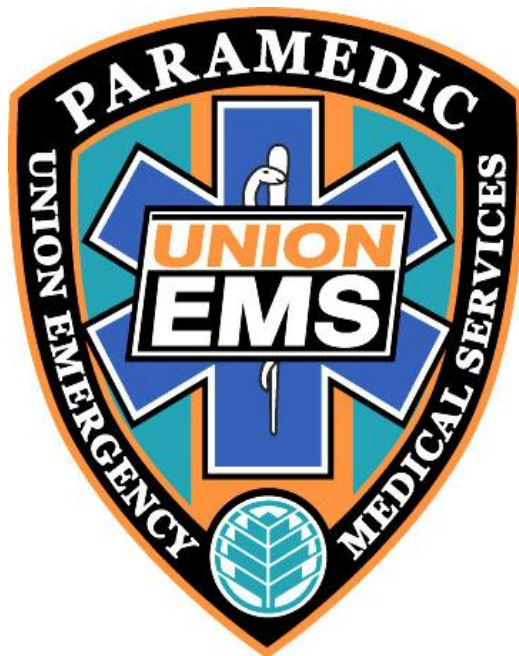


Union Emergency Medical Services

Annual Report

July 1, 2010– June 30, 2011



Carolinus Medical Center-Union
Carolinus HealthCare System

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Executive Summary

During fiscal year 2010-2011, Union EMS responded to over 18,000 requests for service resulting in 12,345 patients being treated and transported.

Response times are climbing as a result of increasing call volumes, crowded highways, and extended turn around times at hospitals while EMS remains constrained by the economy and available funds necessary to deploy additional units. The median response time for all calls during the period was 8.62 minutes and the average response time of all calls was 9.46 minutes. This represents an increase of thirty-four seconds over the previous year. Ninety percent (90%) of emergency calls were answered in 15 minutes or less while the median response time to emergency calls was 8.45 minutes.

Gross Charges for the period amounted to \$8,035,738. Net collections for the period was \$3,874,591, compared to \$3,779,935 for 2009-2010 and represents a 2.5% increase (\$94,656) in cash collections for the reporting period. The increased cash collection is a result of increased call volume and continuous improvements in billing and collections processes.

The Net Adjusted Collection Rate for the period was 98%, representing a 42% increase over the base year (1997-1998) and a 7% increase over 2009-2010 performance. The Net Adjusted Collection Rates takes the Medicare and Medicaid Contractual amounts into account and represents the ratio of true accounts receivable to cash received during the period.

Details of the collection rates are provided later in this document. Please refer to Quarterly Financial Reports for the most recent EMS financial data. The annual external financial audit report for the period will be available later this year.

Not reflected in the EMS financials, but of significance is \$440,755 in Medicaid dollars paid directly to Union County on behalf of Union EMS in 2011 for FY 2009-2010 Medicaid transports as a result of the Medicaid Ambulance Cost Report filed by Union EMS.

Other notable events during the reporting period include:

- Transitioned of EMS to the Union County 800 Mhz radio system for dispatch, operations, and communication with hospitals, improving the interoperability of Union EMS communications within the region and across the state.
- Maintained and improved financial position through controlling expenses, increasing revenue, and through utilization of a new billing and collections agency
- Consolidated scheduling, EMS education and training records, and employee communications databases into an online portal to improve access and communication to and from employees
- Purchased wireless modems for deployment of mobile network connectivity, Mobile CAD, and GPS tracking for EMS vehicles to improve EMS communications, response times, and employee efficiencies with full implementation expected by January 2012.
- Developed strategic plans for alternative staffing patterns to improve EMS system efficiency and to meet growing call volumes (implementation ready when funding is available)
- Collaborated to facilitate the placement of a MedCenter-Air Critical Care Ground Transport Ambulance at CMC-Union to handle a portion of out of county ambulance transfers from the hospital during hours of peak demand
- In addition to providing ambulance and emergency medical services in Union County, Union EMS also provided medical standby coverage for 81 high school and/or collegiate football games and participated in 47 community relations and EMS show and tell events.

The following pages provide a more detailed look into the operations and management of Union EMS for the fiscal year ending June 30, 2011.

PURPOSE OF THE ANNUAL 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, 2010 and ending June 30, 2011.

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 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

Our Mission

Our mission is to provide emergency medical care and medically necessary ambulance transportation in Union County, delivered by competent and caring professionals who demonstrate excellence in patient care, customer service, and community education.

Our Vision

Our vision is to be an organization of superior care and customer service; a preferred employer with a family atmosphere; respected by our community and peers, and empowered by a culture of learning, teamwork, and the continuous pursuit of excellence.

Our Values

- **Caring:** We treat our customers with dignity, giving them the courtesy and gentleness they need. We are helpful; we listen; we communicate; we respond to patient needs.
- **Commitment:** We are dedicated to the Carolinas HealthCare System and Union EMS, taking pride in our organization and our jobs, projecting a professional image, and striving to be the best in all we do.
- **Integrity:** We honor and uphold confidentiality, are honest and ethical, keep our commitments, accept responsibility for our actions, and respect the rights of patients, families and each other.
- **Teamwork:** Linked by our common mission, we respect the professionalism and contributions of our coworkers, understand that physicians are an integral part of the team, value diversity in all its forms, and recognize that people are our greatest assets.

ORGANIZATION

Staffing and Placement Overview:

Union Emergency Medical Services 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 these 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 40 hours per week to handle a

ORGANIZATION, CONTINUED

wide variety of office, administrative, HR, and clerical functions. It should be noted that staffing is supplemented by a roster of up to 35 PRN employees who work in the absences of full-time employees due to vacation, illness, and continuing education.

Union County Emergency Medical Services System – Lead Agency

Union EMS is the lead agency of the Union County Emergency Medical Services System as established by Union County under 10A NCAC 13P .0201 (a) for the defined service area within the geographical boundaries of Union County, North Carolina. The Emergency Medical Services System comprises all components of the EMS system operating in or in conjunction with Union County including, but not limited to, 911 call taking, emergency medical dispatch and communications; First Responders; EMS; air-medical and other specialty care transport services; hospitals; trauma centers; and disaster preparedness. Union EMS serves as the lead agency for coordinating the emergency medical services “system” in Union County.

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 503,131 miles on the fleet during fiscal year 2010-2011. 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 diagnostic 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. Inter-hospital transfers represented 5.7% (706) of Union EMS’ transports during the 2010-2011 fiscal year.

MedCenter-Air Ground Ambulance Based at CMC-Union

In an effort to maintain coverage and keep Union EMS’ ambulances in Union County, Union EMS and CMC-Union collaborated to request MedCenter-Air to place a Critical Care Transport – Ground Ambulance at CMC-Union. The Critical Care Transport Ambulance was deployed in mid-November 2010 and their personnel completed 231 inter-hospital transports from CMC-Union through June 30, 2011. Significant growth in EMS call volume and double-digit growth in the CMC-Union ED volume clouds the anecdotal impact of this added critical care transport capability. In reviewing the statistics, the tangible impact is immeasurably positive and has enabled Union EMS to maintain ambulances coverage in Union County in spite of growing numbers of out of county transports.

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, *medically necessary* ambulance transportation between nursing facilities, hospitals, doctors’ offices, and patients’ residences. Non-emergency and scheduled transport calls represent approximately 14% of our total call volume.

ORGANIZATION, CONTINUED

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 were handled by EMS Management and Consultants (EMS/MC), a private firm specializing in ambulance service billing and reimbursement. The amount of Union County's subsidy to Union EMS as a percent of total operations has decreased from 93% in 1997 to 42% in 2011. The 2010-2011 operating budget for Union EMS was \$6,997,531 and the county subsidy amounted to \$2,913,316 with budgeted capital expenditures and a small portion of operations being funded from EMS reserves. Union EMS has sacrificed capital replacements and employee merit increases to balance the budget in response to necessary reductions in the county funding.

Medical Control:

Medical Control is provided through a contractual arrangement with a physician who serves as the EMS Physician Medical Director. Paramedics function as an extension of and under the authority of the Medical Control Physician and his/her medical license. Paramedics operate very autonomously using an extensive set of protocols and standing-orders published by the North Carolina College of Emergency Physicians (NCCEP) and adopted by the North Carolina Office of EMS. 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. 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 insures that Union EMS serves Union County with competent EMTs and Paramedics administering the most up to date clinical care.

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.

ORGANIZATION, CONTINUED

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, radio communication is maintained on the new Union County 800 Mhz trunked radio system that is interoperable with the Charlotte-Mecklenburg system and the NC VIPER radio system. EMS radio traffic is currently simulcast to our VHF radio frequencies for paging and local redundancy of communications. 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 answer 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.

Union County Emergency Communications is an Accredited Center of Excellence (ACE) in medical and fire dispatch.

C-COM provides a valuable service and is considered by EMS to be a strategic member of the Union EMS Team.

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.



Eighteen (18) county volunteer fire departments also support Union EMS with Medical First Responders and EMT's in the rural areas of Union County. Whether responding from home in their personal vehicle or from the fire station in fire apparatus, these responders provide timely delivery of basic life support measures and defibrillation in the rural areas until Union EMS paramedics arrive.

In accordance with state guidelines, all active First Responders operating in Union County are credentialed by the State of North Carolina and follow county-wide standardized medical protocols.



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

UNION EMS ACTIVITY LEVEL

Volume

Union EMS call volume for fiscal year July 1, 2010 to June 30, 2011 totaled 18,174 responses and resulted in 12,345 billable transports. This represents a 6% increase in dispatches and a 5.8% increase in transports over 2009-2010. 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.

Nature

The highest concentration of requests for Union EMS were for Traffic Crashes (13%) followed by a three way tie among General Sickness, Falls, and Inter-facility Transfers at ten percent(10%), Breathing Problems represented nine percent (9%), and Chest Pain represented eight percent (8%) of all calls. The remaining forty percent (40%) are distributed among 27 other commonly established dispatch categories.

FY 2011 Top Twelve (12) Nature of Calls by Volume							
(1)	Traffic Crashes	2427	13.4%	(7)	Unconscious/Fainting	863	4.7%
(2)	Sick Person	1979	10.9%	(8)	Convulsions/Seizure	659	3.6%
(3)	Transfer/Interfacility/Palliative Care	1934	10.6%	(9)	Hemorrhage/Laceration	427	2.3%
(4)	Fall Victim	1821	10.0%	(10)	Diabetic Problem	423	2.3%
(5)	Breathing Problem	1683	9.3%	(11)	Abdominal Pain	401	2.2%
(6)	Chest Pain	1348	7.4%	(12)	Altered LOC	389	2.1%

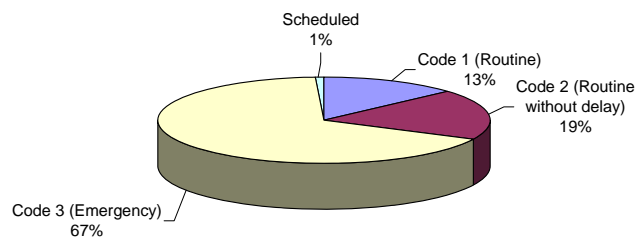
Call Volume Distribution by Response Code

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).

These response codes determine whether ambulances respond with red lights and sirens or not and play an important part in responder safety.

As a result of the medical priority dispatch system, 67% of Union EMS calls were considered “Emergency”, 19% were categorized as “Routine Without Delay”, and 14% of Union EMS’ calls were categorized as “Routine (non-emergency) or Scheduled”, at the time of dispatch.

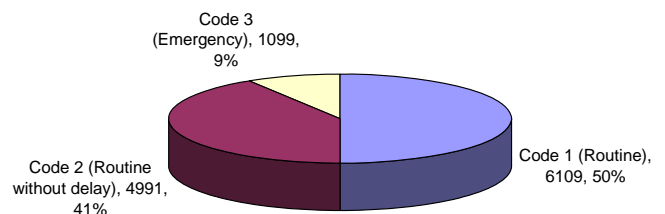
Call Volume by Response Code



Transport Distribution by Response Code

Union EMS transport modes are categorized by acuity of the patient as this determines how urgently a patient may be transported to the hospital and the associated use or non-use of lights and sirens. In most cases, the patient is stabilized by the paramedics’ treatment upon arrival and the “emergency” is over. Patients may then be transported in a non-emergency mode that results in a safe, quiet ride to the hospital.

Transport Volume by Response Code



Distribution of EMS Calls by Time of Day and Day of Week

The following table represents the distribution of ambulance calls by time of day and day of week for fiscal year 2010-2011. This analysis aids EMS leadership in planning shifts and staffing resources to better match the demand for services. The largest concentration of calls for Union EMS is typically between 8:00AM and 10:00PM, Monday-Saturday with peak demand between Noon and 7:00PM.

Union Emergency Medical Services									
Demand Analysis									
Date IS BETWEEN 07/01/2010 AND 06/30/2011									
Hour of Day	SUN	MON	TUE	WED	THU	FRI	SAT	TOTAL	
00:00 - 00:59	78	71	67	61	58	65	61	461	3%
01:00 - 01:59	70	54	57	39	59	58	86	423	2%
02:00 - 02:59	67	58	55	44	56	57	67	404	2%
03:00 - 03:59	58	50	41	44	44	47	45	329	2%
04:00 - 04:59	64	48	35	40	43	50	52	332	2%
05:00 - 05:59	51	46	46	39	51	41	58	332	2%
06:00 - 06:59	57	47	74	50	58	59	56	401	2%
07:00 - 07:59	69	91	89	92	90	90	54	575	3%
08:00 - 08:59	76	124	89	96	115	104	76	680	4%
09:00 - 09:59	106	138	144	140	159	133	110	930	5%
10:00 - 10:59	95	138	150	129	162	136	125	935	5%
11:00 - 11:59	121	155	137	142	165	145	132	997	5%
12:00 - 12:59	109	173	170	159	150	162	146	1,069	6%
13:00 - 13:59	158	137	152	148	174	140	153	1,062	6%
14:00 - 14:59	120	164	147	162	164	147	141	1,050	6%
15:00 - 15:59	123	162	181	165	159	190	138	1,118	6%
16:00 - 16:59	124	166	178	144	137	165	129	1,043	6%
17:00 - 17:59	121	159	171	182	203	159	143	1,138	6%
18:00 - 18:59	134	131	141	161	192	201	154	1,114	6%
19:00 - 19:59	108	149	130	126	118	142	128	901	5%
20:00 - 20:59	108	124	96	110	127	116	136	817	4%
21:00 - 21:59	95	112	95	101	126	138	143	810	4%
22:00 - 22:59	83	89	85	92	93	116	109	667	4%
23:00 - 23:59	91	76	73	70	79	87	110	586	3%
TOTAL	2,286	2,662	2,603	2,536	2,782	2,748	2,552	18,174	100%

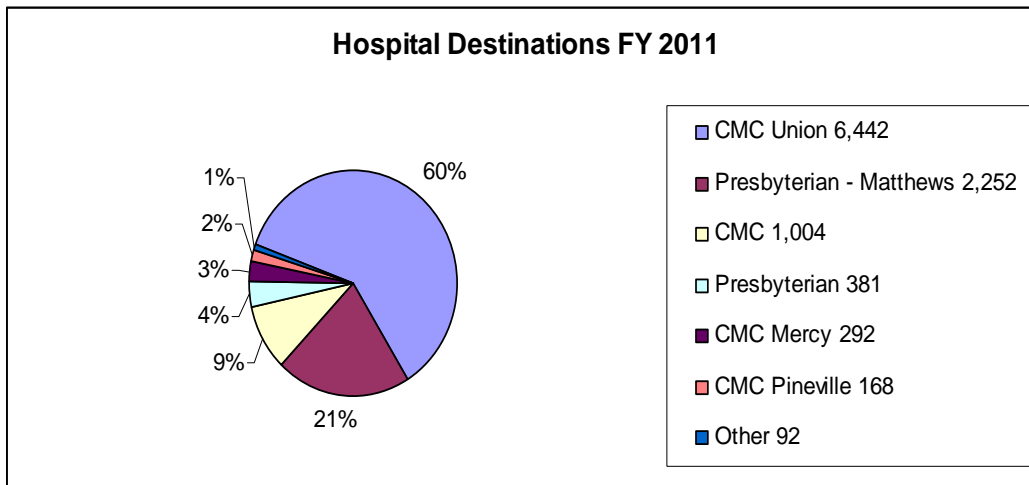
CALL OUTCOMES

12,199 of EMS calls resulted in billable transports*. Another 146 calls resulted in other billable outcomes** for a total of 12,345 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 right represents the outcomes of all EMS encounters for fiscal year 2010-2011.

OUTCOME SUMMARY		
OUTCOME	COUNT	PERCENT
Transport By UEMS*	12,199	67.1%
Refusal	2,901	16.0%
Cancelled	1,060	5.8%
Care Transferred To Other Union EMS Unit	650	3.6%
No EMS Assistance Required	312	1.7%
Assisted Other Unit	256	1.4%
Lifting Assistance Only, No injuries	150	0.8%
Meds Given - No Transport**	146	0.8%
Standby Completed (Fire, Swat, PR Event)	120	0.7%
DOA - No CPR	114	0.6%
No Patients Found	91	0.5%
Football Standby Complete	85	0.5%
Care Transferred To Flight Crew	26	0.1%
Not Applicable	26	0.1%
Transport By Police	23	0.1%
Transport By POV	21	0.1%
Total	18,174	

TRANSPORT DESTINATIONS



Of the 12,345 billable outcomes, 10,601 were transports to hospitals, 1,598 were transports to other destinations (nursing homes, residences, and doctor's offices).

The graph at left represents the breakdown of patient transports to hospitals.

In summary, 60% of transports to hospitals went to CMC-Union, while 21% went to Presbyterian Matthews.

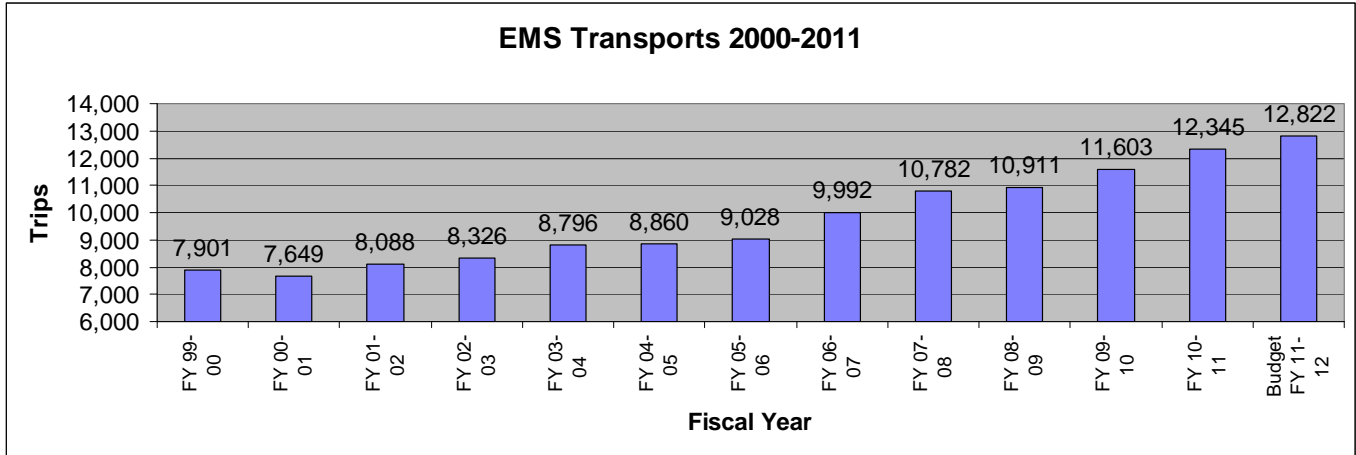
We also note that 9% of transports went to Carolinas Medical Center (CMC), while 4% of all transports to hospitals went to Presbyterian Hospital (Main), and 2% went to CMC-Mercy. The remaining 1% of hospital transports was distributed among a variety of hospitals across the region and state.

During fiscal year 2010-2011, 40% 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.

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

GROWTH

The following graph quantifies transport volume growth over the last twelve years (56%) and the estimated growth (4%) in the number of transports for FY2012 (12,822).



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 9.08 minutes and a median emergency response time of 8.45 minutes county-wide for the fiscal year 2010-2011. Response times for all call types combined (Routine/Scheduled, Routine without Delay, and Emergency) for the period averaged 9.46 minutes.

Fractile Response Time				
Emergency Calls - FY 2011				
Minutes : Seconds	Call Count	Percent	Cumulative Call Count	Cumulative Percent
00:00 - 01:59	795	6.6%	795	6.6%
02:00 - 02:59	283	2.3%	1,078	8.9%
03:00 - 03:59	563	4.7%	1,641	13.6%
04:00 - 04:59	860	7.1%	2,501	20.7%
05:00 - 05:59	1009	8.3%	3,510	29.0%
06:00 - 06:59	1136	9.4%	4,646	38.4%
07:00 - 07:59	1128	9.3%	5,774	47.7%
08:00 - 08:59	1074	8.9%	6,848	56.6%
09:00 - 09:59	1028	8.5%	7,876	65.1%
10:00 - 10:59	884	7.3%	8,760	72.4%
11:00 - 11:59	764	6.3%	9,524	78.7%
12:00 - 12:59	588	4.9%	10,112	83.6%
13:00 - 13:59	478	3.9%	10,590	87.5%
14:00 - 14:59	368	3.0%	10,958	90.5%
15:00 - 15:59	317	2.6%	11,275	93.2%
16:00 - 16:59	196	1.6%	11,471	94.8%
17:00 - 17:59	166	1.4%	11,637	96.2%
18:00 - 18:59	110	0.9%	11,747	97.1%
19:00 - 19:59	91	0.8%	11,838	97.8%
20:00 - 24:59	193	1.6%	12,031	99.4%
25:00 +	71	0.6%	12,074	100.0%

The table at left quantifies the Fractile Emergency Response Time for fiscal year 2010-2011. This EMS industry measure quantifies the individual and cumulative percentage of calls that are answered at various time intervals.

A Union EMS paramedic was on the scene of 65% of all emergency calls within nine minutes and fifty-nine seconds (9:59) and on the scene of 91% of all emergency calls within fourteen minutes and fifty-nine seconds (14:59).

Factors that impact response times include call volume, the number of staffed/deployed emergency vehicles, time of day, traffic patterns, weather and road conditions, and delays in transferring care at hospitals.

With a continued trend of growing call volume, it will be necessary for Union EMS to add personnel and ambulances to maintain or reduce response times in future years.

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 surveys is shared with staff. Successes are celebrated, service recovery opportunities are pursued, and any opportunities for improvement are identified and addressed internally.

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

- Promptness and Safe Transport
- Pain Management

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

- Stabilization of Fractures

The following table summarizes the most recent survey responses of patients surveyed between January and June 2011.

Union EMS							
Patient Satisfaction Survey Results							
Date Range =		January 1, 2011 to June 30, 2011					
SCORES SUMMARY							
Question Description		<15	30	45	60	120	240 >
Min before 911		93%	7%	0%	0%	0%	0%
Question Description	% Favorable Responses	Excellent	Very Good	Good	Fair	Poor	N/A
		5	4	3	2	1	0
Response Time	94%	63%	13%	13%	0%	6%	6%
Quality-Medical Care	100%	63%	38%	0%	0%	0%	0%
Explaining	100%	63%	19%	13%	0%	0%	6%
Reduce Anxiety	100%	56%	25%	19%	0%	0%	0%
Courteous/Caring	100%	63%	25%	6%	0%	0%	6%
Professionalism	100%	81%	6%	13%	0%	0%	0%
Knowledge/Skill	100%	63%	25%	13%	0%	0%	0%
Reduce Pain	100%	56%	19%	13%	0%	0%	13%
Overall Impression	100%	63%	19%	19%	0%	0%	0%
Survey Source	EMS/MC	Web					
	100%	0%					

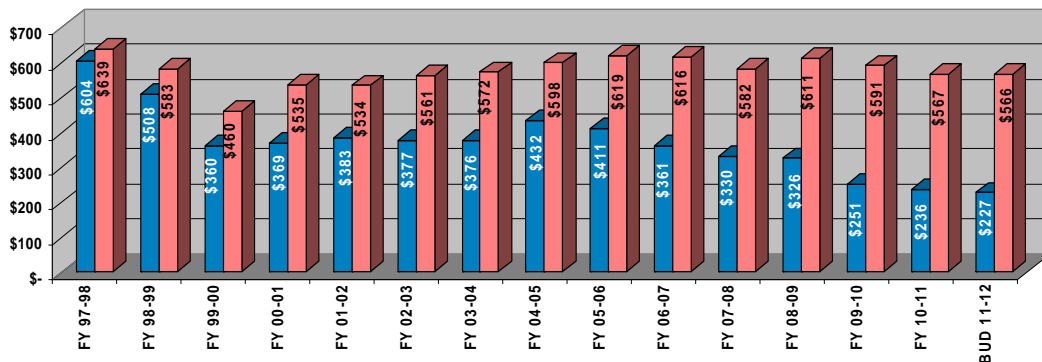
FINANCIAL CONSIDERATIONS

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 2011 budgetary cost for an ambulance call that results in transport is approximately \$567 (annual budget divided by the number of billable transports). The 2011 Union County funding per trip was approximately \$236 per transport, down 60.9% from the base year county funding per trip of \$604.

EMS Cost and County Funding per Transport History



■ County Funding per Transport ■ Total Cost per Transport

User Fees

The table at right represents the Union EMS fee schedule in effect during fiscal year 2010-2011.

Over half (58%) of Union EMS transports fell into the ALS categories and 41% were in the BLS categories, with the remaining 1% falling into the SCT or Treatment/No-Transport categories. The average transport mileage was ten (10) loaded miles.

The average charge per transport was \$658. 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 reimbursement related to the Medicare fee schedule.

Union EMS Ambulance Fee Schedule	
July 1, 2010 - June 30, 2011	
Description	Fee
BLS Non-Emergency	\$390.00
BLS Emerg - No ALS	\$491.00
ALS 1 Non-Emerg	\$534.00
ALS 1 Emergency	\$604.00
ALS2	\$756.00
SCT	\$882.00
Treatment / No Transp	\$200.00
Mileage (loaded miles)	\$12.44

FINANCIAL CONSIDERATIONS, CONTINUED

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 the low collection rates on private/self-pay accounts.

As an example, for a charge of \$658, Medicare will recognize approximately \$380 of the charge for reimbursement. Medicare only reimburses 80% of the amount they recognize, so a \$658 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 \$278. 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 \$658, Medicaid reimburses Union EMS only \$150. The contractual write-off on this account is \$508. Approximately 12% of all transports are in the Medicaid payor class.

Medicaid Cost Report

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. The settlement checks are received by Union County Government and amounted to \$440,755.00 in 2011 for FY 2009-2010 Medicaid transports.

Contractual Write Offs

For the 2010-2011 fiscal year, Medicare and Medicaid contractual write offs amounted to \$2,358,305. Contractual write-offs represent the difference in the amount of EMS Gross Charges and the Medicare and Medicaid Allowable Fee Schedules for Medicare and Medicaid patient transports. This number is directly impacted by increases in user fees to levels above the Medicare and Medicaid fee schedules and increasing transport volumes.

Billing and Collections

EMS Gross Collection Rates for the period were 50%, up 12% from the base year (1997-1998) and represented a seven percent (7%) increase over the 2009-2010 fiscal year. The gross collection rate is the ratio of gross charges to collections and does not take into account contractual write offs mandated by the Medicare and Medicaid Fee Schedules and therefore does not provide a true picture of collections performance.

Billing and collections during this period were handled by EMS Management and Consultants (EMS/MC), a firm specializing in ambulance billing and collections. Founded in 1996, EMS Management & Consultants, Inc. is now one of the Nation’s leading experts in EMS billing and reimbursement management. They currently serve over 125 EMS agencies across several states.



Union EMS is able to export billing information electronically to EMS/MC from our electronic Patient Care Reporting software (e-PCR) which improves the speed and accuracy of the medical billing. By capitalizing on the power of the Carolinas HealthCare System, EMS/MC is able to collaborate with Union EMS and the Carolinas HealthCare System to verify insurance information to further improve filing accuracy and to assure the ambulance bills are going to the most appropriate payor.

Union EMS Collection Rates

Union EMS' collection performance is maintained as a result of consistent data collection by our paramedics, 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, 2011.

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.

Collection Rates			
	Total Billed	Total adjusted Collection Rate	Net adjusted Collection Rate
Base Year	\$1,002,042	38%	56%
Fiscal Year to Date	\$8,035,738	50%	98%
Variance from Base Year		12%	42%

EMS Funding

The difference in revenue and expenses is covered by the taxpayers of Union County in the form of a subsidy for the operation of Union EMS.

Union EMS strives to make the service less of a burden to Union County by generating more income from user fees and by continuously improving the efficiency of the 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.

The amount of Union County's subsidy to Union EMS as a percent of total operations has decreased from 93% in 1997 to 42% in 2011. The 2010-2011 operating budget for Union EMS was \$6,997,531 and the county subsidy amounted to \$2,913,316 with budgeted capital expenditures and a small portion of operations being funded from EMS reserves.

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 2011-2012 that include:

- Continue to improve clinical care in through peer review processes and Medical Direction
- Improve collections through implementation of Debt Set-off for bad debt accounts
- Improve EMS employee engagement and job satisfaction
- Improve patient satisfaction
- Improve response times and deployment efficiency through utilization of mobile CAD, GPS, and automatic vehicle location (AVL) mapping capabilities provided by the deployment of wireless connectivity between the EMS vehicles and Union County

CONCLUSION

This concludes the report of activities and accomplishments of Union EMS during the 2010-2011 fiscal year and marks another year of growth, change, and dedication for the people who are Union EMS.

The purpose of our existence is to provide emergency medical care and medically necessary ambulance transportation through competent and caring professionals who demonstrate excellence in patient care, customer service, and community education.

The leadership and staff of Union EMS strive daily to focus our efforts on accomplishing these objectives and living our values through caring, commitment, integrity, and teamwork.

Respectfully submitted,



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