

PARAMED

Incorporated

PROPOSAL TO PROVIDE

DEVELOPMENT, MANAGEMENT AND

OPERATIONAL SUPERVISION

for a

COUNTY-WIDE LEXINGTON COUNTY AMBULANCE SYSTEM

Lexington County

South Carolina

27 April 1973

FOREWORD

To completely develop a plan for a separate ambulance system for Lexington County, complete with all the system components and criteria, would require adequate time to study the facts and design a system based on the needs for county-wide service. In that there is not adequate time to fully explore these facts, the following information is based on:

- (1) actual operating experience by Carolina Ambulance, Inc., in Lexington County over a period of several years;
- (2) a limited amount of information immediately available on operating statistics of other purveyors in Lexington County for the calendar year 1972;
- (3) Paramed's experience in developing comprehensive studies of emergency medical service needs for local political subdivisions in South Carolina and other areas;
- (4) Paramed's experience in developing and operating total professional emergency medical service systems; and
- (5) Paramed's professional experience as a consultant on emergency medical service.

The information and conclusions are also based on Paramed's understanding that Lexington County wants to develop a separate ambulance service solely for the citizens of Lexington County, to be provided by dispersed units without a fee for services rendered.

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INTRODUCTION

Paramed is pleased to have the opportunity to present this proposal to Lexington County. As stated in the FOREWORD, the proposal is presented with the following goals from the county:

- . No fee for service.
- . County owned service providing total service to all of the county through efficient dispersal.

Lexington County should be congratulated on the above desires as the logical first step to developing a sound Emergency Medical Service system for all Lexington County citizens; however, there are other criteria which should be determined before the quality of the proposed system is known. They are:

- . What "immediate response capability" does the county desire? Immediate Response Capability is the percentage of time a unit is able to be sent on an emergency call immediately upon its receipt. One hundred percent is not attainable financially or mathematically. Ninety percent is deemed a minimally acceptable figure.
- . What response times does the county desire? This will determine where the units will be stationed and will also, with immediate response capability desired, determine how many on-line units will be needed. To have an ambulance reach each citizen in six minutes from receipt of call is much more expensive than a 15-minute response time.
- . What level of patient care is desired? Put simply, what do you want the Emergency Medical Technician to do for the patient? In that we have been serving Lexington County areas, we subjectively designed this proposal to the existing level of patient care now being rendered by Carolina Ambulance, Inc., in Lexington County. However, you and your medical community may wish a higher degree of care; this will affect costs of training and equipment.

In addition to the above points, certain other aspects of the situation should be examined carefully prior to the expenditure of large sums of money and the establishment of an operational system. They are:

- . The number of calls which originate outside Lexington County but served by county purveyors should be determined. At present, these calls are lumped statistically into the Lexington County information by those purveyors who serve areas outside of Lexington County. They may be misleading to planning for Lexington County in that they could cause overdesign of the system in certain areas. (This occurs primarily in the Batesburg-Leesville area.)
- . Comparisons of the existing call volume should be made against the Dunlap & Associates formulas for calls vs. population to determine if a total service system will increase or decrease call volume.
- . All existing EMS resources should be inventoried and evaluated to see which existing components could efficiently be incorporated in a total system, thereby providing cost savings and possibly increasing operating efficiency.
- . Finally, the county's attitude on service fees should be carefully considered, not from only a monetary standpoint, but also primarily an operating standpoint. With no fee for service call volumes generally far exceed normal call experience thereby increasing running times and decreasing immediate response capability in true emergencies. This is not subjective opinion on Paramed's part, but a warning to you which can be backed up by a great deal of hard statistics and horror stories. Should the county wish to control "free rides" by instructing the EMT to refuse service to patients who the EMT deems does not require ambulance transportation, the EMT, the service, and the county are placed in a very tenuous position medically, ethically, and legally.

This type of selection simply will not work satisfactorily from anyone's point of view. If there is no screening process, you will find emergency ambulances constantly tied up on convalescent transports, hospital and doctor's office visits for examination and routine treatments.

From the financial point of view, the fee income at \$25 per call would be approximately \$45,000 to \$50,000

per year. This income figure is small compared to the cost of additional ambulance units and crews that will be required in one to two years in order to give the same quality of service available at the beginning of the system. Thus, the true cost difference is not approximately \$50,000 more per year in tax funds required to run the service but the \$50,000 plus perhaps \$120,000 to \$140,000 more to man and operate two additional units in the future.

Also, the taxpaying citizen may develop an awareness that with a "free" service he is paying twice for the service. First, he pays directly for the service in taxes to support it; secondly, he pays for the service by paying insurance premiums (directly and indirectly) which are loaded to pay for the service. However, the insurance company and other third-party payment sources will not pay these fees to the county, thereby increasing the net tax cost to the citizen.

The above points are not to be deemed as obstacles to the county's desires and plans. On the contrary, they are added so that the county may have more facts and be more knowledgeable about its EMS system and how it serves the citizen. Should the county wish Paramed to operate a system with no fee for service, Paramed would be willing to do so -- as long as the county is aware of the operating demands and increasing cost factors involved with a "free" system.

A recent development within the Central Midlands Regional Planning Council will most probably be of great help to Lexington County and its EMS system. At the present time the Council is accepting proposals for a comprehensive EMS study of the region which will develop all criteria mentioned in this introduction as well as others. The goal of the study would be to develop a cohesive and efficient EMS system to be a truly "regional" system. The study will probably be finished within the next 12 months.

Should Lexington County wish to implement its own system in the near future, it could do so with the existing resources it owns (equipment Carolina Ambulance operates) and other existing resources within the county. This would immediately increase the availability of service within the county and be a major step toward the county's goals. While this system operated more factual data would be developed through a county-wide EMS documentation system and the study would provide additional information which would then allow the county to make more knowledgeable decisions as to what ultimate form it would wish its system to take. Should the county not wish to wait approximately one year to begin full development of its system, Paramed would be willing to conduct a study to determine the needed information with a rather short time frame (two to three months).

As stated in the beginning, Paramed has been pleased to serve Lexington County and looks forward to continuing that effort by working hand in hand with the county leadership in developing a higher quality of ambulance service throughout Lexington County.

EXISTING VOLUME AND COVERAGE

At the present time, Lexington County's ambulance service is provided by a combination of purveyors including a professional Emergency Medical Service, volunteer rescue squads, and funeral homes. The dispersment of ambulance units from all purveyors currently offers Lexington County some type of coverage to a large majority of its citizens. This dispersment ranges from over coverage in the Batesburg-Leesville area to a lack of coverage in the Chapin area. The West Columbia-Cayce area, with a concentration of population, is served by a Carolina Ambulance, Inc., unit stationed at the Metropolitan Airport. Cross coverage is provided by an ambulance stationed in Swansea and by back-up from Columbia. The Swansea area is covered by the Carolina Ambulance, Inc., unit in Swansea and backed up by the Swansea Rescue Squad. Pelion is covered by the Pelion Rescue Squad; Lexington is covered by the Lexington Rescue Squad with some coverage by Carolina Ambulance, Inc., units. Chapin has been covered by the Chapin Rescue Squad, and Irmo is served by both the local fire department and by the Carolina Ambulance, Inc., unit at the Airport. The Batesburg-Leesville area is served by two rescue squads (Batesburg Rescue Squad and Leesville Rescue Squad) and four funeral homes (Amos, Barr, Lybrand, and Shealey). However, the funeral homes in this area also cover portions of nearby Saluda and Aiken Counties.

One of the difficulties in determining exactly the number of calls attributable to Lexington County stems from overlapping coverage by various purveyors. The following chart (Chart 1) lists the estimates of calls by purveyor, by category, in given areas of the county. Specific overlapping coverage is noted between the Swansea Rescue Squad and the Carolina Ambulance, Inc., unit stationed in Swansea, in that the Squad responds to a number of calls with the ambulance. The Squad does, however, run a back-up to the ambulance when it is already on a call. The same overlap is probably true to some degree in the Batesburg-Leesville area. The amount of overlap and the number of calls answered by the funeral homes in adjoining counties is difficult to separate from total figures quoted.

CHART 1

Comparative Call Volume by Area and Purveyor for 1972

	<u>Rescue Only</u>	<u>Emer- gency</u>	<u>Trans- port</u>	<u>Total</u>
<u>Batesburg-Leesville</u>				
Batesburg Rescue Squad	3	4	3	10
Leesville Rescue Squad	15	-	-	15
Amos Funeral Home	-	35	65	100
Barr Funeral Home	-	150	18	168
Lybrand Funeral Home	-	175	93	268
Shealey Funeral Home	-	75	184	259
<u>Chapin</u>				
Chapin Rescue Squad	2	50	8	60
<u>Lexington</u>				
Lexington Rescue Squad	-	90	-	90
<u>Pelion</u>				
Pelion Rescue Squad	6	109	22	137
<u>Swansea</u>				
Swansea Rescue Squad	6	30	4	40
Carolina Ambulance, Inc.	-	256	138	394
<u>W. Cola., Cayce, Airport</u>				
Carolina Ambulance, Inc.	-	909	490	1,399
TOTALS	32	1,883 (64%)	1,025 (35%)	2,940

X FH
R R S

Through E.H
w/over R-S

CHART 2

Carolina Ambulance, Inc., Call and Patient Volume for 1972

<u>Date</u>	<u>W. Cola. Cayce Airport</u>	<u>Swansea</u>	<u>TOTAL CALLS</u>	<u>Patients</u>	<u>No Charge Calls</u>	<u>Calls w/ Patients</u>	<u>Patient Transports</u>
Jan	127	22	149	158	46	103	112
Feb	114	26	140	148	36	104	112
Mar	103	36	139	147	38	101	109
Apr	99	26	125	127	34	91	93
May	121	30	151	155	46	105	109
Jun	99	38	137	139	40	97	99
Jul	138	35	173	179	54	119	125
Aug	104	29	133	137	37	96	100
Sep	135	24	159	166	35	124	131
Oct	123	43	166	172	46	120	126
Nov	105	31	136	136	28	108	108
Dec	131	54	185	196	50	135	146
TOTALS	<u>1,399</u>	<u>394</u>	<u>1,793</u>	<u>1,860</u>	<u>490</u>	<u>1,303</u>	<u>1,370</u>

The relationship between the current purveyors ranges from satisfactory to poor. There has been a good deal of misunderstanding in the past between the professional service and some rescue squads and funeral homes. On the other hand, the working relationship between the Swansea Rescue Squad and the ambulance unit in Swansea has been quite satisfactory.

Currently, Lexington County owns four fully equipped ambulance units and one partially equipped station wagon, used by the management staff to supervise the services rendered. It also owns one completely stocked mass disaster trailer to be used in conjunction with the Metropolitan Area Disaster Plan. In addition, some miscellaneous supplies, uniforms, and equipment are also owned by the county.

PROPOSED AMBULANCE SERVICE COVERAGE

It has been stated that a county system to fully cover the entire Lexington County area with emergency ambulance response is desired by the governing body. To accomplish this, more than four units will be needed. Six units on duty 24 hours, with a back-up system by local rescue squads, could provide an adequate service. In order to run six units on duty at all times, nine units will be required. The extra equipment is to cover normal maintenance down-time and out-of-area trips without adversely affecting immediate response capability and service time.

Initially, up to four units could be dispersed with less populated areas covered by local rescue squads until additional equipment can be secured. The initial four unit staffing and dispersement is suggested as follows: (1) one unit at the Lexington County Hospital to cover the Lexington area with cross coverage to the West Columbia, Cayce area; (2) one unit at the Columbia Metropolitan Airport to cover the West Columbia, Cayce, Springdale, and South Congaree, Pineridge area; (3) one unit at Irmo to cover the Irmo, St. Andrews, Chapin area; and (4) one unit in the Batesburg, Leesville area.

When additional equipment is available, a unit could be stationed in Swansea to cover the Swansea and Pelion area and one unit could be stationed in the city of Lexington to cover the Lexington, Lake Murray area.

If desired, other combinations of dispersement could be explored; however, the suggested six unit coverage would provide satisfactory emergency response and ambulance service to the population areas within Lexington County.

Level of Care

A level of patient care is needed that will insure these minimum procedures:

- . Thorough evaluation of the patient and measurement of vital functions.
- . Complete airway maintenance up to, but not including, endotracheal intubation and tracheotomy.
- . Artificial ventilation, mouth-to-mouth, bag mask, and Elder Valve.
- . Artificial circulation, through chest compression, manual and mechanical.
- . Control of external bleeding.
- . Immobilization of fractures and dislocations, or suspected fractures and dislocations, including use of Thomas Splint for fracture of femur, and complete spinal and cervical immobilization.
- . Assistance to delivery, normal and simple abnormal types.
- . Supportive and protective care of the emotionally disturbed.
- . Extrication of victims from hazardous or entrapping situations.
- . Basic nursing techniques for the comfort, safety, and well-being of the patient.
- . Expert patient handling with all types of stretchers and devices.

Our experience indicates that the above level of care is quite satisfactory and above the standard generally available.

Beyond these basics, the technicians will be brought, as quickly as possible, to advanced training, which will enable the technician to perform sophisticated tasks deemed appropriate by the medical community in a rigidly controlled program.

Training

The key to patient care. The basic entry level into the system should be via the 87-hour Emergency Medical Technician--Ambulance training course originally developed by Dunlap & Associates for the Department of Transportation.* (The text for the course was developed by the American Academy of Orthopaedic Surgeons. The course, as currently being presented, is predominantly by video tape, developed by the South Carolina Hospital Association, including a pre-test.) The majority of the training is carried out via video tape by physicians, registered nurses, other emergency health care professionals, and other authorities in related fields. The successful completion of the course is sufficient for certification as an Emergency Medical Technician in South Carolina. A prerequisite to acceptance into the course is successful completion of the American Red Cross Multi-Media First Aid Course. (This has taken the place of the former Standard and Advanced American Red Cross courses and includes the standard training with advanced skills, given in a total of seven hours in addition to the EMT course.) Additional training should be provided in an in-hospital situation on a recurring basis combined with specialized training in areas beyond the scope of the 87-hour course, but below the planned advanced training program planned by the South Carolina Hospital Association. When the system reaches a sufficient level of sophistication and the community

*See Appendix for course outline.

desires it, additional special training designed to implement a mobile coronary care/mobile intensive care capability can be implemented, under direction of local physicians, hospital administrators, and management who will guide the program. Employees should have the following certificates within the first six months of employment:

- . American Red Cross Multi-Media First Aid
- . South Carolina Heart Association Cardio-pulmonary Resuscitation Technician
- . South Carolina Certified Emergency Medical Technician

In addition to the required certificates, there are several other certificates available. However, the successful completion of these courses is dependent on individual skills beyond the certified EMT level. Also, the entry into, and successful completion of, these courses is strictly controlled by the certifying agencies; therefore, if individual accomplishment indicates that the necessary skills (public speaking, individual leadership qualities, ability to teach, etc.) are present for entry into a given course, then management will endeavor to enroll select individuals. These include:

- . American Red Cross Instructor (Standard, Advanced, or Multi-Media)
- . South Carolina Heart Association Cardio-pulmonary Resuscitation Instructor
- . Emergency Medical Technician Instructor

Within one year they should be required to attend an American Academy of Orthopaedic Surgeons' three-day course.

Documentation

Documentation is an important part of a good emergency medical service system. It is essential for good patient care and the evaluation of patient care. It is vitally important for operational control and evaluation. Documentation involving patient care includes dispatching forms, emergency medical technicians immediate patient care form, cardio-pulmonary resuscitation reports, and emergency run reports. These can be used with or without computers and are invaluable in critiquing and upgrading care and training. (Samples of these documents are included in the Appendix.) Documentation of operating performance constitutes dispatching forms, run tickets, the operating log book, recording devices on the communications system and tachographs in each vehicle which record time, speed and use of the siren. The use of the patient care and operational documents provides information which enables management to constantly evaluate services rendered and make corrections in the system when problems begin to appear, as well as pointing out strong points.

In view of the recent improvements in documentation of all information relating to Emergency Medical Service, we have available a complete computer service program that will supply every statistic necessary to the proper analysis and control of such systems. The City of Columbia, South Carolina, is cooperating with Paramed in making available, to the companies within our system, the use of their computers for complete computer analysis of every aspect of the system including: patient care, delivery of service, dispatching, financial and billing, accounts receivable, aging reports, correlation of receipts to accounts receivable balance, and a multitude of other information necessary to the properly run ambulance

system. With the use of this information by persons knowledgeable in complete Emergency Service Systems, such as Paramed management, we are able to constantly review performance of all facets of the system and recommend change where needed and timely. This service is included in the cost estimates, as it is known that the ability to maintain a quality system is measured by the ability to evaluate it.

Equipment

The equipment on all vehicles is standardized and chosen for efficiency, operating simplicity and durability. All vehicles should be equipped above the minimum standards of the American College of Surgeons.

An example of the equipment to be carried is:

<u>Amount</u>	<u>Item</u>
<u>Patient Care Equipment</u>	
1	Regular First Aid Kit Complete (contents following)
1	Field First Aid Kit Complete (contents following)
1	Long Back Board
1	Short Back Board
1	Reeves Stretcher
2	Pneumatic Full Arm Splints
2	Pneumatic Full Leg Splints
1	Set Timmins Splints
1	Hare Traction Splint
1	Hope Adult Bag Mask Resuscitator
1	Hope Pediatric Bag Mask Resuscitator
1	O. B. Kit
6	Sand Bags
1	Set Vellco Restraints
1	Bed Pan
1	Urinal
1	Emesis Basin
1	Rain Cover
Assortment	Disposable Oxygen Masks
Assortment	Suction Catheters
Assortment	Kling Gauze
Assortment	Alcohol Swabs
Assortment	4"x4"'s -- Sterile
Assortment	Alcohol
Assortment	Tape
Assortment	Stockinette

AmountItemOxygen -- Suction Equipment

2	"D" Size Oxygen Tanks (w/unit)
1	"K" Size Oxygen Tank (w/unit)
1	High Pressure Tubing and Reduction Valve (w/unit)
1	Regulator for Small Tank (w/unit)
1	Regulator for Large Tank (w/unit)
1	Double Yoke Regulator for Elder Valve
1	Elder Valve
1	Laerdal Suction Unit (w/unit)
1	Hand Wheel for Small Tank (w/unit)

Stretchers

1	Ferno-Washington All Level Cot (w/unit)
2	Ferno-Washington Emergency Stretchers (w/unit)
1	Ferno-Washington Pullman Stretcher
1	Emergency Stretcher, Model 11
1	Ferno-Washington Orthopaedic Stretcher
1	Wall Mount for All Level Cot (w/unit)
2	Vellco Restraint Straps for All Level Cot (w/unit)

Rescue Equipment

1	4-Ton Porto-Power Jack (w/unit)
1	5-Ton Hydraulic Jack
1	5-Foot Wrecking Bar
1	Crash Axe with Sheath
1	200-Ft. Section Coiled Rope
1	Bolt Cutter
1	CO ² Fire Extinguisher (w/unit)
1	Dry Chemical Fire Extinguisher (w/unit)
1	Set of Tools
1	Set of Jumper Cables
12	Road Flares

Linen

6	Blue Wool Blankets
2	Pillows
2	Plastic Pillow Covers
8	Regular Sheets
8	Regular Pillow Cases
8	Regular Towels
16	Disposable Sheets
16	Disposable Pillow Cases

Other Equipment

1	5-Cell Flashlight
1	Hand Lantern w/Battery
1	Set of Chains
1	Gas Cap with Lock
Assortment	Maps, Mapbook, Clipboard

Regular First Aid Kit Contents

Top

- 15 -- 4"x4" Sterile Gauze Pads
- 12 -- 3" Kling Gauze
- 2 -- Padded Tongue Depressors
- 4 -- Regular Tongue Depressors
- 1 -- Box 2" Bandage Compress
- 1 -- Box 4" Gauze Bandage
- 1 -- Tourniquet with Forceps
- 3 -- 1" Kling Gauze
- 2 -- Hemostats
- 1 -- Box Ammonia Inhalants (10 per Box)

Bottom

- 36 -- 4"x4" Sterile Gauze Pads
- 10 -- Triangular Bandages
- 10 -- Alcohol Swabs
- 4 -- 3"x18" Vaseline Gauze
- 4 -- Ace Bandages (two 2" & two 4")
- 2 -- Pairs Sterile Gloves
- 1 -- 50-CC syringe with 18 fr. 22" catheter
- 1 -- Resuscitube (Adult/Child)
- 5 -- Restrictor Bands
- 1 -- Sphygmomanometer
- 1 -- Stethoscope
- 5 -- Combination Pads (8"x7&1/2")
- 1 -- Ring Cutter

Field First Aid Kit Contents

Top

- 8 -- Triangular Bandages
- 8 -- Gauze Bandages (4"x6 Yards)
- 4 -- 2" Compress Bandages
- 4 -- 4" Compress Bandages
- 6 -- Absorbent Gauze Compress (24" x 2 Yards)
- 2 -- Eye Dressing Packets
- 8 -- Vaseline Gauze Packets (3" x 18")
- 2 -- Combination Pads (8" x 7&1/2")
- 6 -- 4" x 4" Sterile Gauze Pads

Bottom

- 10 -- Ammonia Inhalants
- 4 -- Absorbent Gauze Compresses (24" x 2 Yards)
- 1 -- Triangular Bandage
- 3 -- 2" Compress Bandages
- 3 -- 4" Compress Bandages
- 3 -- Gauze Bandages (4" x 6 Yards)
- 1 -- Tourniquet and Forceps

Bottom Middle

- 4 -- 4" x 4" Sterile Gauze Pads
- 2 -- 1" Adhesive Tape
- 1 -- 1&1/2" Adhesive Tape
- 2 -- Hemostats
- 1 -- Adult Resuscitube
- 1 -- Adult Airway
- 1 -- Child Airway
- 1 -- Pediatric Airway

Communication System

Of paramount importance is a good dispatch and communications system. The single most important factor in this system is the quality of the dispatcher. Not only does the dispatcher need clear enunciation, knowledge of his radio system, the ability to operate under pressure and extract needed information from callers, but he also needs to have knowledge of the intricacies of an operating ambulance system and its interfacing agencies. He needs to have much of the training of the emergency medical technician. To deliver the high quality of service, the dispatcher must be fully trained in the responsibilities of the system. Without this, the system loses a good deal of efficiency and cohesion. The dispatcher will have to make quick decisions and will have to have the patient care background in order to make the proper decision.

To deliver high quality care, it is essential that the emergency medical technician can communicate directly with the physician in the emergency room. It is, therefore, necessary to have good radio communication between the hospital, operating unit, and the dispatcher, as well as from the dispatcher to the operating unit. In addition to radios, there should be direct telephone lines between the ambulance dispatcher, law enforcement agencies, fire departments, and hospitals.

In view of recent developments on a state-wide basis related to emergency medical service radio communications, it is being suggested that a state-wide radio network for such service be developed. The most commonly referred to plan in South Carolina is the Motorola "Hear" system. The fact that the use of such a system throughout the state may be mandatory in the future leads us to suggest the implementation of such a system for Lexington County in line with the desires of the county.

A recording console should be included in the communications system. The purpose of the console is to tie all radio and telephone lines which will allow all communications to be recorded for later evaluation of the system as well as protection of the patient, the ambulance service, and the county.

Base Station -- 2 Channel with Remote Unit and Mike	\$ 2,832
Remote Desk Top Console (2 @ \$810 each)	1,620
Mobile Units (9 @ \$994 each)	8,946
Antenna	300
Walkie-Talkies w/ Charger and Extra Batteries (8 @ \$760 each)	6,080
Installation (approximate)	1,200
Time Stamp	150
Recording Console	<u>8,600</u>
TOTAL	<u>\$29,728</u>

Disaster

Emergency medical transportation systems must build in a capability to handle a larger number of casualties than the normal operating system can handle. Civil defense agencies are designed to develop plans for the nuclear type disasters and are not usually responsible for primary efforts in "civilian disasters." Generally communities have not established formal plans for disasters such as plane wrecks, collapsing buildings,

explosions, etc. The emergency ambulance agency should take a leading responsibility in disaster planning when the community has no formal plan.

Insurance

The citizens, the patients, the county and the ambulance company need protection. That protection comes in the form of operating policy and controls, but where they fail and an accident occurs, indemnification is needed. The types and amounts of insurance carried are:

- . Workman's Compensation
- . Auto liability -- \$100,000-\$500,000
- . Property damage -- \$25,000-\$50,000
- . Malpractice -- \$250,000 per patient

Vehicles

There are several types of "ambulances" currently in use.

They are:

- . Limousine -- The "standard" ambulance configuration on a Cadillac, Pontiac or Oldsmobile chassis. Approximate cost:

Cadillac -- unequipped	\$15,000
Pontiac -- unequipped	\$13,000
Oldsmobile -- unequipped	\$13,000

This type of vehicle has a high original cost, high maintenance and repair cost, and can generally carry one or two patients and limited equipment. If it is configured for three or four patients, its cost is 20-25% higher. The major attraction of this unit is that it "looks good" and is comfortable. It generally has a smooth ride, but as these vehicles are built by coach builders and not auto manufacturers, this is not guaranteed.

- . Station Wagon -- A station wagon conversion is not satisfactory medically. It can carry only one patient and there is not sufficient "head room" for patients with congestive heart failure,

nor is there 25 inches of space at the patient's vortex to efficiently ventilate the patient and maintain an airway.

- . Carry-all Conversion -- This can be a very good vehicle at moderate cost, but is generally limited to one or two patients maximum capacity.
- . Modular Unit -- The original cost for these vehicles is high with a moderate to high maintenance and repair cost. They are built with a four-patient capacity. The sales feature is the "guarantee" on the Modular Body/Patient compartment which can be removed and reused by changing the cab/chassis. The interior dimensions of these vehicles exceeds all others; however, it is no more functional (patient-care wise) than the over-cab van.
- . Overcab Van Conversion -- This is our preferred emergency service vehicle. It has moderate initial cost, plenty of room for extensive equipment, and can accommodate four stretcher patients. It is not a good vehicle at high speeds (over 65 MPH), but this is a plus to us as we do not allow the speed limits to be exceeded for any reason.

Personnel

The qualifications sought in applicants for Emergency Medical Technician positions should be:

- . 21 years of age
- . high school graduate or equivalent
- . clear driving record for the last three years (no convictions for driving under the influence)
- . police record clear of felonies and/or crimes of moral turpitude
- . successful completion of physical examination
- . military medical experience (not mandatory)

- . ability to speak and handle himself well and with confidence
- . clean, neat appearance
- . desire to step into a paramedical career structure

To attract these applicants, pay, fringe benefits and work situations must be attractive. To lower wage structures would lower the effectiveness of the system. The proposed pay schedule is based on the existing standards in the Metropolitan Columbia area.

Fringe benefits should include:

- . Furnished uniforms
- . Employee/employer paid group hospitalization, group life insurance
- . Sick leave -- 12 days per year
- . Vacation -- 2 calendar weeks after the first year of employment

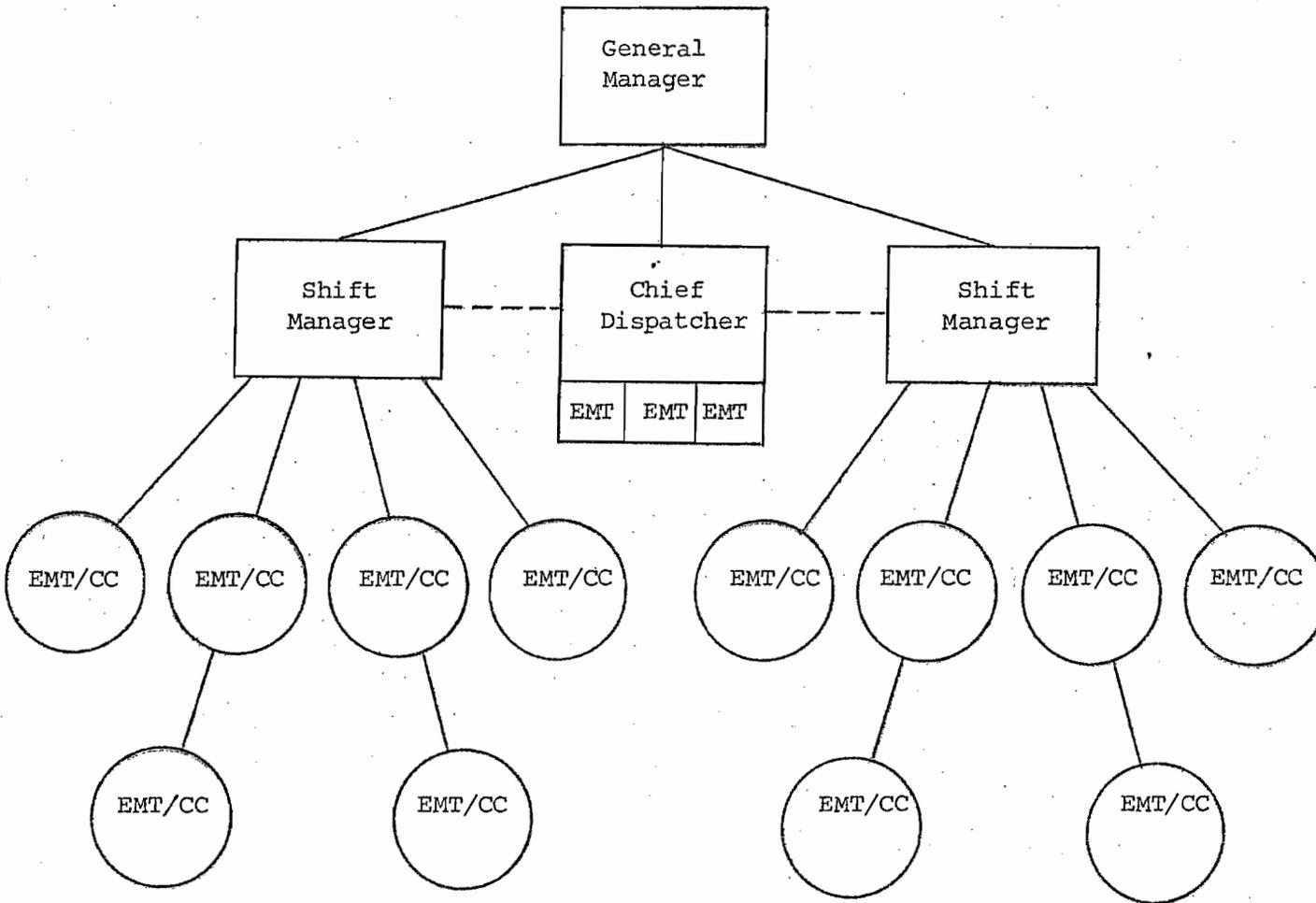
Working conditions should be attractive in that the Emergency Medical Technician will know he has:

- . good training
- . good equipment
- . reliable vehicles
- . constant review
- . clean, attractive quarters
- . comfortable schedule

The work schedule for Emergency Medical Technicians should be 24 hours on duty and 24 hours off duty. The dispatchers should work 12 hours on duty and 12 hours off duty for three consecutive days with the following three days off duty. This manning schedule can only be maintained for a maximum of one year. Then additional personnel will need to

be added to allow for vacations and sick leave without overtime pay.

The organizational structure should be:



Job descriptions for Emergency Medical Service personnel are appended.

COSTS

Some of the various cost components have been established in sections describing the particular components. However, all costs need to be developed for the service as it is to be established. The following costs are general estimates based on the number of units to be used and the resultant costs of all associated areas within such a service. These costs are estimated within Paramed's existing operating experience and are deemed sound.

The expenses listed below and on the following pages are for the operation of the proposed system including total personnel costs which were described in more detail in the Personnel portion of this document.

Expenditures are broken down as to Start-up Expenses, Capital Outlay, Administrative and Operating Personnel Costs, Operating Costs, and Total Costs.

Start-up Expenses

In order to develop a sound basic system certain "start-up" costs would be incurred prior to actual operation for the implementation of the service and the initial training period, while personnel are on the payroll. This would be the cost of the manager and secretary for two months, and all operating personnel for three weeks of intensive training.

These costs are:

	<u>4 Units</u>
1 General Manager	\$ 1,600
1 Secretary	800
2 Shift Managers	1,320
16 EMT's	6,840
4 Dispatchers/EMT's	<u>428</u>
	\$ 10,988
FICA & Unemployment	<u>900</u>
	\$ 11,888
Office, Telephone, Supplies, Equipment, & Miscellaneous	<u>1,000</u>
TOTAL START-UP EXPENSES	<u>\$ 12,888</u>

Capital Outlay

Capital outlay is composed of these original items of equipment and fixtures necessary to the establishment of the system. They include communications equipment, office equipment, vehicles, and furniture.

The communications equipment listed here is for the Motorola "Hear" System radios as recommended for state-wide use between ambulance and hospital units. The vehicles listed are to raise the capability to six on-duty units with three additional back-up units.

Communications Equipment	\$ 29,728
Office Equipment	1,400
Furniture (includes substation sleeping facilities)	<u>1,200</u>
	\$ 32,328
<u>Vehicles</u> -- 5 equipped ambulances @ \$10,500 each	<u>\$ 52,500</u>
TOTAL CAPITAL OUTLAY	<u>\$ 84,828</u>

Administrative and Operating Personnel Costs

Included in this section are personnel costs to run four and six units. In the second year, six additional men will be needed to cover for vacations, sick leave and extra scheduled time off for existing technicians. In the second and third years, five percent salary increases are added for employees.

	<u>4 Units</u>	<u>6 Units</u>
<u>Administrative & Support Personnel</u>		
1 -- General Manager	\$ 10,400	\$ 10,400
1 -- Secretary	5,200	5,200
	<u>\$ 15,600</u>	<u>\$ 15,600</u>
<u>Operating Personnel</u>		
2 -- Shift Managers (@ \$8,580)	\$ 17,160	\$ 17,160
8/12 -- Crew Chiefs/EMT's (@ \$7,774)	62,192	93,288
8/12 -- EMT's (@ \$7,410)	59,280	88,920
4 -- Dispatchers/EMT's (@ \$7,774)	31,096	31,096
	<u>\$169,728</u>	<u>\$230,464</u>
<u>Employer's Contribution & Overtime Reserve</u>		
5% Overtime Reserve--Operating Personnel	\$ 8,486	\$ 11,524
FICA & Unemployment Taxes	15,893	21,122
	<u>\$ 24,379</u>	<u>\$ 32,646</u>
 TOTAL PAYROLL COSTS FOR FIRST YEAR	 <u>\$209,707</u>	 <u>\$278,710</u>
Second year add 6 EMT's (@ \$7,410)		\$ 44,460
Add 5% salary increase from year one		<u>13,936</u>
		<u>\$ 58,396</u>
 TOTAL PAYROLL COSTS FOR SECOND YEAR		 <u>\$337,106</u>
Third year add 5% increase from year two		<u>\$ 16,855</u>
 TOTAL PAYROLL COSTS FOR THIRD YEAR		 <u>\$353,961</u>

Operating Costs

The costs included in this section are for the actual operation of the system exclusive of personnel or capital outlay.

Printing & Office Supplies -- This includes printing all forms, reports, and documents associated with ambulance operation as well as business functions, and all supplies necessary to the business office aspect of ambulance service. This figure is estimated based on actual operating experience measured against the volume of business conducted.

Postage -- This item is computed on an average expected mailing volume in relation to the average number of calls expected. Based on the current postage rates for first-class mail.

Memberships and Dues -- This includes memberships in: National Ambulance and Medical Services Association, International Rescue and First Aid Association.

Travel Expense -- Includes transportation to attend meetings related to provision of Emergency Medical Services, including the National Ambulance and Medical Services Association convention.

Telephone -- The cost estimates for telephone expense are based on current rates of the Southern Bell Telephone Company in Columbia as well as actual operating experience in this area. Estimates include foreign exchange lines to parts of the county where a toll charge might apply. The non-recurring charges (installation, etc.) are included as a part of Operating Expense.

Automotive Operating Expense -- This is computed on actual operating experience in relation to service with a fixed number of vehicles. This is the cost of actual operation of the vehicles and includes gasoline, oil, tires and miscellaneous general costs.

Machine and Service Contracts -- Includes the cost of contracts for routine service and repair of office machines, recording console, and other machines.

Machine and Equipment Repairs -- Based on actual operating experience with new vehicles under warranty. This includes cost of tune-ups, minor repairs and repairs not covered by warranty.

Building Repairs -- This item covers the routine cost of general building maintenance and repairs.

Hardware and Building Materials -- This covers the cost of general bulk items used in general building and repair as well as some replacement items used on ambulance units (i.e., screw drivers, wrenches, tool boxes used for first aid kits, etc.).

Uniforms and Clothing -- This figure is based on actual uniform and clothing costs in relation to the number of personnel employed with a per person average of \$100.

Laundry and Linen -- This cost is determined by two methods. First, using the cost of shared linen facilities with Lexington General Hospital at their current cost; second, using a basic linen inventory, either purchased or from a rental firm; and using disposable products. In arriving at a cost figure, either method approximates the same total cost. This is, in part, the result of using disposable products which have proven quite satisfactory as well as inexpensive.

Cleaning and Sanitation Supplies -- Estimate based on actual operating experience for these supplies.

Medical and Laboratory Supplies -- The estimate is based on actual operating experience, by volume of calls.

Insurance -- The estimate is for complete insurance including auto liability, property damage, malpractice and Workman's Compensation. It is based on insurance rates for ambulance services, written by an insurance underwriter who specializes in this type of coverage. There are certain performance prerequisites for insurance by this firm in order to realize their rate of charge. These prerequisites are built into the suggested option and have to do with level of service, training, personnel, and service controls.

Training -- This is based on a recurring cost to maintain a proper training program for all current personnel as well as for training new personnel added to the system.

Professional Services -- This cost is based on actual expense of completely supervising an emergency service system including documentation of system performance and reporting to the county with evaluations and recommendations for system improvements as the technology of EMS changes. Additional benefits are legal, accounting, and medical consultants familiar and experienced in Emergency Medical Services who would be retained by any qualified management firm.

Miscellaneous Cost -- Based on actual experience in relation to size of the system.

Total Costs

Below are generally estimated costs for a county owned ambulance service, developed and supervised under a Management Contract with Paramed, Inc. The costs are shown over a three-year period, with planned replacement of four ambulances during the second year of operation, and normal complement and salary increases.

First Year

Start-up Costs	\$ 12,888
Capital Outlay	84,828
*Personnel Cost	261,459
Operating Cost	<u>58,785</u>

GROSS COST TO COUNTY FIRST YEAR \$ 417,960

Second Year

Capital Outlay (replace 4 ambulances)	\$ 42,000
Personnel Cost @ 5% increase plus addition of 6 EMT's	337,106
Operating Cost @ 5% increase	<u>61,724</u>

GROSS COST TO COUNTY SECOND YEAR \$ 440,830

Third Year

Personnel Cost @ 5% increase	\$ 353,961
Operating Cost @ 5% increase	<u>64,810</u>

GROSS COST TO COUNTY THIRD YEAR \$ 418,771

ESTIMATED AVERAGE GROSS COST
PER YEAR FOR THREE YEARS \$ 425,854

*Based on 3 months with 4 operating units and 9 months with 6 operating units at an average cost per month of \$17,476 and \$23,226 respectively.

Operating Expense

Printing and Office Supplies	\$ 1,200
Postage	500
Memberships and Dues	185
Travel Expense	500
Telephone	4,600
Automotive Operating Expense	9,400
Machine and Service Contracts	200
Machine and Equipment Repairs	300
Building Repairs	300
Hardware and Building Materials	400
Uniforms and Clothing	2,700
Laundry and Linen	1,800
Cleaning and Sanitation Supplies	200
Medical and Laboratory Supplies	2,000
Insurance	17,000
Training	3,500
Professional Services	12,000
Miscellaneous Costs	2,000
	<u>\$ 58,785</u>

SUMMARY

As can be readily seen, the cost of good Emergency Medical Service is not low, and all needed facts are not now available. However, enough information is available for the county to implement a short-range goal of having its own EMS system. This system could be readily expanded into a six-car professional system dovetailing with existing rescue squads to give greater coverage than is now enjoyed by all citizens. But without a study, the county has no way of knowing what the exact quality and quantity of the service will be. It will provide a solution without knowing the full particulars of the problem being solved.

Other options open to the county would be to implement the short-range goal (i.e., county-wide, county-owned system) and have its own study performed prior to full implementation, or waiting for the Central Midlands Regional Planning Council's study to be performed prior to final implementation.

Paramed, Inc., as stated before, would be willing to assist the county in meeting its desires in either mode, providing the desired system would meet the basic standards of service and ethics to which Paramed subscribes, and we believe that either of the suggested methods of development would do that.

Should Paramed be chosen as the contract operator of Lexington County Emergency Medical Services, we would wish to do so under a contract similar to the Management Contract sample appended, or any other mutually agreeable contract. The fee for our services would be \$12,000 per year.

Also appended are brief descriptions of services provided by Paramed for other counties and brief biographical sketches of some of those involved in Paramed's management.

COURSE AND LESSON OBJECTIVES

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COURSE AND LESSON OBJECTIVES

Course Objectives

To teach students the overall role and responsibilities of the Emergency Medical Technician in performing both the emergency care and operational aspects of his job.

To develop student skill in diagnosis and all emergency treatment procedures short of those rendered by physicians or by paramedical personnel under the direct supervision of a physician.

To develop student skill in the use of and care for all equipment required to accomplish his job.

Lesson Objectives

The total course consists of 25 lessons and 10 hours of in-hospital observation and training and requires a total of 81 hours. Lesson titles, objectives and times are as follows:

1. The Emergency Medical Technician (EMT) -- His Role, Responsibilities and Equipment. 3 hours

Inform the student of:

- . Course objectives
- . Scope
- . Procedures
- . Requirements for satisfactory completion

Provide an overview of the roles and responsibilities of the EMT:

- . Prompt and efficient care of the patient
- . Control of the accident scene
- . Light extrication and preparation of the patient for transport
- . Safe and efficient transport
- . Orderly transfer of the patient and patient information to the hospital emergency department
- . Communications
- . Reporting and record keeping
- . Vehicle and equipment care

Explain legal aspects relating to emergency care.

Familiarize the student with the ambulance and its equipment.

Provide an overview of anatomy and physiology.

2. Airway Obstruction and Pulmonary Arrest 3 hours

Develop a basic understanding of:

- . Mechanics of respiration
- . Importance of oxygen to body functioning
- . Signs of airway obstruction
- . Manual techniques of airway care
- . Manual techniques of pulmonary resuscitation
- . Anatomy of laryngectomy and tracheostomy patients
- . Resuscitation of laryngectomy and tracheostomy patients

Teach the following skills:

- . Manual techniques of airway care
- . Mouth-to-mouth (nose) technique of pulmonary resuscitation
- . Chest-pressure arm lift (Sylvester) method of pulmonary resuscitation
- . Back-pressure arm lift (Holger-Neilson) method of pulmonary resuscitation

3. Mechanical Aids to Breathing and Pulmonary Resuscitation 3 hours

Develop a working knowledge of operation and use of:

- . Mechanical aids to breathing
- . Mechanical aids to pulmonary resuscitation

Teach the following skills:

- . Use of two-way (S-shaped) airways
- . Use of bag-mask resuscitator
- . Use of oropharyngeal airways
- . Use of suction unit
- . Use of oxygen equipment

4. Cardiac Arrest. 3 hours

Develop a basic understanding of:

- . Mechanics of circulation
- . Importance of oxygen to body functioning
- . Technique of determining blood pressure
- . Signs of cardiac arrest
- . Technique of cardiopulmonary resuscitation
- . Dangers to the patient if cardiopulmonary resuscitation is delayed or performed incorrectly

Teach the following skills:

- . Cardiopulmonary resuscitation by a lone rescuer
- . Cardiopulmonary resuscitation by a team of rescuers
- . Determination of blood pressure

5. Bleeding, Shock and Practice on Airway Care, Pulmonary Resuscitation and Cardiopulmonary Resuscitation 3 hours

Develop a basic understanding of:

- . Mechanics of circulation
- . Signs of external bleeding: artery, vein, capillary
- . Signs of internal bleeding
- . Signs of shock
- . Use of pressure dressings to control bleeding
- . Use of pressure points to control bleeding
- . Use of inflatable splints to control bleeding
- . Dangers and use of tourniquets in controlling bleeding
- . Importance of preventing shock and techniques of caring for the patient in shock
- . Intravenous therapy

Teach the following skills:

- . Location of carotid, temporal, femoral, brachial and radial arteries
- . Control of bleeding by a pressure dressing
- . Application of inflatable splints to arm and leg

Provide additional practice in:

- . Airway care
- . Pulmonary resuscitation
- . Cardiopulmonary resuscitation
- . Determination of blood pressure

6. Practice, Test and Evaluation -- Airway Care, Pulmonary Arrest, Cardiac Arrest, Bleeding and Shock. 3 hours

Test basic knowledges and skills associated with:

- . Airway care
- . Pulmonary arrest
- . Cardiac arrest
- . Bleeding
- . Shock

Provide practice and evaluate the following skills:

- . Use of suction equipment
- . Use of oxygen equipment

- . Pulmonary resuscitation using the bag-mask resuscitator
- . Cardiopulmonary resuscitation by a single rescuer
- . Cardiopulmonary resuscitation by a team of rescuers
- . Determination of blood pressure

7. Wounds. 3 hours

Develop the following knowledges:

- . Signs and significance of various wound types
- . Causes and danger of infection in open wounds
- . Basic care of wounds
- . Techniques of dressing and bandaging wounds

Develop skill in dressing and bandaging the following body parts:

- . Extremities
- . Forehead and scalp
- . Neck
- . Shoulder
- . Hip

8. Fractures of the Upper Extremity. 3 hours

Develop a basic understanding of the following:

- . Parts and functions of the musculo-skeletal system
- . General concepts of fractures and dislocations
- . Types of splints and general rules for splinting
- . Signs and symptoms of fractures, dislocations and sprains
- . Techniques of immobilizing fractures and dislocations of the upper extremity

Develop skill in immobilizing and splinting fractures and dislocations of the upper extremity.

9. Fractures of the Lower Extremity. 2 hours, 30 mi

Develop a basic understanding of the following:

- . Signs and symptoms of fractures and dislocations of the lower extremity
- . Techniques of immobilizing fractures and dislocations of the lower extremity

Develop skill in immobilizing fractures of the lower extremity.

10. Injuries of the Head, Face, Neck and Spine. 3 hours

Develop a basic understanding of the following:

- . Elements and functions of the nervous system
- . Signs and symptoms of a spinal fracture

- . General rules of caring for patients with spinal injuries
- . Signs of a skull fracture
- . Techniques of caring for the patient suffering from injuries to the skull and brain
- . Techniques of caring for the patient suffering from injuries to the head, face and neck
- . Techniques of bandaging the skull, cheek, ear, and jaw

Develop skills in dressing and bandaging the following injuries:

- . Skull fracture
- . Lacerated cheek
- . Avulsed ear
- . Fractured jaw

Develop skill in immobilizing a fractured neck.

11. Injuries to the Eye, Chest, Abdomen, Pelvis, Genitalia. . . . 3 hours

Develop a basic understanding of the following:

- . Parts and functions of the abdomen, digestive system and genito urinary system
- . Types of injuries to the eye, chest, abdomen, pelvis and genitalia
- . Techniques of care for injuries to the eye, chest, abdomen, pelvis and genitalia

Develop skills in dressing and bandaging the following:

- . Eye, with and without a protruding object
- . Sucking chest wound with or without rib fracture

12. Practice, Test and Evaluation -- Injuries I 3 hours

Test basic knowledges and skills associated with injuries to various body parts.

Provide practice on and evaluate skills in dressing and bandaging various body parts.

13. Practice, Test and Evaluation -- Injuries II. 3 hours

Provide practice on and evaluate skills in immobilizing fractures of the:

- . Upper extremity
- . Lower extremity
- . Ribs
- . Neck

14. Medical Emergencies -- I. 3 hours

Develop a basic understanding of the causes, signs, symptoms and techniques of care of:

- . Poison victims
- . Victims of bites and stings
- . Heart attack patients
- . Stroke patients
- . Asthmatic patients

Provide additional practice in administering:

- . Oxygen
- . Cardiopulmonary resuscitation

15. Medical Emergencies -- II 2 hours

Develop a basic understanding of causes, signs, symptoms and techniques of care of:

- . Diabetic patients
- . Patients suffering from acute abdominal problems
- . Patients with communicable diseases
- . Emotionally disturbed and unruly patients, including alcoholics and patients in a drug stupor
- . Epileptic patients
- . Unconscious patients

16. Childbirth and Problems of Child Patients 3 hours

Develop a basic understanding of the following:

- . Parts of the female anatomy involved in childbirth
- . Parts developing during pregnancy
- . Obstetrical terms and their meanings
- . Equipment and supplies used during emergency childbirth
- . Emergency care procedures for various phases and conditions associated with pregnancy and childbirth
- . Delivery and care of baby during normal and abnormal births
- . Clamping and cutting umbilical cord
- . Use of special carrier for premature babies
- . Resuscitation of infant
- . Procedures for caring for certain childhood problems

17. Lifting and Moving Patients 3 hours

Develop a basic understanding of the following:

- . Principles of moving and positioning patients for transportation

- . Techniques of moving patients from a bed- or floor-height surface to a stretcher
- . Techniques of moving patients with suspected spinal injuries and immobilizing them on a backboard
- . Technique of moving stretchers around narrow corners and down stairways
- . Loading stretchers on ambulances, securing them in place and unloading them

Teach the following skills:

- . Two-man lifts from a bed- or floor-height surface to a stretcher
- . Immobilizing patient with spinal injuries on backboard
- . Loading and unloading stretchers

18. Practice, Test and Evaluation -- Medical Emergencies, Emergency Childbirth, Lifting and Moving. 3 hours

Test basic knowledges and skills associated with:

- . Poisoning
- . Bites and stings
- . Heart attack
- . Stroke
- . Asthmatic states
- . Diabetes
- . Acute abdomen
- . Transporting patients with communicable diseases
- . The emotionally disturbed and unruly
- . Epilepsy
- . The unconscious state
- . Emergency childbirth
- . Lifting and moving patients

Provide practice on and evaluate the following skills:

- . Two-man lifts from a bed- or floor-height surface to a stretcher
- . Immobilizing patients with special injuries on backboards
- . Cardiopulmonary resuscitation by a lone rescuer
- . Cardiopulmonary resuscitation by a member of a team using the bag-mask resuscitator

19. Environmental Emergencies 2 hours, 30 m

Develop a basic understanding of the following:

- . Estimation of severity of burn
- . Techniques of care for the burned patient

- Special dangers of different types of burns-- heat, chemical, electrical, radiation
- Signs, symptoms and techniques for the patient suffering from heat, sunburns, heat exhaustion, heat stroke and heat cramps, heat fatigue
- Techniques of rescuing and carrying the person
- Techniques of rescuing and carrying the victim diving
- Signs, symptoms and techniques for the patient suffering from air embolism, squamous injuries, carbon monoxide poisoning
- Methods of extinguishing fires of explosives

20. Extrication: Automobiles 3 hours

Develop a basic understanding of principles and considerations involved in extricating victims from automobiles

Teach the following skill

- Techniques of removing patients suspected of spinal injuries from automobiles
- Techniques of removing victims from beneath automobiles

21. Operations -- Driving an Emergency Vehicle, Maintaining a Safe and Ready Vehicle, Inspections and Procedures, Communications and Procedures at Hospital Emergency Rooms 3 hours

Develop a basic understanding of the following:

- Laws relating to operating an emergency vehicle
- When and how to use emergency privileges
- Procedures for daily inspections of vehicle systems and equipment and inspections to be made after each shift
- Information obtained from records of EMT's
- Importance of communications and coordination
- Procedures at hospital emergency

22. Responding to an Ambulance Call 2 hours, 30 mi.

Develop a basic understanding of the duties and responsibilities of the EMT during the various phases of an ambulance run:

- Preplanning considerations while driving to the scene

- . Considerations in analyzing the situation upon arrival at the scene
- . Procedures for examining patients
- . Triage procedures
- . Considerations during loading and transport

Teach the following skill:

- . Systematic procedures for examining patients

23. Situational Review. 3 hours

Provide an opportunity for integration and review of course contents by group discussion of situational examples.

24. Final Written Test. 2 hours

Test major knowledges taught in the emergency care course.

25. Final Practical Evaluation of Skills. 3 hours

Evaluate student demonstration of the following skills:

- . Setting up, adjusting and closing down oxygen equipment
- . Bandaging the head, eye and extremity
- . Cardiopulmonary resuscitation alone and as a member of a team
- . Use of the bag-mask resuscitator
- . Performing an examination for life-threatening problems and a systematic check of injuries
- . Splinting a fracture of the upper extremity
- . Splinting a fracture of the femur
- . Lifting and moving patients from bed- or floor-height surfaces and positioning them on a stretcher
- . Immobilization of the neck and torso of a sitting patient on a short backboard
- . Moving a patient with a suspected cervical spine injury from the floor and immobilizing him on a long backboard
- . Determining blood pressure

Detailed plans for conducting each of the lessons, as well as guidance for testing and evaluating students, are included in the Instructor's Lesson Plans.

CAROLINA AMBULANCE, INC.

POST OFFICE BOX 1327
COLUMBIA, SOUTH CAROLINA
29202

779-4490

779-4492

CALL ORIGINATOR CODE

CODE

AGENCY

CALL NUMBER

CALL DATE

DISPATCH FROM CODE

GROUP

NO.

MO.

DAY

YR.

PATIENT'S NAME:

AGE SEX Race

FROM:

TO:

PATIENT'S HOME ADDRESS:

PHONE NO.:

PATIENT'S EMPLOYER:

PHONE NO.:

RESPONSIBLE PARTY:

RELATIONSHIP:

HOME ADDRESS:

PHONE NO.:

EMPLOYER:

PHONE NO.:

PATIENT'S PHYSICIAN:

DIRECT

LAWYER

INSUR.

MEDICARE

WELFARE

MILITARY

V. A.

OTHER

01

02

03

04

05

06

07

08

TIME OF CALL

1st 10-7

2nd 10-7

OUT CODE

IN CODE

SIGNAL

UNIT NO.

NO. OF PATIENTS

CNTY. CODE

PATIENT'S CONDITION

AM
PM

AMOUNT OF CALL: Base Charge

\$

OTHER CHARGES: Miles

At

Per Mile

+

\$

Total Call Amounts.

=

\$

*

AMOUNT PAID: Receipt No.

-

\$

AMOUNT CHARGED: Net Amount Due

=

\$

*

CREW CHIEF

NO.

NO.

EMT:

EMT:

NEAREST RELATIVE OR NEIGHBOR:

PHONE NO.:

ADDRESS:

RELATIONSHIP:

REMARKS

TERMS: Cash at time of service. In your case credit is being extended as a special courtesy to you.

AGREEMENT: I owe CAROLINA AMBULANCE a balance of \$ _____, and

I agree to pay this balance in full on or before _____.

SIGNED _____

WITNESS _____

(SEE OTHER SIDE FOR RELEASE FROM TRANSPORTATION)

RECEIPT OF CALL

ORIGINATOR

Highway Patrol

Family _____ phone number

Police Department _____ specify

Citizen _____ phone number

Sheriff _____ specify

Hospital _____ specify

Fire Department _____ specify

Other _____ specify

AGENCY CODES FOR EMS COMMUNICATIONS
CENTER CHECK SHEET

HOSPITAL

<u>NAME</u>	<u>CODE</u>
Richland Memorial	01
Baptist	02
Providence	03
V. A.	04
Fort Jackson	05
Lexington	06
Other	07

SHERIFF'S DEPARTMENT:

<u>COUNTY</u>	<u>CODE</u>
Richland	10
Lexington	20

POLICE AND FIRE DEPARTMENTS:

<u>MUNICIPALITY</u>	<u>CODE</u>
Arcadia Lakes	1A
Boyden Arbor	1B
Columbia	1C
Eastover	1D
Forest Acres	1E
Forest Lake	1F
Batesburg	2A
Cayce	2B
Chapin	2C
Gilbert	2D
Irmo	2E
Leesville	2F
Lexington	2G
Pelion	2H
Pine Ridge	2I
South Congaree	2J
Spring Dale	2K
Summit	2L
Swansea	2M
West Columbia	2N

DISPATCHED FROM CODES

1	Base	6	
2	Headquarters	7	Metropolitan Airport
3	St. Andrews	8	Swansea
4	Bluff Road	9	Batesburg
5		0	From Another Call

IN MY BEST JUDGEMENT, I DO NOT FEEL AS THOUGH I NEED THE SERVICES OF CAROLINA AMBULANCE, INC., AND THEREFORE ELECT NOT TO BE TRANSPORTED
MY DECISION SHALL STAND AS A RELEASE FROM ANY SERVICE CHARGE BY CAROLINA AMBULANCE, INC., ON THIS CALL.

PATIENT SIGNATURE _____

EMT CREW CHIEF _____ EMT _____

COMMUNICATIONS CENTER CHECK SHEET Emergency Medical Service, Columbia, S. C. CAROLINA AMBULANCE	GRP. No.	Mo. Day Yr.
CALL NUMBER	DATE	

1	RECEIPT OF CALL
ORIGINATOR	1 <input type="checkbox"/> Highway Patrol 2 <input type="checkbox"/> Police Department _____ Specify 3 <input type="checkbox"/> Sheriff _____ Specify 4 <input type="checkbox"/> Fire Department _____ Specify 5 <input type="checkbox"/> Family _____ Phone Number 6 <input type="checkbox"/> Citizen _____ Phone Number 7 <input type="checkbox"/> Hospital _____ Specify 8 <input type="checkbox"/> Other _____ Specify

8	TIME RESPONSE (DATA)
Time Call Received	
Time Enroute	
Time Arrival Scene	
Time Depart Scene	
Time Arrival At Destination	
Time Ready For Service	

2	NATURE																				
	1 <input type="checkbox"/> Vehicle Accident 2 <input type="checkbox"/> Other _____ Signal Originator's estimate of patient's involved 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 to 10 <input type="checkbox"/> 10 or more <input type="checkbox"/> (6) (7) specify _____																				
3	LOCATION																				
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; height: 20px;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="height: 20px;"></td> <td style="text-align: center;">GRID</td> <td style="text-align: center;">PAGE</td> <td colspan="2" style="text-align: center;">COUNTY</td> </tr> </table>																	GRID	PAGE	COUNTY	
	GRID	PAGE	COUNTY																		

4	DISPATCH OF AMBULANCE	Crew:
	1 <input type="checkbox"/> Normal 2 <input type="checkbox"/> Urgent 3 <input type="checkbox"/> Emergency 4 <input type="checkbox"/> Dispatch Request (emer.)	Unit No:
NOTIFICATION OF OTHER AGENCY		From Code:
	1 <input type="checkbox"/> Highway Patrol 2 <input type="checkbox"/> Police Department _____ Specify 3 <input type="checkbox"/> Sheriff _____ Specify 4 <input type="checkbox"/> Fire Department 5 <input type="checkbox"/> Other _____ Specify	

5	ARRIVAL AT SCENE
	1 <input type="checkbox"/> False Call 2 <input type="checkbox"/> Cancelled 3 <input type="checkbox"/> No Transport 4 <input type="checkbox"/> D.O.A. 5 <input type="checkbox"/> Patient Transported Number of patients requiring care and transportation 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 to 10 <input type="checkbox"/> 11 or more <input type="checkbox"/> (6) (7) specify _____

6	DEPARTURE FROM SCENE
	1 <input type="checkbox"/> Normal 2 <input type="checkbox"/> Urgent 3 <input type="checkbox"/> Emergency 4 <input type="checkbox"/> Dispatch Request (emer.) Number of Patients Transported in this unit: _____
	1 <input type="checkbox"/> Richland Mem. 2 <input type="checkbox"/> Baptist 3 <input type="checkbox"/> Providence 4 <input type="checkbox"/> Vet. Admin. 5 <input type="checkbox"/> Fort Jackson 6 <input type="checkbox"/> Lexington 7 <input type="checkbox"/> Other _____ specify [1 <input type="checkbox"/> Approved]
	Notification of Hospital E. R. 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No Information Provided 1 <input type="checkbox"/> Type of Injury or Illness 2 <input type="checkbox"/> Est. Time of Arrival at E. R. 3 <input type="checkbox"/> Severity 4 <input type="checkbox"/> Other _____ specify
	By Whom 1 <input type="checkbox"/> Dispatch 2 <input type="checkbox"/> Ambulance

Amount	
Other	
Total	
Paid	
Charged	
9	Dispatcher
10	Reviewer

7	REMARKS -- Patient's condition--	--use appropriate signal

RECEIPT OF CALL

ORIGINATOR

1 <input type="checkbox"/> Highway Patrol	5 <input type="checkbox"/> Family _____ phone number
2 <input type="checkbox"/> Police Department _____ specify	6 <input type="checkbox"/> Citizen _____ phone number
3 <input type="checkbox"/> Sheriff _____ specify	7 <input type="checkbox"/> Hospital _____ specify
4 <input type="checkbox"/> Fire Department _____ specify	8 <input type="checkbox"/> Other _____ specify

AGENCY CODES FOR EMS COMMUNICATIONS
CENTER CHECK SHEET

HOSPITAL

<u>NAME</u>	<u>CODE</u>
Richland Memorial	01
Baptist	02
Providence	03
V. A.	04
Fort Jackson	05
Lexington	06
Other	07

SHERIFF'S DEPARTMENT:

<u>COUNTY</u>	<u>CODE</u>
Richland	10
Lexington	20

POLICE AND FIRE DEPARTMENTS:

<u>MUNICIPALITY</u>	<u>CODE</u>
Arcadia Lakes	1A
Boyden Arbor	1B
Columbia	1C
Eastover	1D
Forest Acres	1E
Forest Lake	1F
Batesburg	2A
Cayce	2B
Chapin	2C
Gilbert	2D
Irmo	2E
Leesville	2F
Lexington	2G
Pelion	2H
Pine Ridge	2I
South Congaree	2J
Spring Dale	2K
Summit	2L
Swansea	2M
West Columbia	2N

DISPATCHED FROM CODES

1	Base	6	
2	Headquarters	7	Metropolitan Airport
3	Andrews	8	Swansea
4	Bluff Road	9	Batesburg
5		0	From Another Call

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JOB DESCRIPTIONS

Ambulance Service General Manager

Nature of Work

This is responsible administrative work in directing all phases of providing emergency ambulance service to a defined area.

The employee of this class is responsible for directing all activities embodied in providing ambulance services. Though policies are set by a governing Board of Directors, the employee is expected to develop work procedures, prepare rules and regulations, and any changes in administrative practices for discussion, consideration and subsequent approval by the Board of Directors. Once these are approved and adopted, the employee enjoys considerable latitude in working within that framework. However, he is held accountable for the efficient and proper administration of the program. Supervision is exercised over subordinate personnel of various levels. Work is subject to review through periodic and special conferences held with superiors, through reports submitted, and observation of results obtained.

Illustrative Examples of Work

Plans, organizes, assigns, directs and coordinates his own work as well as the work of subordinates who are engaged in providing total emergency ambulance services.

Prepares budgetary estimates; exercises budgetary control over approved budget; recommends to Board of Directors the employment

and separation of personnel; enforces standards of dress and appearance of ambulance crews.

Arranges classes and instructors to train subordinate personnel in how to attend to emergency cases, to provide first aid, immediate patient evaluation and care, and other related subject matter; coordinates training courses, and oversees keeping of proper records related to training and testing.

Oversees all office work relating to records, collections, and personnel attendance; payroll time records and preparing payroll and payroll reports; ascertains that ambulance units are in proper running order, fully equipped, and serviced as per schedule.

Supervises all office work to assure adequate administrative controls, records, equipment and supplies are available.

Performs related work as required.

Desirable Knowledges, Abilities and Skills

Thorough knowledge of modern office practices and office equipment. Thorough knowledge of the governing procedures, rules, regulations and policies.

Thorough knowledge of the operational and maintenance requirements of the various types of apparatus and equipment used in ambulance services.

Thorough knowledge of training and testing materials, methods and techniques.

Thorough knowledge of first aid principles and skill in their applications.

Thorough knowledge of advanced training programs for
Emergency Medical Technicians.

Thorough knowledge of personnel management, personnel
motivation and leadership principles.

Considerable knowledge of the geography of the area, street
names and numbers.

Considerable knowledge of organizational and administrative
theory, principles and practices.

Working knowledge of bookkeeping, business management, and
accounting principles.

Considerable knowledge of the structure and programs of the
various civic and other local organizations which have or could have
working relationships with the ambulance service.

Ability to plan, organize, direct, and coordinate his own
work as well as the work of subordinate personnel engaged in providing
total emergency ambulance services.

Ability to prepare and submit clear and concise reports
orally and in writing.

Ability to plan and coordinate a personnel development
program.

Ability to establish and maintain effective working relation-
ships with the Board of Directors, the medical community, subordinates, and
the public.

Desirable Experience and Training

Considerable experience in administrative positions affording
experience in a supervisory capacity or extensive experience as a Shift

Manager in providing emergency ambulance services; extensive experience as a military medic; preferable include supervisory experience; graduation from a standard high school; or equivalent combination of experience and training.

Assistant Manager Ambulance Service

Nature of Work

This is responsible administrative work in assisting superior to provide satisfactory emergency ambulance services to citizens of a defined area.

The employee of this class is responsible for assisting a superior with his administrative duties and performing a variety of tasks independently in assuring that the emergency ambulance service program fulfills the needs of the area to be served. The employee works within the framework of established rules, regulations, and policies, but he is expected to exercise initiative and judgment in attending to the non-recurring problems. Work also involves supervising Shift Managers and acting as duty officer on a 24-hour basis. Work is subject to review through conferences, reports submitted, and observation of results obtained.

Illustrative Examples of Work

Assists in supervising or supervises the operation of emergency medical service; reviews all communication system data, emergency care, cardiopulmonary resuscitation reports, emergency run reports and tachograph data recording charts, prepared and submitted by subordinate staff for completeness and adherence to accepted practices, standards, and policies; plans and schedules work duty rosters, vacations, extra duty assignments and evaluate personnel performance.

Schedules training courses for subordinate personnel; participated in formulating course content; conducts training drills and conducts tests and evaluates results.

As required, responds with necessary equipment to persons needing emergency medical assistance.

Reviews all submitted reports covering subject matters as trip tickets, réceipts, daily business figures; makes bank deposits; establishes and maintains contacts with insurance companies, medicare offices, medicaid, attorneys and United States armed forces as means of acquiring third-party payments; supervises billing of those agencies.

Performs related work as required.

Desirable Knowledges, Abilities and Skills

Thorough knowledge of personnel management, personnel motivation and leadership principles.

Considerable knowledge of modern office practices and office equipment.

Considerable knowledge of first aid principles and skill in their application.

Considerable knowledge of the governing rules, regulations, procedures, and policies.

Considerable knowledge of the geography of the area, street names, and numbers.

Considerable knowledge of the operational maintenance requirements of the various types of apparatus and equipment used in ambulance services.

Considerable knowledge of training and testing materials, methods and techniques.

Considerable knowledge of advanced training programs for Emergency Medical Technicians.

Knowledge of the structure and programs of the various civic and other local organizations which have or could have working relationships with the emergency ambulance service.

Some knowledge of bookkeeping, business management and accounting principles.

Some knowledge of organizational theory, principles, and practices.

Ability to plan, organize, assign, supervise, and coordinate his own work as well as the work of subordinate personnel engaged in providing emergency ambulance services.

Ability to instruct others and to instill interest, loyalty, and dedication to their work.

Ability to analyze situations quickly and correctly and to adopt effective courses of action.

Ability to prepare and submit clear and concise reports orally and in writing.

Ability to establish and maintain effective working relationships with superiors, other employees and the public.

Skill in the use and care of emergency medical apparatus and equipment.

Desirable Experience and Training

Considerable experience as a Shift Manager in an emergency ambulance or related service; considerable experience as a military medic including progressively responsible supervisory experience; graduation from a standard high school; or any equivalent combination of experience and training.

Desirable Cross Training

Should be occasionally exposed to selected points of responsibility on a General Manager level to exercise cross training in preparation for promotional opportunities.

Ambulance Service Shift Manager

Nature of Work

This is highly responsible supervisory work in attending to the provision of emergency ambulance services on a shift basis.

The employee of this class is responsible for performing limited administrative duties and supervising subordinated personnel who are engaged in driving ambulance units in attending to persons needing emergency service. Emphasis of this class of work is upon providing efficient evaluation, immediate patient care, and safe transportation of persons to and from hospital, nursing homes, and other locations where immediate medical attention is available. Work is performed in accordance with established rules, regulations, and policies, but the employee is expected to exercise considerable initiative and judgment in attending to unusual cases and problems. General supervision is received from a superior, and work is subject to review through conferences reports submitted, and evaluation of results achieved.

Illustrative Examples of Work

Upon reporting for work, ascertains that all ambulance units and personnel are ready and able to provide emergency services; assigns crew members to various duties as workload requires; supervises cleaning of building and grounds.

Performs such routine administrative tasks as preparing shift reports, reviewing ambulance units trip tickets, and attending to telephone calls regarding service, charges, and complaints; makes maintenance appointments for any unit needing attention.

Makes arrangements for crews to attend daily training sessions; rides as observer on units to observe conduct and work methods of ambulance crews.

Performs related work as required.

Desirable Knowledges, Abilities, and Skills

Considerable knowledge of personnel management, personnel motivation, and leadership principles.

Considerable knowledge of the geography of the area served, street numbers, and names.

Considerable knowledge of first aid, principles and skill in their application.

Considerable knowledge of advanced training programs for Emergency Medical Technicians.

Knowledge of modern office practices.

Knowledge of the governing rules, regulations, and policies.

Knowledge of the operation and maintenance requirements of the various types of apparatus and equipment used in the emergency ambulance service.

Some knowledge of bookkeeping, business management, and accounting principles.

Ability to supervise crews in the effective use of apparatus and equipment.

Ability to analyze situations quickly and correctly, and to adopt effective courses of action.

Ability to prepare and submit clear and concise reports orally and in writing.

Skill in the use and care of emergency medical apparatus and equipment.

Desirable Experience and Training

Considerable experience as a crew member of an emergency ambulance service; experience as a military medic; graduation from a standard high school, or any equivalent combination of experience and training.

Desirable Cross Training

Should be occasionally exposed to selected points of responsibility on an Assistant Manager level to exercise cross training in preparation for promotional opportunities.

Emergency Medical Technician -- Ambulance*

Work Requirements

Responds to emergency calls to provide efficient and immediate care to the critically ill and injured, and transports the patient to a medical facility.

After receiving the call from the dispatcher, drives ambulance to address or location given, using the most expeditious route depending on traffic and weather conditions. Observes traffic ordinances and regulations concerning emergency vehicle operation.

Upon arrival at the scene of accident or illness, parks the ambulance in a safe location to avoid an accident. In the absence of police, enlists the assistance of persons available to create a safe traffic environment, such as the placement of road flares, removal of debris, and redirection of traffic for the protection of the injured and those assisting in the care of the injured.

Determines the nature and extent of illness or injury and establishes priority for required emergency care. Renders emergency care, such as opening and maintaining an airway, giving positive pressure ventilation, cardiac resuscitation, controlling of hemorrhage, treatment of shock, immobilization of fractures, bandaging, assisting in childbirth, management of mentally disturbed patients, and initial care of poison and burn patients. Administers drugs, including intravenous fluids, as directed by a physician.

Reassures patients and bystanders by working in a confident, efficient manner. Avoids mishandling and undue haste while working expeditiously. Searches for medical identification emblem as a clue in providing emergency care.

Where patients must be extricated from entrapment, assesses the extent of injury and gives all possible emergency care and protection to the entrapped patient and uses the prescribed techniques and appliances for removing the patient safely. Radios the dispatcher for additional help or special rescue and/or utility services, if needed. Provides light rescue service if the ambulance has not been accompanied by a specialized unit. After extrication, provides additional care in sorting of the injured in accordance with standard emergency procedures.

Complies with regulations on handling of the deceased, notifies authorities, and arranges for protection of property and evidence at scene.

Assists in lifting stretcher, placing in ambulance and seeing that patient and stretcher are secured and that emergency care, if necessary, is continued.

From the knowledge of the condition of the patient and the extent of injuries and the relative locations and staffing of emergency hospital facilities, determines the most appropriate facility to which the patient will be transported, unless otherwise directed by the dispatcher or a physician. Reports directly to the emergency department or control center the nature and extent of injuries, the number being transported, and the destination to assure prompt medical care on delivery. For serious cases, may ask for additional advice from the hospital physician or emergency department.

Constantly observes patient enroute to emergency facility, administers additional care as indicated or directed by physician.

Identifies diagnostic signs which may require radio communications with a medical facility for advice and for notification that

special professional services and assistance be immediately available upon arrival at the medical facility.

Assists in lifting and carrying the patient out of the ambulance and into the emergency department.

Reports verbally and in writing his observation and care of patient, at the emergency scene and in transit, to the emergency department staff for record and diagnostic purposes. Upon request, provides assistance to the emergency department staff.

After each trip, replaces used linens, blankets and other supplies, sends supplies for sterilization, makes careful check of all equipment so that the ambulance is ready for the next run. Maintains ambulance in efficient operating condition. Cleans and washes ambulance and keeps it neat and in an orderly condition. In accordance with local or state regulations, decontaminates the interior of the vehicle after transport of victim with contagious infection or radiation exposure. Determines that vehicle is in proper operating condition by checking gas, oil, water in battery and radiator, and tire pressure. Maintains familiarity with specialized equipment items used by the ambulance service.

NOTE: Seniority and responsibility should be determined by the one responsible for employment and surveillance of personnel. Attendants and drivers should be equally trained in each other's duties and responsibilities so that they may function inter-changeably or independently in caring for multiple casualties.

Education, Training and Experience

A high school education or equivalency qualification is considered minimal. Must be 18 years of age or older.

Training shall be that required by the appropriate government entity.

Has practical experience in the care and use of emergency equipment commonly accepted and employed, such as suction machines, oxygen delivery systems (installed and portable), backboards, fracture kits, emergency medical care kits, obstetrical kits, intravenous kits, stretchers of various types, light rescue tools, and basic automobile mechanics. Has a basic understanding of sanitizing and disinfecting procedures. Has knowledge of safety and security measures.

Acquires a thorough knowledge of the territory within his service area, and the traffic ordinances and laws concerning the emergency care and transportation of the sick and injured. Has necessary driver and professional licenses as required by law.

Aptitudes

Motor coordination in administering emergency care of the critically ill and injured, in lifting and carrying patients, and in driving the ambulance.

Manual dexterity and physical coordination in carrying, lifting, extricating, climbing, hoisting, and other similar maneuvers in a manner not detrimental to the patient, fellow workers, or self.

Facility to give and receive verbal and written directions and instruction.

Interests and Temperaments

A pleasant personality; leadership ability -- firm, yet courteous; good judgment under stress; clean and neat in appearance; good moral character; emotional stability and psychological adaptability.

Physical Demands

Normal good health.

Ability to lift and carry up to 100 pounds.

Visual color discrimination in examining patients and determining by appearance diagnostic signs that require immediate detection and proper action, as well as to distinguish traffic signs and lights.

Both far and near visual acuity necessary for driving and for examining the patient (correction by lenses permitted).

*As presented by the Committee on Emergency Medical Services, National Academy of Sciences-National Research Council, Washington, D.C., July, 1970, in their report to the National Highway Safety Bureau of the Federal Highway Administration, U. S. Department of Transportation, under Contract No. DOT-OS-00035, Task Order 6.

MANAGEMENT CONTRACT

S A M P L E C O P Y

STATE OF _____)

COUNTY OF _____)

RE: AGREEMENT

THIS AGREEMENT made this _____ day of _____, by and between _____, hereinafter called the _____, _____, hereinafter called the _____, and _____ a _____ corporation, hereinafter called Management Company.

WITNESSETH:

WHEREAS, the City and Counties desire to provide the best available ambulance service to the citizens of the City of _____ and _____; and

WHEREAS, the City and Counties desire the benefit of the experience, supervision and services of the Management Company upon the terms and conditions hereinafter set forth, and said Management Company is willing and desires to accept such employment on said terms and conditions;

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That for and in consideration of the premises and the mutual covenants and agreements of the parties hereto as hereinafter set forth, it is hereby covenanted and agreed as follows:

1. TERM. The term of this contract shall extend from _____ for a period of three (3) years until _____, subject to annual review and modification upon mutual agreement of the parties.
2. TERMINATION. This contract may be revoked or cancelled at any time by mutual agreement of the City, Counties, and Management Company, or may be terminated by the City and Counties in accordance with the provisions hereinafter set forth.
3. EMPLOYMENT. The City and Counties hereby hire and employ the Management Company to manage and operate an ambulance service in the City of _____ and to render the services herein contemplated, and the Management Company hereby accepts such employment and agrees to discharge such duties all in accordance with the terms and conditions herein set forth.

4. COMMISSION. The City and Counties shall establish an Ambulance Service Commission which shall administer this contract on behalf of the City and Counties and shall make such administrative rules and regulations from time to time as may be necessary within its sound discretion to provide proper ambulance service, and the Management Company agrees to be responsible directly to the Ambulance Service Commission in the performance of all required services. The Ambulance Service Commission shall have the right to approve or disapprove of any of the management or employment practices of the Management Company and may terminate this contract in the event any deficiency, as determined in its sole discretion, continues to exist after notice of not less than ten (10) days is given in writing to the Management Company.

5. FACILITIES. All equipment, vehicles, uniforms, linen, office space and other facilities necessary to the operation of the ambulance service shall be rented, purchased or provided by the City and Counties at their expense in such quantity and quality as the governing bodies of the City and Counties and the Ambulance Service Commission shall determine. Replacement equipment shall be provided from time to time by the City and Counties at their expense.

6. SERVICES. The Management Company is hereby charged with the sole and exclusive management of the ambulance service in the City of _____, subject to the requirements and regulations of the Ambulance Service Commission, and shall provide all services customarily provided for in such instances, including the following:

- (a) Supervision of the operations of all equipment, facilities and employees, including the hiring, training and discharging of employees. Adequately trained personnel shall be employed in all positions. Minimum personnel requirements shall be determined by the Ambulance Service Commission. No personnel can be employed without the approval of the Ambulance Service Commission.
- (b) Maintenance of proper books, documents, papers, accounting records and other evidence pertaining to costs incurred; it being understood that all such records shall be made available at all reasonable times during the contract period and for three years from the date of final payment under the contract for inspection by the Ambulance Service Commission, its counsel or auditors, or any authorized representatives of the State and Federal Governments and copies thereof shall be furnished if requested; and that monthly statements showing the details of the operation of the service and its expenses and bi-weekly payroll reports shall be furnished to the Ambulance Service Commission.

- (c) The collection of all charges to patrons of the ambulance service; it being understood that the Management Company will use its best efforts to realize maximum recovery and shall make use of legal process when necessary.
- (d) Maintenance and operation of all equipment and vehicles in proper and safe working condition. Repairs and preventive maintenance shall be performed in garages authorized by the Ambulance Service Commission and shall be considered a part of the operating expense of the service.
- (e) Providing evidence of insurability and such liability, professional and other insurance and fidelity bonds as may be required by the Ambulance Service Commission or may be necessary to indemnify the City and Counties against loss by damage to persons and property. Premiums shall be a part of the operating expenses of the service.
- (f) A personal inspection of the operation of the service shall be made by the president or principal officer of the Management Company at least bi-weekly. Expenses of inspection and supervision shall be a part of the management fee and not a part of the operating expenses.

7. FUNDS. All funds derived from the operation of the ambulance service shall be deposited in an account designated by the Finance Director of the City of _____ at least weekly or as directed by the Ambulance Service Commission. No operating expenses shall be paid by the Management Company out of such funds.

8. EXPENSES. All expenses of the operation of the ambulance service shall be paid in the manner prescribed by the Ambulance Service Commission.

9. CHARGES. Charges to patrons of the ambulance service shall be made in accordance with a schedule of fees approved by the Ambulance Service Commission and the governing bodies of the City and Counties.

10. COMPENSATION. The Management Company shall receive as compensation for its services to be rendered hereunder a fixed annual management fee of _____ Dollars, payable in equal monthly installments. The management fee shall be subject to annual negotiation. In addition thereto, if the Management Company succeeds in collecting in excess of _____ percent of the charges to patrons for services during any fiscal year, then the Management Company shall receive additional compensation of \$ _____ for each _____ percent in excess of _____ percent of the total annual charges collected. For example, a collection of _____ percent of total annual charges would mean additional compensation of \$ _____.

IN WITNESS WHEREOF, we have hereunto set our hands and seals
the date hereinabove written.

PRIOR SERVICES PROVIDED

Paramed now operates:

Northern Virginia Doctors Ambulance, Inc. -- A private ambulance service serving the Virginia suburbs of Washington, D. C., with professional land and air ambulance service.

Durham Ambulance Service, Inc. -- This system provides total service to the city and county of Durham, North Carolina.

Paramedical Services, Inc. -- This system provides total ambulance service to the county of Surry and approximately 55 percent of the county of Yadkin, North Carolina.

Spartanburg County Emergency Medical Services -- Paramed is now implementing this system and will operate it for Spartanburg County, South Carolina.

Carolina Ambulance, Inc. -- Carolina Ambulance is the management company which operates the Columbia, Richland, and Lexington County systems which are provided under the direction of the Columbia, Richland and Lexington Ambulance Commission.

Paramedical Services of South Carolina, Inc. -- This company serves the total ambulance needs of Aiken County, South Carolina.

Studies Performed or in Progress:

A Study of Emergency Ambulance Services in Dallas County, Texas (performed with Dunlap & Associates, Darien, Connecticut).

Study of Ambulance Systems and Emergency Facilities for Florence County Ambulance Commission, Florence County, South Carolina.

Patient Handling Manual for Emergency Medical Technicians-- Ambulance (Paramed subcontracted to Dunlap & Associates for this document prepared for the National Highway Safety Bureau, Department of Transportation).

Evaluation of Metropolitan Ambulance Service and its Relationship with the City of Lynchburg, Virginia.

Study of Ambulance Service Needs and Alternatives for Spartanburg County, South Carolina.

Study of Ambulance Service Needs and Alternatives for
Greenville County, South Carolina.

Study of Ambulance Service Needs and Alternatives,
Edgefield County, South Carolina.

Study of Ambulance Service Needs and Alternatives,
Surry County, North Carolina.

Study of Ambulance Service Needs and Alternatives,
Aiken County, South Carolina.

PARAMED, INC.

MANAGEMENT BACKGROUNDS

Thomas A. Hulfish. 2
Henry A. Pettit. 4

PARAMED
MANAGEMENT BACKGROUND

THOMAS A. HULFISH -- President, Paramed, Inc., Alexandria, Virginia;
President, Carolina Ambulance, Inc., Columbia, South Carolina;
President, Northern Virginia Doctors Ambulance, Inc., Alexandria, Virginia;
President, Durham Ambulance Service, Inc., Durham, North Carolina;
President, Paramedical Services of Texas, Inc., Dallas, Texas;
President, Piedmont Medical Equipment, Inc., Durham, North Carolina;
President, Paramedical Services, Inc., Mount Airy, North Carolina;
President, Paramedical Services of South Carolina, Inc., Aiken, South Carolina.

Thomas Hulfish has a long history in the Emergency Medical Services field. He received his initial patient care training in the United States Navy as a Hospital Corpsman. Completing active duty, he served as a Chief Hospital Corpsman in the Naval Reserve. After attending George Washington University, he was employed as a health educator for the American Cancer Society.

Since entering the ambulance field in 1961, he has developed six operating companies, which are now subsidiaries of Paramed, Inc. Through these companies Mr. Hulfish has developed ambulance and rescue systems which serve the needs of thirteen cities and counties in the Southeast. In addition, he has provided information and preliminary guidance for the study "Description and Analysis of Eighteen Proven Emergency Ambulance Service Systems," produced by the National Association of Counties Research Foundation for the National Highway Safety Bureau. Also, he has worked with Stanford Research, Inc., on the implementation of their data gathering system into the Municipal Ambulance and Rescue System of Columbia, South Carolina, as part of Stanford's project of "Emergency Medical Services Survey and Plan Development," for the National Highway Safety Bureau. Mr. Hulfish has served as an advisor to the U. S. Naval Hospital, National Naval Medical Center, regarding the equipping of ambulances and the orientation of emergency personnel. Further, he has been an advisor to the Peace Corps on medical transportation and is an emergency medical service consultant to the Atlantic Research Corporation. He served as a National Ambulance and Medical Services Association consultant to Dunlap & Associates for their preparation of a "Patient Handling Manual for Emergency Medical Technicians--Ambulance" for the National Highway Safety Bureau.

Mr. Hulfish has represented Paramed at many national meetings and conferences including: The American Medical Association's National Conference on "The Community and Emergency Medical Service"; hearings of the Committee on Ambulance Design Criteria" of the National Academy of Sciences, National Academy of Engineering and National Research Council; Ohio State University College of Medicine Workshop on "The Operation of a Mobile Coronary Care Unit"; and the

First National Symposium on Air Mobility in Community Service, where he spoke on helicopter ambulance activities. He has lectured on "Community Ambulance Operational Controls" at the American Academy of Orthopaedic Surgeons Course in "Emergency Care and Transportation of the Sick and Injured" in Columbia, South Carolina.

Mr. Hulfish has served as a member of the Cardiopulmonary Resuscitation Committee of the Virginia Heart Association, a Director of the Southern Ambulance Association, the Training Committee of the National Ambulance Training Institute, and is a member of the National Ambulance and Medical Services Association (NAMSAs) for which he has served as a member of its "Blue Ribbon Committee on Standards and Accreditation." He presently serves as a member of NAMSAs's Board of Governors, is Chairman of its Legislative Committee, and is a delegate to the American College of Emergency Physicians (ACEP) as well as other medical groups. He recently represented NAMSAs, as well as Paramed, at the International Symposium on Emergency Medical Services presented by the American Paramedical Institute, and the Second National Conference on Emergency Medical Services at Bethesda, Maryland. In June of 1972 he testified on proposed Emergency Medical Service legislation before the Subcommittee on Public Health and Environment of the Committee on Interstate and Foreign Commerce, United States House of Representatives; and in January of 1973 again testified on proposed Emergency Medical Service legislation before the Subcommittee on Health, United States Senate. He also serves as an Associate Editor of the National Para-Medical News REVIEW.

Within his community, Mr. Hulfish served as a member of the Board of Health for eight years, was a Chief Judge of Elections for a period of six years, has served as President of the National Foundation and President of the Mental Health Association, and is a member of the Alexandria Hospital Corporation. In addition, he has served on many boards and committees of various civic and volunteer health organizations.

PARAMED
MANAGEMENT BACKGROUND

HENRY A. PETTIT -- Vice President, Paramed, Inc., Alexandria, Virginia;
Vice President, Carolina Ambulance, Inc., Columbia, South Carolina;
Vice President, Northern Virginia Doctors Ambulance, Inc., Alexandria, Virginia;
Vice President, Durham Ambulance Service, Inc., Durham, North Carolina;
Vice President, Paramedical Services of Texas, Inc., Dallas, Texas;
Vice President, Piedmont Medical Equipment, Inc., Durham, North Carolina;
Vice President, Paramedical Services, Inc., Mount Airy, North Carolina;
Vice President, Paramedical Services of South Carolina, Inc., Aiken, S. C.

Mr. Pettit has a 12-year background in EMS which includes: graduate of the Baltimore City Fire Department Ambulance School; graduate of the course "Emergency Care and Transportation of the Sick and Injured" sponsored by the American Academy of Orthopaedic Surgeons; graduate of the "Immediate Patient Care" course of the Virginia Committee on Trauma of the American College of Surgeons; certified Emergency Medical Technician by the National Ambulance Training Institute. In addition, he has been involved in developing and coordinating numerous training programs and seminars while studying Business Administration at the university level.

Not only has Mr. Pettit managed three ambulance companies, but he has also been the moving force behind their initial organization. His efforts have also included: designing and converting vehicles into emergency service ambulances; establishing continuing Emergency Medical Technician training programs with physicians; membership on the Cardiopulmonary Resuscitation Task Force of the South Carolina Heart Association; planning and coordinating the three-day Emergency Care and Transportation of the Sick and Injured course under the sponsorship of the American Academy of Orthopaedic Surgeons for two years; and acting as an advisor to the Chairman of the Subcommittee on Emergency Medical Service of the South Carolina Legislature. With his background and experience he has successfully mastered the intricacies of getting a total service operation "off the ground" and functioning as well as assisting in raising the quality of patient care in the areas in which he served.

Mr. Pettit is Vice President of the Southern Ambulance Association which he helped to form. He is also a member of the National Ambulance and Medical Services Association, serving as Chairman of the Membership Committee and a member of the Medical Evaluation Committee. He has served on the Board of Directors of the National Ambulance Training Institute and is the recipient of that organization's "Outstanding Service Award" for 1968 in recognition of his contributions to the furtherance of better patient care through training programs for ambulance personnel.