	150	144	128	96	933	6%
12:00 - 12:59	102	126	141	132	128	139	141	909	6%
13:00 - 13:59	138	135	168	141	144	134	123	983	6%
14:00 - 14:59	133	145	160	161	153	149	131	1,032	6%
15:00 - 15:59	102	179	158	142	130	137	120	968	6%
16:00 - 16:59	116	165	160	111	132	165	136	985	6%
17:00 - 17:59	112	152	146	141	118	139	140	948	6%
18:00 - 18:59	112	138	140	126	150	139	145	950	6%
19:00 - 19:59	95	102	106	87	96	128	118	732	5%
20:00 - 20:59	81	90	99	93	119	108	114	704	4%
21:00 - 21:59	90	89	96	89	89	109	102	664	4%
22:00 - 22:59	91	82	75	88	74	99	103	612	4%
23:00 - 23:59	60	56	77	63	85	73	92	506	3%
Total	2,130	2,375	2,380	2,239	2,308	2,364	2,309	16,105	
	13%	15%	15%	14%	14%	15%	14%		

Outcome Summary

Trip Date IS BETWEEN 07/01/2008 AND 06/30/2009

Outcome	Count	Percent
Transported By UEMS*	10,858	67.4%
Refusal	2,343	14.6%
Cancelled	852	5.3%
Care Transferred to Other Union Units	517	3.2%
No EMS Assistance Required	398	2.5%
Assisted Other Unit	305	1.9%
No Patients Found	142	0.9%
DOA - No CPR	129	0.8%
Meds Given - No Transport**	129	0.8%
Standby Completed (Fire / PR Event)	124	0.8%
Lifting Assistance Only, No injuries	105	0.7%
Football Standby Complete	61	0.4%
Tx By POV	44	0.3%
Tx By Police	35	0.2%
Care Transferred To Flight Crew	27	0.2%
Care Transferred To Another Service	13	0.1%
Not Applicable	12	0.1%
DOA - CPR	6	0.0%
Meds Given Tx by POV**	1	0.0%
Total	16,101	

CALL OUTCOMES

In summary, 10,858 (67.4%) of all the EMS calls resulted in billable transports*. Another 130 calls resulted in other billable outcomes**.

The remaining calls consist of those where the patient refuses, no patients are found, or the care was transferred to another Union EMS unit for transport. The table at left represents the outcomes of all EMS encounters for fiscal year 2008-2009.

TRANSPORT DESTINATIONS

The table at right represents the breakdown of patient transports to the 14 most frequented hospital and nursing home destinations.

In summary, 56.8% of transports resulted in transport to CMC-Union, while 20% of transports resulted in transport to Presbyterian Matthews. We also noted that 9.3% of transports resulted in transport to Carolinas Medical Center (CMC), while 3.1% of all transports were to CMC-Mercy, and 2.4% were to Presbyterian Hospital (Charlotte).

During fiscal year 2008-2009, 36.6% of all transports to hospitals resulted in transport to out of county facilities. Current policy permits Paramedics to transport to the patients' choice of hospitals within Union and contiguous counties unless the patient's condition dictates transport to the closest facility, a trauma center, or an appropriate interventional cardiac center.

Destination Facility Count

Date IS BETWEEN 07/01/2008 AND 06/30/2009

Facility	Total	Percent
Hospital - CMC Union	6,171	56.8%
Hospital - Presbyterian - Matthews	2,170	20.0%
Hospital - CMC	1,006	9.3%
Hospital - CMC Mercy	338	3.1%
Hospital - Presbyterian	266	2.4%
Hospital - CMC Pineville	148	1.4%
Hospital - Other	46	0.4%
Nursing - Autumn Care of Marshville	144	1.3%
Nursing - Rehab and Nursing Center	132	1.2%
Nursing - Brian Center of Monroe	78	0.7%
Nursing - Lake Park Nursing	65	0.6%
Nursing - Hospice House	44	0.4%
Nursing - Monroe Manor	26	0.2%
Nursing - Monroe Square	16	0.1%
Nursing - Other	36	0.3%
Non-Facility Destinations	172	1.6%
Total	10,858	

Out of county transports result in longer transport times and pose a significant challenge to maintaining coverage and acceptable response times in the county.

RESPONSE TIMES

Response Time for the purpose of this report is “EMS Response Time” and is defined as *the time in minutes calculated from the time an EMS Unit is dispatched until the time that unit arrives on the scene*. Union EMS documented emergency response time at an average of 8.19 minutes and a median emergency response time of 7.47 minutes county-wide for the fiscal year 2008-2009. All levels of response times combined (Routine/Scheduled, Routine without Delay, and Emergency) for the period averaged 8.39 minutes.

Fractile Response Time				
Date IS 07/01/2008 TO 06/30/2009; Dispatch Priority IS Code 3 (Emergency)				
Minutes	Call Count	Cumulative Call Count	Percent of Total Calls	Cumulative Percent of Total Calls
00:00 - 02:59	1146	1,146	10.2%	10.2%
03:00 - 03:59	1475	2,621	13.1%	23.4%
05:00 - 05:59	1058	3,679	9.4%	32.8%
06:00 - 06:59	1074	4,753	9.6%	42.4%
07:00 - 07:59	1983	6,736	17.7%	60.0%
08:00 - 09:59	989	7,725	8.8%	68.8%
10:00 - 10:59	746	8,471	6.6%	75.5%
11:00 - 11:59	625	9,096	5.6%	81.0%
12:00 - 12:59	872	9,968	7.8%	88.8%
13:00 - 14:59	328	10,296	2.9%	91.7%
15:00 - 15:59	385	10,681	3.4%	95.2%
16:00 - 16:59	146	10,827	1.3%	96.5%
17:00 - 17:59	10	10,837	0.1%	96.6%
18:00 - 18:59	88	10,925	0.8%	97.3%
19:00 - 19:59	71	10,996	0.6%	98.0%
20:00 - 24:59	163	11,159	1.5%	99.4%
25:00 - 29:59	42	11,201	0.4%	99.8%
30:00 +	22	11,223	0.2%	100.0%

The table, at left, presents the Fractile Emergency Response Time for fiscal year 2008-2009. This EMS industry measure quantifies the individual and cumulative percentage of calls that are answered in various time intervals.

A Union EMS paramedic is on the scene of approximately 69% of all emergency calls within nine minutes and fifty-nine seconds (9:59) and on the scene of 92% of all emergency calls within fourteen minutes and fifty-nine seconds (14:59). This represents an improvement of five and two percentage points respectively over 2008 performance which is directly related to adding personnel and equipment to facilitate 12 hours of additional ambulance coverage seven days per week.

In an effort to further improve these response times, Union EMS and the Union County Emergency Communications Center participated in a NCOEMS Response Time Improvement Grant to facilitate incremental improvements in 911 call processing, to set goals and implement policy for tracking and improving selected response time intervals, and for improving over-all EMS response time and efficiency.

Results of the project are also reflected in these numbers including a 30-second improvement in the median emergency response time from 2008 to 2009 (8.00 minutes to 7.47 minutes respectively).

PATIENT SATISFACTION

Union EMS monitors the perception and satisfaction of our patients through feedback received as a part of our EMS Patient Satisfaction Survey program. The information obtained from the survey is shared with staff. Successes are celebrated and any opportunities for improvement are identified and addressed. Between January and June 2009, Union EMS mailed 444 surveys and achieved 198 responses during the same period resulting in a 45% completed survey return rate. The results were overwhelmingly positive with 98% favorable responses on most questions.

EMS patients responding to the survey identified the following as “most important” to them at the time of their emergency:

- Quick Response
- Breathing Relief/Assistance
- Pain Relief

Other items identified by EMS patients as being important to them include:

- Caring/Compassion
- Knowledge
- Professionalism

The following table summarizes the survey responses of 198 patients surveyed between January and June 2009.

Union EMS – Patient Satisfaction Scores – January-June 2009							
Question Description	% Favorable Responses	Highly Satisfied	Satisfied	Unsatisfied	Highly Unsatisfied	Neither	N/A
		5	4	3	2	1	0
Response Time	98%	76%	18%	0%	2%	0%	5%
Medical Care	99%	81%	16%	1%	0%	2%	1%
Explaining	98%	71%	22%	1%	1%	2%	4%
Reduce Anxiety	99%	76%	19%	1%	0%	1%	3%
Non-Medical Needs	98%	51%	15%	1%	2%	1%	32%
Courtesy	98%	84%	12%	1%	1%	1%	2%
Overall Impression	99%	83%	15%	1%	0%	1%	1%

Of the patients who responded to the surveys, 45% also submitted written comments regarding their experience with Union EMS. The following are a sample of these comments:

- *“As a senior citizen living alone I am very grateful for the excellent care I received. Thank you Union EMS and God bless you.”*
- *“I was impressed with the knowledge, care and professionalism of these two young people. My anxiety was eased and I think they may have saved me from a stroke or worse.”*
- *“This is the third time in the last six months my family was satisfied with the response and promptness getting me to hospital. Thanks to all who serve.”*
- *“EMS people were top notch. My ambulance ride, which was my first, was quite nice and manned by professionals.”*
- *“I hope all those who are hurt and in need of medical emergency help are blessed with the compassionate & knowledgeable EMT's who aided me. My injury required surgery & will entail rehab & a long recovery. Thank you for being there for me. You are so appreciated.”*

FINANCIAL CONSIDERATIONS

Cost

Any competent and responsive emergency medical service that provides service on a 24-hour basis is expensive to operate and maintain. Equipment and staff exist primarily to be ready to respond 24-hours per day, 7-days per week to provide the desired coverage of the county. Bases and response units need to be strategically located and numerous enough to permit minimum response times. Coverage must flex so that equipment and personnel remain available to respond to the next emergency. All of these features of readiness are expensive and do not produce revenue.

The 2009 budgetary cost for an ambulance call that results in transport is approximately \$614 (annual budget divided by the number of billable transports). The 2009 cost to Union County is approximately \$327 per transport, down 46% from the base year county cost per trip of \$604.

User Fees

While Union EMS charges a fee to users of its services, the ceiling of these fees is regulated by the EMS Agreement as set forth by the Union County Board of Commissioners. Currently, EMS is authorized to maintain the user fees at a level no higher than 110% of the median of adjacent county EMS systems.

The table at right represents the Union EMS fee schedule in effect during fiscal year 2008-2009. The majority (67%) of Union EMS transports fall into the ALS-1 Emergency category and 21% are in the BLS Non-emergency category. The average transport mileage was ten (10) loaded miles. The average charge per transport was \$544. This fee schedule is evaluated each year and adjusted, as needed, to bring Union EMS in-line with other services in the region and to enable the service to take full advantage of the anticipated changes in Medicare reimbursement related to the Medicare fee schedule.

Union EMS Ambulance Fee Schedule	
July 1, 2007 - June 30, 2008	
Description	Fee
BLS Non-Emergency	\$325.00
BLS Emergency	\$350.00
ALS 1 Non-Emergency	\$425.00
ALS 1 Emergency	\$460.00
Treatment/No Transp	\$200.00
ALS2	\$560.00
Specialty Care Transport	\$628.00
Mileage (loaded miles)	\$10.70

Collection and Reimbursement Methodology

On revenue producing transports, collection of ambulance fees is difficult because of the types of calls, the economic status of some of the users, and federal and state regulations regarding Medicare and Medicaid reimbursements. Also, it should be noted that adjustments to EMS user fees above the Medicare Fee Schedule produces minimal additional revenue because of the required Medicare and Medicaid write-offs and low collection rates on private/self-pay accounts.

As an example, for a charge of \$544, Medicare will recognize approximately \$380 of the charge for reimbursement. Medicare only reimburses 80% of the amount they recognize, so a \$544 charge is reimbursed by Medicare at approximately \$304. Only the remainder of the "approved" amount is billable to the patient or secondary insurance (\$76). The contractual write-off on this account becomes \$164. Approximately 47% of all transports are in the Medicare payor class.

Medicaid pays under a different methodology in which providers cannot balance bill the patient or other insurance. For a charge of \$544, Medicaid reimburses Union EMS only \$150. The contractual write-off on this account is \$394. Approximately 7% of all transports are in the Medicaid payor class.

Union EMS files a "Cost Report" each year with Medicaid to document and quantify our total cost of operations. As a result Medicaid issues a settlement check to supplement the low reimbursement on approved transports. In recent years the cost settlement has resulted in approximately \$200 additional reimbursement per paid Medicaid claim. The settlement checks are received by Union County Government and amounted to over \$200,000 in 2009 for FY 2007-2008 Medicaid transports.

For the 2008-2009 fiscal year, Medicare and Medicaid contractual write offs amounted to \$1,092,912.

FINANCIAL CONSIDERATIONS, CONTINUED

Billing and Collections

Billing and collections are handled by National Reimbursement Group (NRG), a firm specializing in ambulance billing and collections. NRG has over 25 years experience in the EMS and ambulance billing industries. NRG has handled Union EMS' billing and collections since December 1, 1999. NRG's services include electronic filing of private insurance, Medicaid and Medicare, and referral of delinquent accounts to a specialized collection agency.

Union EMS' collection performance is maintained as a result of consistent data collection by our paramedics, implementation of an electronic medical record system, continued efforts of our billing office, and the timely turnover of delinquent accounts to a collection agency. This table represents collection data for fiscal year ending June 30, 2009.

Collection Rates			
	Total Billed	Total adjusted Collection Rate	Net adjusted Collection Rate
Base Year (FY 1997-1998)	\$1,002,042	38%	56%
Quarter Ending Sept. 2008	\$1,456,627	49%	87%
Quarter Ending Dec. 2008	\$1,468,866	47%	104%
Quarter Ending March 2009	\$1,538,982	51%	98%
Quarter Ending June 2009	\$1,470,421	56%	104%
Fiscal Year to Date	\$5,934,896	51%	98%
Variance from Base Year		13%	42%

Net Adjusted Collection Rate presented in this table includes cash received, Medicare and Medicaid Contractuals, and write-offs of uncollectible accounts that occurred during the period. Percentages in excess of 100% are related to timing of charges and payments during the period. The average net collection rate for the period (cash + Medicare and Medicaid Contractuals) was 69%.

EMS Funding

The difference in revenue and expenses is covered by the taxpayers of Union County in the form of a subsidy paid to Carolinas Medical Center-Union for the operation of Union EMS.

Union EMS is striving to make the service less of a burden to Union County by generating more income from user fees and utilizing more efficient collection processes beginning with data collection by Paramedics and ending with continued follow up on delinquent accounts by a collection agency. All these efforts are intended to shift the cost of EMS away from the county taxpayers and to the users of our services.

Union EMS is actively involved in other endeavors to maximize reimbursement, including associational and lobbying activities coordinated through the NC Association of EMS Administrators and the NC Association of County Commissioners.

GOALS IDENTIFIED

Union EMS has identified new goals for fiscal year 2009-2010 that include:

- Development of new contract objectives in conjunction with Union County Government in preparation for a multi-year EMS Contract renewal in 2010
- Roll-out and implementation of new patient care protocols consistent with new state guidelines
- Development and submission of updated Union County EMS System Plan to the State Office of EMS
- Increase EMS involvement/oversight of First Responder programs and implement new state guidelines for standard of care as a component of the Union County EMS System Plan
- Finalize development and transition of EMS Education and Training Records database to online format to improve access and communication to employees
- Explore and implement alternative staffing plans to improve EMS system efficiency
- Continue testing and implementation of online connectivity options and GPS tracking for EMS vehicles to improve EMS communication and response
- Continue to maintain and improve financial position through controlling expenses and improving billing and collections processes
- Acquire, deploy and begin using base, mobile, and portable radios operating on the 800 Mhz trunked system being developed by Union County Communications to improve interoperable radio communications in the region
- Develop and implement “peer-review” component to existing quality management program
- Improve employee satisfaction scores
- Improve patient satisfaction scores

ACKNOWLEDGEMENTS

Union EMS acknowledges the vision of the Union County Board of Commissioners in identifying the need and benefit of affiliating EMS with the Carolinas HealthCare System in 1997 and the positive twelve-year relationship that has resulted. We acknowledge the continued support of Union County Administration and Staff including County Manager Mr. Al Greene and Finance Director Mr. Kai Nelson.

We appreciate the leadership and support of our own Carolinas Medical Center-Union President Mr. Michael Lutes, Vice President Mr. Brent Lammers, as well as all Carolinas Medical Center-Union staff who continue to provide support to the administration and operation of Union EMS.

Thanks to the EMS Operations Manager, Training Officer, and all the EMS Shift Supervisors for their teamwork in managing their shifts, schedules, and their personnel. Additionally, thanks to each of the shift supervisors and their assistants who attend to other assigned areas of responsibility to support specific areas of the EMS operations including: buildings, furnishings, and grounds; vehicles and durable medical equipment; and computers and information technology.

Thanks to Christopher Rosanova, DO who continues to serve as the medical conscience of the agency while providing medical direction and support to the leadership staff and field training officers as well as medical oversight of our EMTs and paramedics in the field.

Thanks to the Field Training Officers who continually research new medications, procedures, and protocols for implementation; provide continuing education and skills practice opportunities; precept new employees and students; as well as monitor the system's overall quality of care through continuous clinical care and documentation audits and quality tracking initiatives.

Thanks to EMS Office Coordinator Tina Busby for ongoing administrative support to EMS and other department administrative duties as well as maintaining all the points of communication between our employees, customers, and contractors.

CONCLUSION

This concludes the report of activities and accomplishments during the 24th year of Union EMS's existence and the twelfth year of our affiliation with Carolinas Medical Center-Union and the Carolinas HealthCare System. Over the years, Union EMS has continued to grow, change, and to be molded by the environment, the vision of leadership, and the dedicated work of the men and women who *are* Union EMS.

The purpose of our existence *is to provide quality, timely, compassionate, and professional service to the people of Union County.* We at Union EMS pledge all our efforts to this end and look forward to new efficiencies gained as a result of embracing our changing environment with a renewed focus on the basics of systematic delivery of excellent patient care.

Respectfully submitted,



G. Scott Shew, MHA, FACHE
Director
Union Emergency Medical Services