

EMERGENCY SERVICES DEPARTMENT

General Information

Department Head: Donovan Davis (since Jan. 2009)
 Location: 152 North Fayetteville Street, Asheboro, NC 27203
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 On-Duty EMS Shift Supervisor: 318-6922
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Mission

To provide service to the community by preventing and minimizing loss of life, pain and suffering, property loss, and environmental damage from fire, natural disasters, and medical emergencies by offering education, prevention, and emergency response.

Summary

Emergency Services includes fire inspection and enforcement of the N.C. State Building Codes, fire investigation, answer and dispatch of all emergency and non-emergency calls for assistance through 9-1-1 for all public safety agencies in the county, response to and provision for appropriate pre-hospital medical care and transport. Prevention services include public education, mitigation measures through preplanning, and disaster planning. This department operates 24 hours per day.

For the 2003-04 fiscal year, this department had 70 allocated positions, four more positions than the previous year. During budget deliberations, the Commissioners authorized the addition of another ambulance (prime-time only) at the Archdale Ambulance Base, with the accompanying staff of four Emergency Medical Technicians. (*Organizational Chart Attached*)

For the 2007-08 fiscal year, this department had 74 allocated positions.

Overview

Randolph County initiated its ambulance service on July 1, 1977, when it took over that service from Ridge Funeral Home. The Emergency Services Department (ES) was created in 1983, when Neil Allen was hired as Emergency Services Director. (Neil retired December 31, 2008). The new department combined Emergency Medical Services, Fire Marshal, Fire and Ambulance Dispatch, and Emergency Management into one department. This department was initially housed at the McDowell Center. In August of 1992, ES moved into the old *Courier-Tribune* building, located at 152 N. Fayetteville Street. In November of 1992, ES took over all

emergency communications (ambulance, law enforcement, and fire) for the County and all municipalities except Archdale. On March 17, 1993, the County initiated its E911 system, and the first call was placed at 9:11 a.m. The Fire Marshal's office was expanded to include fire inspectors July 1, 1992, as a result of new state laws requiring businesses and industries to have periodic fire inspections.

Facilities and Equipment

ES is housed in 7 buildings. The County owns all the buildings except for the Liberty Ambulance Base, which is owned by the Town of Liberty and the Trinity Base (Station 39) which is owned by the Guil-Rand Fire Department.

- Emergency Services Administration Building, 152 N. Fayetteville Street (3,700 sf upstairs, 3,061 sf downstairs): The upper level of this building houses ES Administration (1,530 sf), the 911 Communications Center (1,450 sf), Emergency Management (part of Administration), and the Sheriff's Vice/Narcotics Unit (720 sf). The lower level includes the Fire Marshal (1,260 sf), the Emergency Operations Center (500 sf), break room (756 sf), and storage (545 sf). This building is a very secure structure, as it has no windows on either level. Access is gained through a door with an electronic access lock. Visitors are screened and personally escorted into and throughout the building.
- Asheboro Ambulance Base, 2222 S. Fayetteville Street, McDowell Center (3,880 sf):
- Archdale Ambulance Base, 402 Balfour Drive, (1350 sf): This base will be enlarged in 2004 to accommodate a second ambulance bay and crew.
- Ramseur Ambulance Base, 5989 Hwy 64 East (1386 sf): This is a one-bay station built in 1987.
- Randleman Ambulance Base, 2-A Parrish Dr., Randleman (1386 sf): This is a one-bay station built in 1990, using the floor plan for the Ramseur Base.
- Liberty Ambulance Base, 215 W. Swannanoa Av., Liberty: This space is owned by the Town of Liberty and located within the Liberty Fire Department.
- Trinity Ambulance Base, 6258 Welborn Rd, Trinity: This space is owned by the Guil-Rand Fire Department at its Station 39.

ES also owns a building on Dave's Mountain (228 sf), which houses radio equipment for EMS, law enforcement and fire. Located there is a high-powered repeater for Med 9 and Med 5. At Randolph Hospital there are (frequencies) 220, 280, & 340 repeaters, a base station, and a portable radio for the doctor in the Emergency Department.

Service Area: Emergency Medical Services (EMS)

Mission

To provide emergency medical technician-paramedic level pre-hospital care and transport services to the citizens and visitors of Randolph County.

Summary

The 24-hour-per-day on-call division provides state-of-the-art pre-hospital care with skill, compassion and dignity to those who are ill or injured. This service area has 45.88 positions.

Overview

Randolph County Emergency Medical Services is the lead agency for all levels of pre-hospital care and transport. All credentialed pre-hospital providers practicing in Randolph County, regardless of practice, are required to be affiliated with Randolph County Emergency Medical Services System, follow the established pre-hospital protocols and scope of practice, and practice under the direct supervision of the Randolph County Emergency Medical Services Medical Director.

Goal

It is the goal of the Randolph Emergency Medical Services System to provide for optimal care for the ill or injured patient through continued development of an emergency medical services system, which includes plans for the implementation and provision of

- A coordinated emergency medical services system
- The dispatch of emergency medical services resources
- The treatment and transportation of persons in need of pre-hospital medical care in the most prompt and efficient manner possible
- A quality improvement program
- A coordinated medical response to mass casualty and disaster situations
- Educational programs necessary to maintain the expected level of patient care
- Commitment to the professional development of our employees, providing them with proper motivation, tools, and opportunities to best serve the citizens of Randolph County.
- Strengthen the growth and development of Emergency Medical Services as an integral part of the health care profession
- Liaison with governmental agencies
- Other activities as necessary to carry out those activities as defined by the Medical Care Commission and North Carolina Office of Emergency Medical Services

Randolph County Emergency Medical Services System Components

"EMS System" means a coordinated arrangement of resources (including personnel, equipment, and facilities) organized to respond to medical emergencies. It is integrated with other health care providers and networks including, but not limited to, public health, community health monitoring activities, and special needs populations.

Emergency Medical Dispatchers enhance our pre-hospital services by providing life-saving instructions until the arrival of pre-hospital providers. Ash-Rand Rescue Squad and EMS Inc. and Piedmont Triad Ambulance and Rescue function at the Intermediate level to provide complementary ambulance service to Randolph County. The North Carolina Zoological Park provides EMT level of care, and city and county fire departments provide Medical Responder or greater level of care to supplement the EMS System

response. Finally, Randolph Hospital Inc. utilizes Carelink (out of Moses Cone Hospital) as a Specialty Care Transport for inter-facility transports.

- ◆ **EMD: The Emergency Medical Dispatcher** takes calls from the general public for EMS assistance, provides medically oriented instructions to the caller over the telephone, and dispatches an ambulance and other EMS resources in response to the call.
- ◆ **MR: The Medical Responder** tends to be the first person to arrive at the scene of an incident and is trained to provide basic emergency medical care.
- ◆ **EMT: The Emergency Medical Technician** determines the nature and extent of illness or injury and establishes priority for required emergency care. Based on assessment findings, renders emergency medical care to adult, infant, and child, medical and trauma patients.
- ◆ **EMT-I: The EMT-Intermediate** has advanced training that allows this credentialed technician to administer intravenous fluids, use defibrillators to give lifesaving shocks to a stopped heart, and employ advanced airway techniques and equipment to assist patients experiencing respiratory emergencies.
- ◆ **EMT-P: The EMT-Paramedic** provides the most extensive pre-hospital care. In addition to the procedures already described, paramedics may administer drugs orally and intravenously, interpret electrocardiograms (EKGs), perform endotracheal intubations, and use monitors and other complex equipment.
- ◆ **MICN: The Mobile Intensive Care Nurse** is a registered nurse who has been approved or re-approved by the North Carolina Medical Board to issue instructions to ALS professionals in accordance with protocols approved by the medical director.
- ◆ **The Medical Director** is the physician responsible for the medical aspects of the management of our EMS System. **On-line Medical Direction** allows EMS personnel to obtain on-line medical direction. On-line medical direction is restricted to medical orders that fall within the scope of practice of the EMS personnel and within the scope of approved system treatment protocols. Only physicians, EMS-physician assistants, EMS-nurse practitioners, or mobile intensive care nurses can provide on-line medical control. Only physicians may deviate from written treatment protocols. On-line medical direction is provided by a system of two-way voice communication that can be maintained throughout the treatment and disposition of the patient.
- ◆ **Quality Management Committee** is the committee within our EMS system responsible for the continued monitoring and evaluation of medical and operational issues within the system and for improvement of the system. It is chaired by the Medical Director for the Randolph County EMS System. Each quarter the Quality Management Committee meets to address any EMS System issues as well as to review the patient care audit the Medical Director conducted for that quarter. This allows the committee to ensure we are providing a high standard of care and to identify any training issues.
- ◆ **Specialty Care Transport Program** is a program designed and operated for the provision of specialized medical care and transportation of critically ill or injured patients.

Randolph County Emergency Medical Services System Providers

The Randolph County EMS System franchises with other providers for emergency services, non-emergency transport, and specialty care transport. Each franchise agreement indicates the hours of operation and level of care to be provided by the franchisee. Randolph County Emergency Medical Services provides 24-hour coverage at the paramedic-level of care.

Randolph County Emergency Medical Dispatch

The Randolph County 9-1-1 Communications center is an NCOEMS approved EMD center, operating (medically) under the guidance of Randolph County Emergency Medical Services System. Emergency Medical Dispatchers (EMDs), utilizing the Medical Priority Dispatch System (MPDS), provide valuable information and instructions on how to perform lifesaving maneuvers while waiting for emergency medical personnel to arrive. The Randolph County Emergency Medical System utilizes Randolph County 9-1-1 Communications to dispatch and coordinate pre-hospital resources. All agencies in the system operate on a shared, countywide UHF radio system (with VHF radio system as back up). All emergency and non-emergency requests for pre-hospital services are received by Randolph County 9-1-1. Once the call is received, credentialed emergency medical dispatchers process the call and a response is configured and dispatched. Thirty-three classifications of emergency type are dispatched on the basis of a pre-determined response matrix.

EMS Operations/Staffing

Operating out of five bases, EMS is provided countywide 24-hours-a-day by Randolph County EMS. Six ambulances are strategically located throughout Randolph County to meet the needs of the community. A primetime unit in the Archdale/Trinity community provides paramedic coverage during peak times. This unit operates between the hours of 10 a.m. and 10 p.m. The Paramedic administrative staff supplements these primary units as call demands increase.

EMS bases are located in Archdale Unit 841 (Base-1), Trinity Unit 851 (Base-6), Liberty Unit 842 (Base-2), Ramseur Unit 843 (Base-3), Asheboro Units 844 and 854 (Base-4), and Randleman Unit 845 (Base-5). Each ambulance is staffed with at least one Emergency Medical Technician-Paramedic and one Emergency Medical Technician credentialed at the Technician level or greater. Additional units will be staffed and put into service for special event coverage or unusual events. Emergency backup is available through EMT and EMT-I level ambulances used for routine transports. Additional backup is available from neighboring counties through mutual aid arrangements. All emergency resources are dispatched 24-hours-a-day by Randolph County 9-1-1 Communications Center and have the ability to communicate directly with the Randolph County 9-1-1 Communications Center.

EMS has three shifts which rotate in consecutive progression. The shifts are designated as "A" Shift, "B" Shift and "C" Shift. Each shift is staffed with twelve (12) employees and one supervisor. Employees rotate through all of the five bases to ensure that they have geographical knowledge of each ambulance base district. Also, the supervisor arranges the schedule to ensure all team members work together at some point during the month. In order to ensure adequate staffing, Randolph County EMS utilizes a pool of part-time employees. Ideally there will be about 25 individuals in the pool. The majority of part-timers are seeking a full-time position. Supervisors monitor and evaluate the part-time employee's performance. By doing this on a regular basis, they can make an informed decision in the event a full-time vacancy occurs on their shift. The employee can be moved into a full-time slot without going through the advertising requirements for filling vacancies. Part-time employees must go through the same training as full-time employees (both initial training and continuing education training). Part-time employees must average working 24 hours a month or 72 hours a quarter.

The crew at each ambulance base uses the time between calls to clean the base, clean the truck and equipment, restock the truck, and notify the supervisor of replacement items needed. They must also make sure the truck is refueled when it is half empty. The County issues gas cards for BP Service Stations.

Randolph County Emergency Medical Services offers a variety of specialty service programs, including public information, injury prevention and safety presentations. Other specialty programs include a State Medical Assistance Team (SMAT) and a Special Emergency Response Team (SERT). SMAT is comprised of Randolph County EMS personnel, Hospital personnel, fire personnel, 911 Communications personnel and law enforcement personnel who provide the first line of response in support of local agencies in the event of a decontamination event or mass medical care event. The special emergency response team is comprised of one to five tactical paramedics who function as members of the Randolph County Sheriff Department's Tactical team in response to calls that involve a hostile situation or one in which there is a risk for personal injury. These calls typically are drug raids, hostage situations or searches.

EMS Operational Team

Emergency Services Director

Manages the Divisions of EMS, Fire Marshal, Communications, and Emergency management.

Emergency Services Deputy Director – EMS

An employee in this class manages, directs, and supervises the operations of the Emergency Medical Services Division. Responsibilities include the supervision of the Shift Supervisors and the coordination of EMS resources. Responsibilities include interviewing, hiring, and training employees; planning, assigning, and directing work; appraising performance; rewarding and disciplining employees; addressing complaints and resolving problems. Additional responsibilities also involve the planning and coordination of local resources with other county and city agencies or departments and with area hospitals. The employee must exercise considerable independent judgment in frequent dealings with hospitals and outside agency personnel. Work is performed under the general supervision of the Director of Emergency Services and is evaluated by observation, review of reports, and overall effectiveness of operations.

Shift Supervisor

Randolph County Emergency Medical Services operates three (3) twenty-four (24) hour shifts which are managed by three (3) Supervisors. An employee in this class supervises and coordinates the activities of a staff of emergency medical technicians on an assigned shift. The employee is responsible for monitoring in-service and out-of-service ambulances and makes appropriate decisions to efficiently operate the shift. The employee must have good knowledge of how the department operates and be able to make decisions. The employee has the responsibility for ensuring that equipment is in working condition, supplies on each unit are ample, and that each vehicle is staffed with qualified personnel. The employee must encourage and promote effective, efficient, and professional skills and relationships in order to facilitate the delivery of the highest possible standard of care. Work is performed under the direct supervision of the EMS Deputy Director and is evaluated by observation and in terms of the effectiveness of operations.

Crew Chief

An employee in this class supervises and coordinates the activities of a staff of emergency medical technicians on an assigned shift in the absence of the Shift Supervisor. The day-to-day function of this employee is to train new employees, precept employees advancing in certification as well as to improve the overall skill of his assigned shift. The employee is responsible for monitoring in-service and out-of-service ambulances and makes appropriate decisions to efficiently operate the shift. The employee must have good knowledge of how the department operates and be able to make decisions. The employee has the responsibility for ensuring that equipment is in working condition, supplies on each unit are ample, and that

each vehicle is staffed with qualified personnel. Work is performed under the direct supervision of the Shift Supervisor and/or the EMS Deputy Director and is evaluated by observation and in terms of the effectiveness of operations.

Emergency Services Medical Director

All aspects of the organization and provision of basic (including medical responder) and advanced life support emergency medical services (EMS) require the active involvement and participation of physicians. Furthermore, every pre-hospital provider that provides any level of life support in Randolph County must have an identifiable physician medical director whose primary responsibility is to ensure quality patient care. Additional responsibilities include involvement with design, operation, evaluation, scope of practice and ongoing revision of the system, including initial patient access, dispatch, and pre-hospital care,

The Medical Director acts as Chairman of the Medical Oversight Committee and serves as the Medical Director for the following programs:

- Medical Responders
- EMT-Basic
- EMT-Intermediate
- EMT-Paramedic
- Emergency Medical Dispatch
- Tactical Emergency Medical Specialist Program
- State Medical Assistance Team
- Mobile Intensive Care Nurse

Scope of Practice for Pre-Hospital Providers

A. Medical Responder (MR)

A Medical Responder trainee or Certified Medical Responder, while caring for patients in a hospital as part of their training or continuing education, under the direct supervision of a physician, or registered nurse, or while at the scene of a medical emergency or during transport, or during inter-facility transfer when medical direction is available by the transferring facility physician or MICN according to the policies and procedures of the Randolph County EMS System, may perform any activity or administer any medication listed below according to local ALS Treatment Guidelines:

- (a) Basic airway management
- (b) Use of basic adjunctive airway equipment
- (c) Positive pressure oxygen delivery inhalation devices
- (d) Suctioning
- (e) Cardiopulmonary resuscitation
- (f) Obstructed airway management
- (g) Bleeding control via direct pressure
- (h) Spine immobilization; basic splinting
- (i) Administration of oral glucose in conscious patient
- (j) Scene assessment, triage, scene safety
- (k) Semi-automatic defibrillation
- (l) Conduct a patient assessment
- (m) Acquire vital signs including orthostatic blood pressure
- (n) Emergency childbirth

- (o) Utilize restraints

Allowable Drugs:

- a. Oxygen
- b. Oral glucose preparations.

B. Emergency Medical Technician (EMT-B)

I. An EMT-B may perform any activity identified in the scope of practice of a Medical Responder.

II. An EMT-B trainee or Certified EMT-B, while caring for patients in a hospital as part of their training or continuing education, under the direct supervision of a physician, or registered nurse, or while at the scene of a medical emergency or during transport, or during inter-facility transfer when medical direction is available by the transferring facility physician or MICN according to the policies and procedures of the Randolph County EMS System, may perform any activity or administer any medication listed below according to local ALS Treatment Guidelines:

1. Basic airway management
2. Use of basic adjunctive airway equipment
3. Positive pressure oxygen delivery inhalation devices
4. Suctioning
5. Administration of Oxygen
6. Cardiopulmonary resuscitation
7. Obstructed airway management
8. Bleeding control via direct pressure
9. Spine immobilization; basic splinting
10. Administration of oral glucose in conscious patient
11. Scene assessment, triage, scene safety
12. Semi-automatic defibrillation
13. Conduct a patient assessment
14. Acquire vital signs including orthostatic blood pressure
15. Emergency childbirth
16. Utilize restraints
17. Utilize the pneumatic anti-shock garment (if available)
18. Monitoring of blood glucose with automated glucometry (if available)
19. Administering a patient's own medication, when available, is allowed under off-line medical control. If the EMT-B is working under medical direction using approved written medical protocols. The allowed medications are:
 - a. Pre-measured inhalation devices
 - b. Pre-measured epinephrine devices
 - c. Aspirin for Cardiac Emergencies
 - d. Pre-measured NTG SL spray device or SL NTG Tablets
20. Ash-Rand, PTAR, RCEMS and NC Zoo EMT-Basics may carry and administer Albuterol via nebulizer to those patients who already take Albuterol. EMTs with County Fire Departments may administer Albuterol via nebulizer if the patient has their own Albuterol and home nebulizer.

C. EMT-Intermediate (EMT-I)

I. An EMT-I may perform any activity identified in the scope of practice of a Medical Responder and EMT-B.

II. An EMT-I trainee or Certified EMT-I, while caring for patients in a hospital as part of their training or continuing education, under the direct supervision of a physician, or registered nurse, or while at the scene of a medical emergency or during transport, or during inter-facility transfer when medical direction is available by the transferring facility physician or MICN according to the policies and procedures of the Randolph County EMS System, may perform any activity or administer any medication listed below according to local ALS Treatment Guidelines:

1. Visualize the airway by use of the laryngoscope and remove foreign body with Magill forceps
2. Perform pulmonary ventilation by use of a blind insertion airway device
3. Endotracheal intubation in an infant, child or adult
4. Perform an advanced patient assessment
5. Administer the LA Stroke Screening assessment/questionnaire
6. Temperature management
7. Complete the thrombolytic screening exam/questionnaire
8. Institute intravenous (IV) lines in peripheral veins to include external jugular and monitor and administer medications through pre-existing vascular access devices. Pre-existing vascular access is considered to include standard peripheral IVs, as listed above and heparin locks.
9. Administer glucose solutions or isotonic balanced salt solutions
10. Obtain venous blood samples
11. Use glucose measuring devices
12. Perform pulse oximetry
13. Utilize the Oxylator EM-100 ventilator
14. Administer approved medications by the following routes: intravenous, intramuscular, subcutaneous, inhalation, transcutaneous, rectal, sublingual, endotracheal, or orally
15. Administer, using prepackaged products when available, the following medications:
 - a. 25% and 50% Dextrose
 - b. Acetaminophen
 - c. Activated Charcoal
 - d. Afrin
 - e. Albuterol
 - f. Aspirin
 - g. Crystalloid Solutions
 - h. Diphenhydramine Hydrochloride
 - i. Epinephrine
 - j. Glucagon
 - k. Ibuprofen
 - l. Naloxone Hydrochloride
 - m. Nitroglycerine
 - n. Oral Glucose
 - o. Thiamine

Medications Allowed for Monitoring by EMT-Intermediates During Inter-Facility Transports

Monitor intravenous infusions during inter-facility transports utilizing the hospitals infusion devices.

1. Non-Medicated IV Fluids only (NS, D5W, LR) No additives

Skills Approved for Monitoring by EMT-Intermediates during inter-facility transports

1. Utilize an AED
2. Monitor urinary catheters
3. Monitor patients with nasogastric tubes
4. Monitor heparin/saline locks
5. Monitor PEG tubes
6. Use of infusion pumps

D. EMT-Paramedic (EMT-P)

I. An EMT-P may perform any activity identified in the scope of practice of a Medical Responder, EMT-B, and EMT-I.

II. An EMT-P trainee or Certified EMT-P, while caring for patients in a hospital as part of their training or continuing education, under the direct supervision of a physician, or registered nurse, or while at the scene of a medical emergency or during transport, or during inter-facility transfer when medical direction is available by the transferring facility physician or MICN according to the policies and procedures of the Randolph County EMS System, may perform any activity or administer any medication listed below according to local ALS Treatment Guidelines:

1. Perform defibrillation and synchronized cardioversion
2. Transcutaneous cardiac pacing
3. Visualize the airway by use of the laryngoscope and remove foreign body with Magill forceps
4. Perform pulmonary ventilation by use of a blind insertion airway device
5. Perform pulmonary ventilation by use of nasotracheal or orotracheal intubation in an adult
6. Endotracheal intubation in an infant or child
7. Institute intravenous (IV) lines in peripheral veins to include external jugular and monitor and administer medications through pre-existing vascular access devices. Pre-existing vascular access is considered to include standard peripheral IVs, as listed above, intraosseous access, and heparin locks.
8. Access existing venous catheters
9. Administer glucose solutions or isotonic balanced salt solutions
10. Obtain venous blood samples
11. Use glucose measuring devices
12. Perform intraosseous cannulation
13. Perform Valsalva's Maneuver and Carotid Sinus Massage
14. Perform needle cricothyroidotomy
15. Perform surgical cricothyroidotomy
16. Perform needle thoracostomy
17. Monitor thoracostomy tubes
18. Perform nasogastric intubation and gastric suction
19. Perform EKG-Monitoring
20. Acquire and Interpret 12-lead EKG

21. Perform pulse oximetry
22. Airway change tracheostomy
23. Utilize the Oxylator EM-100 ventilator
24. Administer approved medications by the following routes: intravenous, intramuscular, subcutaneous, inhalation, transcutaneous, rectal, sublingual, endotracheal, or orally
25. Administer, using prepackaged products when available, the following medications:
 - a. Activated Charcoal
 - b. Adenosine
 - c. Albuterol
 - d. Amiodarone
 - e. Aspirin
 - f. Atropine Sulfate
 - g. Calcium Chloride
 - h. Dexamethasone (Supplemental Medication)
 - i. Dextrose 50% and 25%
 - j. Dextrose, Oral
 - k. Diazepam
 - l. Diltiazem
 - m. Diphenhydramine Hydrochloride
 - n. Dopamine Hydrochloride
 - o. Epinephrine 1:1,000
 - p. Epinephrine 1:10,000
 - q. Epinephrine: Pre-measured Injection Device
 - r. Etomidate
 - s. Furosemide
 - t. Glucagon
 - u. Haloperidol
 - v. Heparin
 - w. Ibuprofen
 - x. Labetalol
 - y. Lidocaine Hydrochloride
 - z. Magnesium Sulfate
 - aa. Methylprednisolone
 - bb. Metoprolol
 - cc. Midazolam
 - dd. Morphine Sulfate
 - ee. Naloxone Hydrochloride
 - ff. Nitroglycerine Preparations
 - gg. Oxygen
 - hh. Oxymetazoline
 - ii. Pralidoxine Chloride
 - jj. Promethazine
 - kk. Pronyestyl
 - ll. Sodium Bicarbonate
 - mm. Tetracaine Hydrochloride
 - nn. Thiamine

Medications Allowed for Monitoring by Paramedics During Inter-Facility Transports:

Monitor intravenous infusions during inter-facility transports utilizing the hospital's infusion devices.

1. Aminophylline***
2. Amiodarone***
3. Antibiotics
4. Bretylium***
5. Digoxin***
6. Dobutamine***
7. Dopamine***
8. Epinephrine***
9. Histamine 2 Blocker
10. Heparin***
11. Insulin***
12. Lidocaine Hydrochloride***
13. Magnesium Sulfate***
14. Mannitol***
15. Methylprednisolone***
16. Nitroglycerin***
17. Norepinephrine***
18. Oxytocin***
19. Phenytoin***
20. Phenobarbital***
21. Platelet GPIIb/IIIa inhibitors***
22. Potassium Chloride***
23. Procainamide***
24. Steroid Preparations***
25. Terbutaline***
26. Thrombolytic Agents (e.g., tPA)***
27. Total parenteral Nutrition (TPN)***
28. Whole Blood and Blood Components
29. Ranitidine

Skills Approved for Monitoring by Paramedics in Transport.

1. Monitor thoracostomy tubes
2. Urinary Catheters
3. Arterial Line Maintenance
4. Intraosseous Adult
5. Swan-Ganz Catheterization Maintenance
6. Use of infusion pumps

*** Requires an Infusion Pump, When Given by Continuous Infusion

E. Mobile Intensive Care Nurse (MICN)

A Mobile Intensive Care Nurse trainee or Credentialed Mobile Intensive Care Nurse, while assisting the pre-hospital provider by providing medical direction, under the direct supervision of a physician, at the scene of a medical emergency or during transport, or during inter-facility transfer according to the policies

and procedures of the Randolph County EMS System, may perform any activity listed below according to local ALS Treatment Guidelines:

1. Identifies and assesses pre-hospital emergency situations by interpretation of information furnished by pre-hospital field personnel.
2. Determines the appropriate pre-hospital interventions and gives radio orders utilizing the standardized medical protocols and guidelines in accordance with the policies and procedures of the Randolph County EMS System.
3. Communicates instructions and information accurately and proficiently to the pre-hospital emergency care team via radio and/or landline.
4. Initiates and maintains complete pre-hospital care records in accordance with standards set by the Randolph County EMS System.
5. Functions as an education resource for pre-hospital care team, including participation in chart reviews.
6. Participates in multi-disciplinary reviews and educational classes related to pre-hospital care.

Initial and Ongoing Requirements and Training

Initial Credentialing Requirements

Applicants seeking initial credentialing at any EMS level in the RCEMS System must complete the entire didactic, clinical, and field internships required by Randolph Community College (RCC), or other approved educational institution. The student must successfully complete credentialing requirements for initial certification as required by NCOEMS.

Local Re-credentialing

All providers within the Randolph County EMS System will be credentialed through NCOEMS and will be re-examined at the end of each credentialed period (4 years). EMT's, EMT-'Is and EMT-P's will be required to complete a written exam. NCOEMS requires that all field technicians attend at least 24 hours of continuing education per year. (Randolph County EMS requires 30 hours.) All field technicians must successfully complete an annual scope of practice skills evaluation to ensure compliance with local state requirements. Physicians, supervisors and crew chiefs conduct the evaluations, which include such items as IVs, CPR, medication administration, intubation, etc.

The Continuing Education curriculum will be updated to reflect new technologies, best practices, and patient care techniques to coincide with the dynamic evolution of the modern EMS practice. EMS personnel are paid for their hours of training, which takes place during their 48-hour periods between shifts. Training sessions are offered the third Tuesday and Wednesday of every month except for July and December. Training has both classroom and hands-on components. Most of the training is held at Randolph Community College. Emergency vehicle operations training takes place at RCC's Emergency Training Center. Doctors and other technical experts outside Randolph County EMS serve as instructors.

On-line classes can be completed from a home computer or from the ambulance stations. Make-up classes are provided for those who couldn't attend the scheduled classes. All training information is documented in the Operations Officer's computer.

EMT students at community colleges are required to do "ride time" before they graduate. RCC and GTCC have contracted with our EMS to provide this experience, and the EMS Deputy Director schedules times for these students to ride along on calls and to practice their skills. A different number of hours of ride time are required for the different levels of certification.

The State of North Carolina has recently enlarged the scope of practice allowed for EMTs, who could now work in other settings such as health departments, hospitals, and emergency departments and perform such procedures as IVs and intubations. At this time, no ALS providers are practicing in alternate practice setting.

Hiring Process

The interview selection is a two-step assessment process. First, each applicant will go to the Assessment Center, which is an interviewing and selection process that includes a written exam, writing an ambulance call report, carrying a simulated 165 lb. patient on a long spine board, and a practical evaluation, which simulates situations that may be experienced on the job. Upon successful completion of this process, applicants will complete step two, which is an oral interview.

Upon successful completion of the selection process, an applicant will be offered employment at the EMT-Basic level. Once an employee has completed all of his or her local accreditation requirements for their NCOEMS credential, a personnel action form will be submitted to reflect this change and the employee will be compensated at the appropriate level, depending upon his experience and level of certification.

Each employee, regardless of his certification or experience, will complete a new employee orientation and our field training and evaluation program. The new employee orientation program introduces new employees to our department and reviews the General Operating Guidelines, the patient care manual, the exposure control plan, County-related policies and procedures, HIPAA policies and procedures, obtaining uniforms, and an emergency vehicle operations course. The new employee orientation is usually 40 hours long. After the employee completes the new employee orientation, the employee is assigned to a crew chief in order to start the field training and evaluation program. The field training and evaluation program is an organized, standardized, successful, and proven approach to the mentoring of new employees to their profession and our service, eliminating subjectivity and permitting the documentation of success or failure. The new employees are better prepared to meet the challenges of the environment in which we serve. Each employee receives approximately 300 hours of field training and evaluation before he is allowed to provide independent patient care. The new technician has the luxury of having a mentor in the rear of the ambulance during this evaluation and training process. Once the evaluation and training process has been completed, the technician will become a primary crew member.

EMS Billing

Billing is handled for each individual that is transported. (Note: For multiple patient events, 3 or more patients could be transported in one ambulance.)

BLS-Non-emergency (\$190)

These transports are generally for scheduled visits to a doctor's office or other medical facility, with no treatment given.

BLS-Emergency (\$300)	These transports are for situations such as a broken leg; no ALS required.
ALS-1 (\$230)	These transports are generally from one hospital to another; may need to do monitoring, IVs, etc. during transport.
ALS-1 Emergency (\$375)	These transports involve ALS treatment.
ALS-2 (\$525)	These transports involve more intensive ALS procedures.
Specialty Care (\$600)	These transports are inter-facility transports with a doctor, nurse, respiratory therapist, etc. on board.
Treatment-No Transport (\$125)	This situation usually occurs when someone with diabetes, asthma, etc. is in distress. ALS treatment is provided to the patient. Due to the treatment provided, the patient's condition improves and the mentally competent patient refuses any further treatment or transport by EMS.

Mileage Charge (\$6.42 per loaded mile)

Charge Waiver Policy

- If an emergency responder is on the scene and gets hurt, we do not charge to transport him.
- If a patient is not viable when EMTs arrive or if the patient isn't revived, we do not charge.
- If the patient is a jail inmate, we do not charge. (Randolph County Jail only)

Each Ambulance Call Report (ACR) is sent electronically to the Administrative Assistant in Emergency Services. Each ACR is reviewed for completeness, accuracy, and charges. Once a week the ACRs are delivered to the Tax Department, where the actual ambulance billing is done.

The supervisor and/or the crew chief will review the ACR (ambulance call report) and, as an audit of the ACR, will follow up with the hospital to verify the patient's condition (presentation of symptoms and mechanics of injury) and to verify that the treatment protocol was correct based on that information. Each report will be reviewed as it comes in.

Vehicles/Equipment

All ambulances in the Randolph County EMS system are inspected by the NC Office of Emergency Medical Services to ensure they comply with equipment standards as established by the State and the System Medical Director.

RCEMS utilizes daily vehicle check sheets by the EMS Crews at the beginning of each shift. This helps ensure that units are inspected for proper vehicle operations, needed maintenance, and the EMS Unit is cleaned. These unit check-off sheets are reviewed by the Operations Supervisors on a daily basis. The Operation Supervisors ensure that preventative maintenance program classifications are conducted on each unit based on the unit mileage. All maintenance and minor or major repairs of each Randolph County EMS Unit are maintained on a computer-based record for each vehicle through an assigned vehicle tracking number.

RCEMS utilizes a combination of transporting ambulances and a QRV (Quick Response Vehicle) to provide an ALS level of coverage to Randolph County 24 hours a day 7 days a week.

There are the 13 vehicles currently in our fleet. We try to replace vehicles on a 2-2-3 basis (2 first year, 2 second year, 3 third year), although this is not always possible. We will be taking possession of one new ambulance in May 2008 and remounting one ambulance in June of 2008. Currently we have a need to replace three ambulances.

Outfitting and Staffing an Ambulance

One ambulance requires 7½ positions for 24/7 status and 3¼ for prime-time status. Outfitting a new ambulance costs around \$157,000. This includes

- Truck--\$105,000.00
- Communications Equipment--\$10,000
- Supplies & Equipment--\$42,000

Supplies and Equipment

We currently have ten monitor/defibrillators at a cost of \$25,000 each. The County has a maintenance contract on these units, as they must be checked periodically for calibration.

Communication Equipment

Communication equipment on each ambulance consists of the following:

- UHF radio (Med 9/Med 5 frequency)—fixed mobiles, 40 watt, used for dispatch from 911 for emergencies and used by EMTs in the ambulance to talk to the doctor in the ED
- VHF radio (155220/340 frequency)—used for non-emergency communication with the hospital; this channel can be used statewide
- 2 UHF portables--
- 1 cell phone—can call the hospital for diversion to Cone, Wesley Long, High Point, Chapel Hill, etc.
- 1 alphanumeric pager (911 puts information into the pager: patient name, room # at the nursing home, etc.); EMT activates again at the end of the call with ticket #, time, etc.
- Cybertracker plots the ambulance location on a map enhancing the telecommunicator's ability to identify the closest available EMS unit to a medical call.

We are currently planning to replace mobile and portable radios. The current radios are old and are no longer in production, making it difficult to replace worn-out parts.

We are currently planning to add Mobile Spillman to the laptops in order for the crews to see the in coming call medical calls and also to get their ACR report information sooner and quicker decreasing the need to tie-up a telecommunicator.

Ten laptop computers have been purchased: 7 for the active ambulances, 1 for the supervisor's vehicle, 1 in reserve and one for fit testing and for mass casualty events. Each laptop costs \$3,755. Additional costs include printers, mounts, cabling, and installation. The total cost for these laptops was \$55,000.

A software program for the laptops has been purchased and installed. There are two components to this program:

- GIS—The EMT can type in the address from dispatch and a map comes up on the screen showing how to get to the scene.
- ART (Auto Run Tracking)—The EMT types in the ACR (ambulance call report), documents findings, what was reported to them, treatment rendered, etc. He then prints out a report. The ED

doctor gets a copy. This information will be downloaded to the Tax Department for automated billing. (Currently someone in Emergency Services manually adds information on mileage, etc., then sends the report to the Tax Dept., where everything is manually typed again and a bill is generated.)

This computer software program should help with performance:

- Various reports can be generated (e.g., how many IVs a certain EMT performed in a quarter and how many were successful).
- It should reduce errors on reports since they will not have to be manually retyped (in both ES and Tax Department).
- It will save a lot of time in the ES and Tax Department billing process.
- Meets require data submissions to NCOEMS

Comments

Neil Allen, ES Director, feels that longevity rewards would help in retention of field technicians. He also feels that a training officer position is very much needed for the department.

Commonly Used Terms in EMS

Abbreviations

ACR	Ambulance Call Report
ALS	Advanced Life Support
ART	Automated Run Tracking
BLS	Basic Life Support
ED	Emergency Department
EMD	Emergency Medical Dispatch (or Dispatcher)
EMS	Emergency Medical Services
EMT-B	Emergency Medical Technician-Basic
EMT-I	Emergency Medical Technician-Intermediate
EMT-P	Emergency Medical Technician-Paramedic
FTEP	Field training and Evaluation Program
GIS	Geographic Information System
MICN	Mobile Intensive Care Nurse
MR	Medical Responder
PTAR	Piedmont Triad Ambulance and Rescue
QRV	Quick Response Vehicle
RCC	Randolph Community College
SCT	Specialty Care Transport
SOG	Standard Operating Guide

Definitions of Common Terminology

Advanced Life Support-Level 1: Transportation by ambulance, medically necessary supplies and services, and either an ALS assessment by ALS personnel or the provision of at least one ALS intervention.

Advanced Life Support-Level 2: Transportation by ambulance, medically necessary supplies and services, and the administration of at least 3 medications (or 3 doses of the same medication), and at least one of the following ALS procedures: manual defibrillation/cardioversion, endotracheal intubations, central venous line, cardiac pacing, chest decompression, surgical airway, intraosseous line.

Basic Life Support: Transportation by ambulance and medically necessary supplies and services, plus the provision of BLS ambulance service.

Chute Time: Begins when 911 dispatches the unit and ends when the ambulance is moving.

Dispatch Delay: Begins when the call comes in to 911 and ends when 911 dispatches the unit.

Response Time: Begins when 911 dispatches the unit and ends upon arrival on the scene.

Specialty Care Transport: Interfacility transportation of someone critically injured or ill by ambulance, including medically necessary supplies and services, at a level of service beyond the scope of the EMT-P. SCT is necessary when the patient's condition requires ongoing care from one or more health professionals in an appropriate specialty area (nursing, emergency medicine, respiratory care, cardiovascular care, etc.)

Standard Operating Guide: Department manual outlining internal policies and procedures, duties and responsibilities of employees, mandated certifications, dress codes, emergency vehicle operations, etc. This manual is given to all new employees.

Turn-around Time: Begins when the unit arrives at the hospital and ends when the unit leaves the hospital.

Performance Measurements

Two goals for this service area are to provide pre-hospital care that is both timely and of the highest standard possible to the citizens and visitors of Randolph County. A third goal deals with billing.

The first goal, which deals with timeliness, measures three components of response time. These measures were chosen because, according to the Emergency Services Director, most citizens evaluate their level of satisfaction with the service based on response time. Most complaints are related to the length of time it took for the ambulance to arrive on the scene.

- *Percent of time pre-hospital care to the sick and injured is provided within 10 minutes*—The time period of 10 minutes refers to the time from dispatch to arrival on the scene. There are nationally recognized standards for this response time. The California Office of EMS developed a standard based on 4 areas of population density: urban, suburban, rural, and wilderness. Randolph County's average population density per square mile puts us in the suburban category. Ten minutes is the standard for suburban areas. Of course, Randolph County is a large county geographically, and some areas are too remote from ambulance stations to be reached within 10 minutes. Our ambulances reach the scene within 10 minutes 60+% of the time.
- *Percent of time the standard chute time (time lapsed from receipt of call until vehicle is en route) is 2 minutes or less*—Two minutes is a National Fire Service standard, and other counties in North Carolina are using this standard. Ambulance crews strive to be en route within 2 minutes of dispatch, but night calls (when they are sleeping) may take a little longer.
- *Percent of time that turn-around time at the hospital is less than 30 minutes*—This standard was determined by doing time studies of how long it took to deliver the patient, do the paperwork, clean the ambulance, and restock supplies used from that trip.

The first goal also includes some workload measures, including the number of dispatches and the number of transports. These numbers can be useful in determining if call volume has increased to the point of needing another ambulance or checking against revenues to see if workload has decreased or if collections

have decreased. Not all dispatches result in a transport. However, if any treatment is given at the scene, a flat fee of \$100 is charged. If no treatment is rendered, the County receives no reimbursement for that trip.

Neil Allen, Emergency Services Director, calculates performance measures for EMS by using a Spillman report that calculates average response times. For each month of the quarter he reviews one week of EMS calls to determine the number of calls for which chute times are equal to or less than 2 minutes. The same report and procedure are used to determine the number of calls that EMS responds to within 10 minutes and for which turn-around time is 30 minutes or less.

The second goal deals with quality of care:

- *Percent of time providers follow established pre-hospital care protocols*—Protocols for Randolph County EMS are patterned after national protocols, modified and adapted by our medical director. The Emergency Services Deputy Director does a random sampling audit each quarter (e.g., every 4th call or every 10th call) to verify that protocols for the chief complaint for each of the selected calls were followed correctly. This measure was chosen because staff felt it was the best way to ensure proper treatment based on patients' complaints and EMS findings.
- *Number of complaints per 1000 transports*—These are complaints received by phone, mail, or walk-ins. This is a new measure for the 2004-05 fiscal year, added by recommendation from the County Manager's Office.
- *Number of founded complaints per 1000 transports*—The Deputy Director investigates each complaint and determines if it is founded. Each complaint and the subsequent findings are documented on a written form (see sample). Since "founded complaints per 1000 transports" is a new measure, its standard is initially being based on a sampling of 4 counties in North Carolina who are measuring founded complaints: Guilford, Forsyth, Wake, and Durham.

The third goal deals with the billing of ambulance services.

- *Number of days to process call to billing department*—This is a new measure for the 2004-05 fiscal year. As of July 2004, the ambulance crews have laptop computers in their ambulances, which they use for completing ambulance call reports. When they have completed all information, they electronically send the report to the department's Processing Assistant, who reviews the report for accuracy, completeness, and charges. Then she forwards the report to the Tax Department, where actual ambulance billing takes place. During the first quarter of the fiscal year, the ambulance crews were learning how to use the ambulance call report software; the average number of days for processing should decrease in subsequent quarters.

Service Area: 9-1-1 Emergency Communications

Mission

To provide citizens and visitors rapid and convenient 9-1-1 access and dispatch service to the outside agencies of law enforcement, fire, emergency medical, rescue, and human services.

Summary

Randolph County 9-1-1 provides fast, easy access to Emergency Services, Law Enforcement, Fire, Emergency Management, and other public services as deemed necessary. Staff answers and prioritize requests for emergency and non-emergency assistance and dispatch law enforcement, emergency medical service, fire and rescue in a timely manner in order to prevent or minimize loss of property and life. Pre-arrival instructions are given to callers with medical emergencies until responders arrive. Coordination and information relay of operations among different agencies is conducted on a daily basis. Public education to the community through presentations/demonstrations in schools, churches, and/or social organizations is provided upon request. The 9-1-1 Center is staffed 24 hours per day, 365 days per year. This area has 18.77 positions, same as last year.

Overview

On February 4, 1991, Randolph County adopted a 911 ordinance that established an Emergency Telephone System Fund and a monthly 911 service charge of \$1.00, effective June 10, 1991, to all telephone subscribers in the area served by the Randolph County 911 service. (Effective November 15, 1995, this amount was reduced to \$0.65 per month.) Proceeds from this surcharge were used to purchase and maintain emergency telephone equipment, including computer hardware, software and database provisioning, addressing and nonrecurring costs of establishing a 911 system. All telephone service providers collect this surcharge and pass it along to the County, less a 1% administrative fee.

It has been determined that certain positions associated with the 911 service can be paid for from the Emergency Telephone Fund. At this time, the following positions are paid for from this fund: 100% of the MIS specialist in Emergency Services, 100% of the Addressing Coordinator in Computer Services, and 50% of the GIS Analyst in Computer Services.

North Carolina Senate Bill 1242 established the 911 Wireless Fund and Wireless Board. Effective October 1, 1998, the State began collecting from cell phone providers a 911 surcharge of \$0.80 on all cell phones. They pass along 40% of these funds to the 911 systems in the state. These funds can be used for purchase, lease, and maintenance of emergency telephone equipment needed for a wireless Enhanced 911 system. The other 60% of the wireless surcharge is used to reimburse the cell phone providers for their costs associated with designing, upgrading, and maintaining the technology necessary to provide 911 systems the location, name and telephone number of cell phone callers. Randolph County pays for some telecommunicator training from the Wireless Fund.

By 2005 all cell phone providers must use cell phones with a GPS (geographic positioning system) chip. This chip identifies to 911 the location of a cell phone caller by latitude and longitude. In the interim, these providers may use a time-distance method to identify callers and their location. There are currently 7 cell phone providers in Randolph County. All 7 providers are compliant (either by GPS or the time-distance method). This new technology is very important to Randolph County because 30-40% of 911 calls are from cell phones. (One reason for this is that most of the time multiple cell phone callers will report the same incident, usually an automobile accident.

911 Communications System

The Randolph County 911 Communications Center is the Public Safety Answering Point (PSAP) for Randolph County, North Carolina and receives all calls made to the number “911” from within Randolph County. Dialing “911” is the primary method for the public to request emergency assistance from within Randolph County and will connect the caller to the Randolph County 911 Communications Center.

The equipment in the Communications Center has 3 components: Spillman System (CAD, GIS, records for all agencies, alphanumeric paging), a computer server for telephones, and a computer server for radios.

The Communications Center also houses the network connection for County departments located close by or north of town (Courthouse, Register of Deeds, Elections, Library, DRC, DSS). From here, these departments are connected with Computer Services by fiber.

The goal of the Communications Center is to answer 911 calls immediately. However, due to the transmission of data, the caller hears 2 rings before the 911 line in the Center rings. Ideal performance may be affected by call volume, staffing or equipment problems. In case of “dropped” calls, a return call will be made immediately to the number indicated by the Automatic Number Indicator (ANI).

Communications Center procedures include the following for each request for service: determining & documenting address of incident, determining & documenting call-back telephone number, determining & documenting the problem/nature of the request, determining & documenting emergency vs. non-emergency requests, providing pre-arrival instructions if indicated, determining & sending the closest appropriate vehicle to emergency requests for service, and determining any need for, and requesting assistance from, any other agencies as indicated.

The Communications Center has a mechanism in place to document time events for each request for service. These time events include time of request, time vehicle was alerted, time vehicle began responding, time vehicle arrived at scene, time vehicle left scene, time vehicle arrived at destination, time vehicle returned to service.

The Communications Center and field personnel have communications capabilities that allow for immediate communication with one another at any time a vehicle is operating within the agency's service area. There is a minimum of two communications devices per vehicle.

The Communications Center has a contingency plan to provide immediate back-up communications equipment and/or power source as may be necessary for its continued operation in the event of equipment or power failure. Three portable 911 command posts are available to answer 911 calls either at the Center or at an alternative location. The contingency plan includes off-site capabilities in the event of an incident with the Communications Center building.

When the numbers “911” are dialed from a regular telephone, the phone number from which the call originates is sent to a database hosted by Sprint. The database forwards the call to the Randolph County 911 Communications Center with the following information:

- The originating phone number (main number if more than 1 phone)
- If a cell phone, the tower number may display
- Type of phone (business, coin, residential, cell)
- Phone exchange (Liberty, Ramseur, Seagrove, Archdale, Randleman, etc.)
- Name of phone service subscriber,
- Address where the phone is located,
- Emergency service number and any information attached to that number,
- Call time and date,
- Dispatch position that answered telephone,
- 911 line that received the call,
- If call was transferred and the number that call was transferred to.
- Communications barriers, which can exist with persons who are blind, deaf, mute, or who speak a language other than English, are accommodated.

Once a 911 call has been answered by the Center, no caller will be instructed to hang up and dial another telephone number. If a call must be transferred for any reason, the Telecommunicator initiating the transfer will make the necessary connection without breaking contact with the caller until certain the connection is successful. Any person calling for emergency assistance will never be required to speak with more than 2 persons to request emergency medical assistance.

The Randolph County 911 Communications Center operates continuously, 24 hours a day, year round. When a 911 call is received and answered, the Telecommunicator determines the call nature, response type, response level, response priority, and the location and nature of the emergency. He then completes the process to accept the call as a CAD event and immediately sends the call information to the appropriate console for dispatch by radio. The Telecommunicator keeps the caller on line as necessary, gathering additional information and updating CAD for the dispatching Telecommunicator. The Telecommunicator maintains contact with responding units until the event has ended.

Telecommunicators are trained in the management of calls for medical assistance and certified in the use of Emergency Medical Dispatch procedures and are re-certified every two years. The Communications Center dispatches emergency medical response units based upon criteria provided by Randolph County EMS. Nature codes, response level and priority information is used by CAD to assure dispatch of the most appropriate response to any caller's request for assistance.

Communications Hardware and Frequencies

The Randolph County 911 Communications Center emergency communications system provides two-way radio voice communications within, but not limited to, Randolph County, NC to the Communications Center (PSAP) and to facilities where patients are routinely transported, i.e., Randolph Hospital. All Federal Communications Commission radio licenses or authorizations required for the EMS system are held and administered by the Randolph County Emergency Services Department.

The radio system has the capability of communicating through frequencies in the Very High Frequency range (VHF) and in the Ultra High Frequency (UHF) range. The Federal Communications Commission (FCC) has licensed the Randolph County 911 Communications Radio System on specific frequencies for EMS use. These are

VHF Frequencies

Mobile Channel Number	Channel Frequency	Channel Usage
F-1	155.220	Miscellaneous
F-2	155.280	State Wide Mutual Aid
F-3	155.340	BLS Encode
F-4	154.415	County Fire
F-6	155.895	Direction and Control
F-27	162.500	Greensboro Weather

UHF Frequencies

Channel Name	Channel Frequency	Channel Usage
Med 9	462.950	Primary paging frequency
Med 5	463.100	ALS Encode
Med 10		Statewide UHF Frequency

- There are 9- 911 trunks coming into the Center, 6 non-emergency (non-published) lines and 3 designated alarm lines. If all 911 lines are busy, emergency calls automatically roll over to seven-digit numbers with ANI capabilities.
- E-911 calls come to the Center by Sprint and are handled in the Center by a CML Rescue Star phone system. The CML System displays database information, which comes from Sprint.
- Response units are dispatched through a CML conventional frequency system.
- Public Safety agency activities are tracked on a computer-aided dispatch system, manufactured by Spillman. The system is Windows NT based and uses a map display. The system also utilizes MDT terminals for law enforcement only at this date.

Staffing

911 has 16 full-time telecommunicators, 2 supervisors, and an MIS specialist. Telecommunicators work 12-hour fixed shifts that alternate between a 36-hour workweek and a 48-hour workweek. Telecommunicators wear uniforms when on duty. They are provided a shirt, and they get an allowance for pants of a designated color.

Randolph County 911 utilizes a pool of part-time employees, many of whom are seeking full-time positions. The 911 has 10 part-time positions budgeted. Most part-time telecommunicators work 12-hour shifts, but some work fewer than 12 hours in a shift.

Operations

In addition to receiving all 911 calls for the county, the Center dispatches response for Randolph County EMS, Ash-Rand Rescue, Piedmont Triad Ambulance, Randolph County Sheriff, Asheboro Police, Randleman Police, Liberty Police, Ramseur Police, Seagrove Police, Randolph

County Fire Services and Randolph County Fire Marshal. One ear has the 911 telephone earpiece; the other ear listens to the radio communications from the various agencies. Each Telecommunicator is assigned one radio position per shift. This means that one Telecommunicator will dispatch only fire; another, only EMS; and another, only law enforcement. They also monitor alarms (fire, electricity, and panic buttons) for County buildings (Courthouse, McDowell, DSS, and Jail). In the midst of all this activity, these employees must also, after each call, enter into the computer the status of every field unit so that at any given moment it can be determined where each unit is and what it is doing.

Each shift has a supervisor/lead worker who assigns and coordinates work. Since more Telecommunicators are needed during certain times of the day, a staggered staffing pattern is followed:

7 a.m. – 12 noon	4 on duty
12 noon – midnight	5 on duty
midnight – 7 a.m.	4 on duty

Four employees work 7 a.m. – 7 p.m.; one works 12 noon – midnight; and four work 7 p.m. – 7 a.m.

Employees cannot leave their post for a lunch or supper break. They generally eat at their station, either bringing food from home or ordering takeout. There is a TV at each station, and employees are allowed to have the TV on during slower periods.

Department policy dictates that field officers, family members, and other visitors are limited to 15 minutes in the Communications Center. No one with a criminal history is allowed in the Center. 911 administrative employees conduct around 25 group tours annually through the Communications Center. These may be student, church, civic, or scout groups. In addition, staff members go to schools to do presentations.

Training/Certifications/Continuing Education

The initial training for all new employees is the Communications Training Program (CTP). This is a comprehensive 5-7 week classroom course in-house conducted by supervisors during their off time. The department generally hires in groups of 4 or 5 since these instructors must be paid overtime for this work. After successful completion of the classroom training, new employees are assigned to a preceptor (experienced Telecommunicator) for the remainder of their training. Training will not exceed 300 hours. If the trainee has not met the standards of this service area before meeting the 300-hour limit, termination will occur. Throughout the training period, the classroom instructors and preceptors will keep detailed progress reports on each trainee. In turn, the trainee will also evaluate the preceptor.

At the present time, there are 3 certifications, in addition to the CTP, that must be obtained within the first 6 months of employment (if possible) while employees are under the probationary period. These initial certifications must be maintained by recertification and continuing education. Not keeping certifications current and in good standing could result in suspension and/or termination of employment. The County will pay for registration, travel, food and lodging of any initial certification. However, Telecommunicators must pass these on the first try or it will be the employees' responsibility to obtain any failed certification on their own time and at their own expense. The County will fund all costs for recertification if the employee is in good standing. The

Supervisor will be responsible for enrolling employees in all classes, both initial and recertifications, and for notifying employees of details regarding the class. If an employee is unable to attend the class, for whatever reason, he is to give no less than a 48-hour notice to the Deputy Director. Failure to do so may result in disciplinary action, and/or the employee will be subject to reimbursing the County for any expenses incurred.

The first certification is Emergency Medical Dispatch (EMD). This is a 24-hour course. After taking this course, employees must also pass a written exam given by the state Office of EMS to prove they are proficient as EMDs. When Randolph County adopted the EMD program in 1998, we chose Medical Priority as our vendor, and all certifications must be accomplished through them in order to use their product. All EMD updates are implemented within 1 year of release, usually sooner. They coordinate the course offerings. This course teaches the Emergency Medical Dispatcher (EMD) to ascertain information from the caller by asking pre-determined questions. This will allow units to be dispatched with the proper response to reduce liability and to provide field personnel with necessary patient information. The EMD gives pre-arrival and post-dispatch instructions to the caller in order to help the patient. This enables patient care to begin immediately. This certification requires 24 hours of continuing education as well as recertification every 2 years for national standards and every 4 years for state. All full-time and part-time Telecommunicators are required to obtain this certification. It has been determined that the cost for this course can be covered from the Wireless Fund.

The second certification is through DCI (Division of Criminal Information). This is a 40-hour course. The State Bureau of Investigation requires that all Telecommunicators be certified to access information through this system. A criminal background check as well as being fingerprinted is required for this certification. Randolph County is authorized for full access in this system. Receipt of this information is restricted to law enforcement/justice personnel only. All full-time and part-time personnel must recertify every 2 years. The content of this course involves entering and retrieving information from a national database in the areas of criminal history, driving records, stolen property, missing persons, wanted persons, etc.

The third certification is CPR. This is an 8-hour, pre-requisite course for the EMD certification course. These classes are offered in-house or at a local facility.

Once all training has been successfully met and certifications obtained, trainees will be released to function alone as Telecommunicators, without the supervision of a preceptor. After trainees have been released, they will receive random evaluations from the Supervisor.

Mandatory continuing education is required for each Telecommunicator (while off duty) on a quarterly schedule. Employees are paid for required in-service training classes. In-service notifications are sent to each Telecommunicator by email only, using the County-provided email address. When employees have a conflict with an in-service, they are given a makeup assignment, but hours must be accounted for to maintain all required certifications.

Comments

Neil Allen feels that a training officer position is very much needed for this service area, as well as for EMS.

Commonly Used Terms in 911 Communications

Abbreviations:

ANI	Automated Number Indicator
CAD	Computer-Aided Dispatch
CTP	Communications Training Program
DCI	Division of Criminal Information
EMD	Emergency Medical Dispatch
FCC	Federal Communication Commission
GIS	Geographic Information System
GPS	Global Positioning System
LIFE	Linked Information for Emergencies
MDT	Mobile Data Terminal
PSAP	Public Safety Answering Point
UHL	Ultra High Frequency
VHL	Very High Frequency

Performance Measurement Reporting

The goals for this service area deal with answering and dispatching calls quickly. Goal #1 is to ensure that all emergency lines are answered in a timely manner. The department keeps up with the number of incoming calls and separates 911 calls from administrative calls. It is important to maintain this information over a period of time to see if the workload increases to the point that extra telecommunicators are needed. The goal is to complete 35% of incoming 911 calls within one minute, 70% within two minutes, and 95% within three minutes. These percentages were chosen as the standard after calculating the average time their most proficient operator spent on incoming 911 calls over a period of six months.

Why has this service area fallen so short of the standard for completing 911 calls? Cell phone usage continues to increase, as reflected by the fact that they now account for 42% of all incoming 911 calls. Additionally, many citizens are having their house phone lines removed and are using only their cell phones. The number of landlines in Randolph County has decreased from 72,000 to 69,000 over the last year. Cell phone calls take longer because the operator has to type in a lot of information. For the 25% of cell phones that have the GPS chip, the operator types in the latitude and longitude to get the caller's location. For the other 75% without this chip, the telecommunicator must ask the caller where he is calling from, who he is, etc. 911 receives about 34,500 calls from cell phones without the GPS capability per year. Eventually, with new technology and new software, all this information will be available on the telecommunicator's screen, just as it is for calls from landlines.

Goal #2 is to ensure that calls are dispatched quickly. The standards for this goal were chosen by the same method as Goal #1—the average times of the most proficient operator over a period of six months were calculated: 50% within one minute, 75% within two minutes, and 95% within three minutes. Dispatch time begins when the operator hits the “accept” button after getting all pertinent information from the caller. Dispatch time ends when the operator has completed giving instructions to the response agency and ends that call.

The time for dispatching is affected by the volume of calls during peak times. More serious calls may get dispatched before prior less serious calls. Many times the queue of incoming calls increases because multiple cell phone callers are reporting the same incident.

Neil Allen, Emergency Services Director, calculates performance measurements for Communications by using a Spillman report that calculates average dispatch times and tallies the total number of calls received (911 and administrative). For each month of the quarter he runs a detail report of one shift per telecommunicator to arrive at average times to complete incoming calls and to complete dispatch.

Emergency Management

Mission

To enhance the quality of life by assisting citizens, visitors and public safety agencies to effectively prepare for, respond to, recover from and mitigate against all hazards and disasters.

Summary

The Emergency Management service area has staff on-call 24 hours per day, 365 days per year to respond to, prepare for, mitigate against and recover from disasters and emergencies within Randolph County. This area has 1.24 positions allocated. The State provides some funding (\$16,242 this year) for this area of work.

Overview

Emergency Management is an area of service required of all counties by the State of North Carolina. Randolph County has, through the adoption of an Emergency Management Ordinance in 1980, established an Office of Emergency Management to coordinate all activity relative to preparing for, mitigating against, and recovering from hazards, disasters and emergencies in Randolph County. This Office was originally placed under the Fire Marshal. With the creation of the Emergency Services Department in 1983, the Director of Emergency Services was designated as the person responsible for coordinating these functions in Randolph County.

The Director completes an annual work plan for Emergency Management. The State dictates what must be included in the plan. In addition, any time there is an emergency incident, the Director must send a report to the State within 24 hours. All NC counties are required to have an Emergency Operation Plan (EOP).

The Staff Attorney is currently preparing an ordinance that would allow the County Commissioners to declare a state of emergency during a disaster. By declaring a state of emergency, the County would become eligible for certain reimbursements for expenses incurred because of a disaster.

The next area of work for Emergency Management will be to develop a Continuity of Operation Plan and a Continuity of Government Plan. These plans deal with business recovery and business contingency following a disaster

Staffing

The Deputy Director, Emergency Management, works full-time in this service area and a small portion of the Director's time is spent on Emergency Management. The Deputy Director has recently begun spending more time in this area working on federal homeland security grants. The County has been awarded \$570,000 (4 separate grants) in homeland security grants so far, and North Carolina has just received an additional \$41,000,000 for future grants to the counties. The County is using these funds for the following:

- gas masks for law enforcement and EMS,
- multi-hazard trailer and rehabilitation for responders,

- decontamination unit and equipment to enhance the field radio system, and
- training for all responders on hazardous materials, weapons of mass destruction, and terrorism.

Emergency Operation Plan

All counties are required to develop an EOP that details the responsibilities and requirements of various agencies involved in the Emergency Management arena. The EOP enables us to respond to disaster situations in Randolph County, whether natural or man-made.

Our first EOP was written in 1989 and updated in 1992. In July 2003 we received a grant to develop a new EOP, which must be completed by June 30, 2004 and reviewed annually. This plan will outline each involved person's responsibilities but will not tell that individual how to carry out his duties. Everyone must sign off on his knowledge of and readiness to carry out his responsibilities

Hazard Mitigation Plan

The County received a Federal grant, administered by the State, to develop a Hazard Mitigation Plan (HMP), which must be completed by November 2004. The County contracted with the Piedmont Triad Council of Governments to prepare the HMP for us. The Plan was finished and sent to the State for approval in November 2003. After the State approved it, they sent it on to the Federal government for approval; then the County Commissioners approved it in August 2004. The HMP must be reviewed annually and resubmitted to the State and Federal government every 5 years.

Randolph County Emergency Management must coordinate on-the-scene response for hazardous incidents and compliance oversight. For example, if 911 received a call about a fuel spill, someone must go to the scene, assess the situation, contact any relevant state agencies, contact the company whose truck had the spill, make sure clean-up has been arranged for, and to back to the scene later to verify that clean-up was done. In the last year, we responded to 136 suspected anthrax calls alone.

Exercises/Drills

The State requires local Emergency Management entities to conduct an annual tabletop exercise. We use a critique following an actual event as our annual exercise. In January 2003 we used the December 2002 ice storm critique to help develop our EOP.

Since a portion of Randolph County is within a 50-mile radius of the Sharon-Harris Nuclear Plant, we are required by the state to participate in the Sharon Harris exercise once every 5 years.

Performance Measurements

With the completion of the Emergency Operation Plan and the Hazard Mitigation Plan, a new goal and new performance measures are being adopted for the Emergency Management Service Area, as of July 1, 2004. The new goal is to develop, exercise and evaluate the ability of Randolph County to respond to natural or man-made disasters that may threaten the County.

One way this goal will be accomplished is through training of department heads and others involved in the new Emergency Operation Plan. The Emergency Management Director is meeting individually with all participants to explain their roles and responsibilities during a disaster. He will also be conducting hands-on exercises for mock emergencies later in the year. After each such exercise, staff will evaluate Randolph County's readiness for and ability to respond to various disasters. This performance measure was chosen because having a plan in place, with trained responders, is the best way to ensure that Randolph County is capable of dealing with natural or man-made disasters.

The second measure for this goal is to organize and implement a County Emergency Planning Committee. This committee will determine what deficiencies Randolph County has, what equipment is needed, what procedures need to be put into place, etc. for preparing for and responding to emergencies. It is anticipated that the Homeland Security Committee will also function as the Emergency Planning Committee. Official appointments to the Emergency Planning Committee probably will be made by the County Commissioners in January 2005. This performance measure was chosen because agencies represented by members on this committee are all agencies that could be involved during an emergency. Having input from all the possible players before an emergency occurs will help to ensure that Randolph County is as prepared for and as capable of responding to emergencies as possible.

Service Area: Fire Inspections

Mission

To enforce the N.C. State Building Code, Fire Prevention, throughout Randolph County and to provide fire-related services at the request of the citizens, fire departments, or outside agencies, within our means.

Summary

The Fire Inspection area has N.C. State-certified Fire Inspectors that work Monday-Friday, 8:00 a.m. to 5:00 p.m. During these hours the inspectors inspect businesses, churches and schools throughout Randolph County following the N.C. State Building Code. Each week one Inspector is on-call to respond to and assist fire departments on fire-related calls to determine the cause and/or origin. This service area has 5.11 allocated positions

Overview

Randolph County's Fire Inspections Office includes the Fire Marshal, Assistant Fire Marshal and 2 Fire Inspectors, which are state-mandated positions. The Fire Marshal, Assistant Fire Marshal, 2 Inspectors, and a secretary operate out of offices located on the lower level of the Emergency Services Administration Building. Fire Inspectors were added to this service area in 1992, when the state began requiring that all businesses, industries, institutions, and dwellings designed for more than 2 families have periodic fire inspections. Randolph County made the decision at the outset not to charge for any fire inspections. Therefore, there is no revenue stream to support the cost of this program.

When we began doing these inspections in 1992, we also did them for all municipalities in the county except for Randleman and Asheboro. Four Inspectors were hired to do this work. In 1997 the Town of Liberty started doing their own inspections. Then in 2000 Liberty took over the inspections in the Town of Staley. In 2002 Randleman took over Archdale, Seagrove and Trinity. The following year Randleman took over Franklinville and Ramseur. Since that time Randolph County has done inspections only in the unincorporated areas of the county. When the workload decreased because of this, only 3 Inspectors were needed. One Inspector position was deleted at the first vacancy, and that position was shifted to Communications, where there was a great need for another position.

In addition to doing fire inspections and investigations, the Fire Marshal maintains a close working relationship with the 19 volunteer fire departments located in Randolph County. He attends their fire chief council meetings for information exchange. He assists departments with fire district maps, fire relief fund paperwork, and many other issues. The NC Department of Insurance must approve all fire district maps, after which the County Commissioners must approve them. These maps have required a good deal of the Fire Marshal's time in recent years.

The Fire Marshal assists with 911 Communications' radio equipment to find the source of problems and repair it, if possible, without calling in technical support. He is also a part of the Emergency Operations Center staff during a disaster.

Operations

These employees typically work 8 a.m.-5 p.m. Monday-Friday. However, there are some instances when a facility cannot be inspected until after normal working hours because of the nature of its operations. In addition, fire personnel rotate, being on call after hours and weekends. They may be called out to fires, mass gatherings where occupancy exceeds the legal limit, and other types of incidents. All Inspectors wear County-provided uniforms when on duty. Even though only one Inspector is on call at a time, more than one may be called out to an incident after hours. For this reason, all Fire Inspectors drive their County vehicles home each day.

New facilities are identified through the Building Inspections Department. Facilities must pass a fire inspection before being issued a Certificate of Occupancy. Fire Inspectors are also involved in plan reviews for new buildings (sprinkler systems, fire alarm systems, fire extinguishers, exits, etc.) and must approve the building plans before construction can be completed.

The workload in Fire Inspections is processed through a computer software program. The secretary runs a printout of inspections that are due in the coming month and allocates the work out to each Inspector. She makes every attempt to insure that an Inspector is not assigned the same facility twice in a row. If an Inspector has overlooked something in a facility, a different Inspector is more likely to spot it during the next inspection.

If one or more items in a facility are found to be out of compliance with the State Building Code, an Inspector will make a follow-up inspection. Sometimes more than one return visit is necessary. If a facility is still not in compliance after 3 return visits, the Inspector serves the owner a violation notice. The owner has 15 days to correct the problems, or the County takes out a criminal summons on him, or her.

Training

A Fire Inspector has 6 years from date of hire to progress through 3 levels of State certification. However, one of the 6 years may be waived with a letter of proficiency from the Inspector's supervisor. We normally do not request this waiver until the probationary period of the Level 3 certification.

- Level 1—The Inspector must complete a 40-hour class and pass a written exam, whereupon he is given a probationary Level 1 certification. He then must work for 2 years under the supervision of another Inspector who is already at Level 1 or higher. At the end of the 2 years, he must take a State exam. If he passes, he is given his Level 1 certification. If he fails the exam, he must retake the class and the State exam.
- Level 2 – The Level 1 Inspector must complete a 3-day class and pass a written exam, whereupon he is given a probationary Level 2 certification. He then must work for 2 years under the supervision of another Inspector who is already at Level 2 or 3. At the end of 2 years, he must take a State exam. If he passes, he is given his Level 2 certification. If he fails the exam, he must retake the class and State exam.
- Level 3 – The Level 2 Inspector must complete a 2-day class and pass a written exam, whereupon he is given a probationary Level 3 certification. He then must work for 2 years under the supervision of another Inspector who is already at Level 3. At the end of

2 years, he must take a State exam. If he passes, he is given his Level 3 certification. If he fails the exam, he must retake the class and the State exam. The State will, upon request from a supervisor, usually allow a probationary Level 3 Inspector to take the State exam after 1 year.

These certification courses are offered throughout the state at community colleges.

Randolph County currently has 2 Fire Inspectors who are Level 3, and the third one is a Level 1. The Fire Marshal is a Level 3.

The State does have continuing education requirements for Fire Inspectors, at this time they are required to have 6 hours of continuing education based on the NC Fire Prevention Code. And since Inspectors are required to testify in court from time to time as “expert” witnesses, they take continuing education classes of their own volition, especially in the area of arson and related issues. The NC Department of Insurance, state and national fire organizations, and community colleges offer these classes.

During each level of certification, an Inspector may inspect only facilities classified at that level:

- Examples of Level 1 facilities include businesses, small assembly (fewer than 100), mercantile, residential (larger than a 2-family dwelling) and storage occupancies. Level 1 facilities must be inspected at least every 3 years.
- Examples of Level 2 facilities include all Level 1 occupancies and large assembly (more than 100), educational, and industrial facilities. Level 2 facilities must be inspected at least every 2 years.
- Examples of Level 3 facilities include all Level 1 and 2 plus high-rise buildings, buildings with hazardous materials, institutions (nursing homes, prisons, jails), and buildings housing explosives. Level 3 facilities must be inspected at least annually.

Even if a building is vacant, it still must be inspected on the same schedule as it would if it were in use.

Even though some facilities do not have to be inspected every year or even every 2 years, Randolph County Fire Inspections has made the decision to inspect every facility annually.

Fire Investigations

State law dictates that all fires be investigated to determine cause and origin. Many times the fire chief of a volunteer fire department can do this. When he can't or when he wants a second opinion, he will call on the Fire Marshal's Office for assistance.

Any time that the County Fire Marshal or Fire Inspector goes to the scene of a fire; he completes a written report that is kept on file in the office. This report may be needed if a case goes to court.

Randolph County's fire personnel are not sworn officers with power of arrest, although they could be, according to State law, if they had successfully completed the Basic Law Enforcement course. They do, however, work closely with local law enforcement and the SBI.

At this time the Assistant Fire Marshal is a state certified, as well as internationally certified fire investigator.

If a fire is determined to be incendiary, the case is turned over to the appropriate law enforcement agency, and we assist them with the investigation. For any suspicious fire, evidence (including photographs taken at the scene) is collected and some may be sent to the SBI lab in Raleigh for Trace Evidence or may be stored in an evidence room at the Fire Marshal's Office in order to insure a continuous chain of custody. County Inspectors keep a record of what they found at the scene and where the evidence went. This information is locked up in an evidence room that has two locks. It takes two individuals to unlock this room. The Fire Marshal has the key to one lock; the Inspectors have the other keys.

Vehicles

Fire Inspections has a total of 5 vehicles. Four cars and one Suburban investigative unit are in active service. One car not in service allows for preventive maintenance on the other vehicles. All personnel drive their cars home every day since they are potentially on call at any time. The vehicles are as follows:

- 2005 Dodge Ram 1500 Pickup bought new – has over 40,000 miles (assigned to Assistant Fire Marshal)
- 2005 Dodge Ram 1500 Pickup bought new – has over 55,000 miles (assigned to Inspector)
- 2005 Dodge Ram 1500 Pickup bought new – has over 55,000 miles (assigned to Inspector)
- 1996 Ford Crown Victoria bought new – has 90,000 miles (assigned to Fire Marshal)
- 1983 Chevrolet Suburban bought used from Beason Cross Road Fire Department (Forsyth County) – has 11,702 miles (back up investigative unit with tools and equipment)

Equipment

The major equipment of this service area is on each investigative unit:

- generator and light sets – can be used to light a fire scene at night when there are no lights or lighting is insufficient
- Digital photography equipment, 35-millimeter photography equipment and video equipment.
- breathing apparatus (3 sets)
- turn-out gear (4 sets)

In addition, all personnel have radios, cell phones and pagers.

Performance Measurement Reporting

The Fire Marshal's Office has two major functions—to perform fire safety inspections and to investigate suspicious fires.

The first goal is to provide fire safety inspections to all businesses, schools, daycares, and churches. This goal is measured by calculating the total number of facilities, number of inspections and follow-up inspections done, and the percentage of facilities inspected.

Since 1992 the State has been mandating that all buildings other than single- or two-family dwellings have periodic fire inspections. Depending on what category a business or facility falls in, it may need to be inspected every year, every other year, or every three years. Randolph County's goal, however, is to inspect every facility in every category every year. Therefore, even if 100% of all facilities are not inspected annually, the County is still doing more than the State requires each year.

The second goal is to investigate all suspicious fires, as mandated by state statutes. The Emergency Services Director looked for national standards for percentage of fires for which cause is determined. However, Mississippi was the only state found to have a standard, and theirs was 85%. This is the standard adopted by Randolph County.

The Fire Marshal provides the Emergency Services Director with the number of fire inspections, data retrieved from PICK (certificates of occupancy given, which tells how often inspections are required), the number of investigations to which his inspectors have responded, and information from Spillman (number of suspicious fires and percent for which cause is determined).