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**SQUAD**



**1998  
Annual  
Report**

By Dayton Haugh  
Captain

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## **Executive Summary**

As we approach the year 2000 the Rescue Squad continues to grow. Our dedicated men and women answered 10,897 calls for assistance last year, a 13.6% increase from the year before. Our cost of providing service has remained relatively stable over the last several years. The 1998 cost per incident is artificially low because a number of capital expenses were carried over to the 1999 - 2000 fiscal year. A more accurate figure would be \$55.00 to \$60.00 per response

The Squad faces the need to make major capital expenditures during the 1999 - 2000 fiscal year as part of our physical plant approaches 40 years of age. The increase in membership has made our office systems and personnel space inadequate for administration, housing and training. As our service becomes more technical our need for specialty vehicles has increased, and the obsolete technical rescue and water rescue units need replacing.

As one of the few volunteer rescue squads still responsible for providing service to a community of this size and population, we remain dedicated to helping to make our community a safer place to live, work and play.

## SQUAD MISSION

The Articles of Incorporation of the Albemarle Rescue Squad dated January 14, 1958, set forth the following statement of purpose:

To save life and administer first aid, to teach methods of safety and first aid to the general public and in the schools; to serve in time of flood, fire, hurricane and famine; to render assistance in case of accident, casualty, and illness; to instruct its members in principles and applications of the live saving and first aid...

The *Albemarle* Rescue Squad became the *Charlottesville - Albemarle* Rescue Squad soon after beginning operations in November of 1960. The Squad carries on the original mission by:

1. Training and equipping members to respond to calls for assistance and provide basic and advanced life support care
2. Maintaining specialized rescue teams to provide vehicle extrication, water rescue, and technical rescue
3. Providing logistical support for the fire departments when needed
4. Supporting and providing first aid equipment to fire first responder agencies

The Charlottesville - Albemarle Rescue Squad strives to meet or exceed applicable standards of the Commission for the Accreditation of Ambulance Services (CAAS) or of the American Society for Testing and Materials (ASTM).

Each year Squad members compete in competitions of skill. The Technical Rescue Team was the state Rescue Champion for 1994-95; the Dive Rescue Team was the **state Dive Rescue Champion** for 1995-96, 1997-98, 1998-99 and is the **1999-2000 champion**; and the Advanced Life Support Team has been state ALS Champions on four occasions - 1986-87, 1988-89, 1995-96 and 1997-98.

## **I. THE CHARLOTTESVILLE - ALBEMARLE RESCUE SQUAD**

### ***A. Introduction***

The Charlottesville - Albemarle Rescue Squad (C-ARS) is the primary provider of emergency medical care and transport, and technical rescue services, including vehicle extrication service, to the City of Charlottesville, University of Virginia, and part of Albemarle County.

C-ARS was formed in 1959 after a deputy sheriff was injured in a building collapse in downtown Charlottesville. Members were trained in first aid by Dr. David Strider and equipped station wagons with first aid supplies. Phones in member's homes, Joel Cochran's office, and the Albemarle Sheriff's Office received calls for help. For years Joe Williams and Bill Wingfield of A-C Answering Service provided daytime dispatch for calls. In 1989 dispatch was transferred to the Charlottesville / Albemarle / University of Virginia Emergency Operations (9-1-1) Center.

Members ran the ambulances from their homes and first aid supplies were kept in a garage behind the Southern Railway Station until 1963, when the squad building was constructed at its present location on McIntire Road on a site leased from the City of Charlottesville. Crews now staff the building on a 24-hour a day basis. Members are issued pagers allowing for callback of off duty members during periods of high call volume or for special rescue incidents. The minimum level of training for all members is Emergency Medical Technician.

All members are *volunteer* - no member is paid for their service. Members are required to run one day or night every week and to attend monthly training. No one is charged for Rescue Squad services. Operations are funded through an annual fund drive, general donations (including donations from Albemarle County and the University of Virginia), and memory donations throughout the year.

## ***B. Agency Licensure***

C-ARS is licensed by the Virginia Department of Health as an *Emergency Ground Transport - Advanced Life Support (Cardiac/Paramedic)* agency pursuant to the Rules and Regulations Governing Emergency Medical Services. Every two (2) years the agency license must be reissued, and, to be eligible for licensure, the Field Representative of the Office of Emergency Medical Services must inspect the agency. The agency is required to have available for inspection, among other things, its Standard Operating Procedures, training and personnel records, vehicle maintenance records, medical equipment and supplies, and vehicles.

## ***C. Agency Management***

### 1. Board of Directors

C-ARS is a volunteer, non-profit, Virginia non-stock corporation, which qualifies as a 501(c)(3) charitable corporation under the Internal Revenue Code. Control of the corporate business is vested in the Board of Directors. Current members of the Board include:

J. W. Albright  
Carol Baber  
John Burruss  
Clint Butts  
Linda Butts  
Jim Carpenter  
Larry Claytor  
Pete Davidson  
L. Dayton Haugh, J.D.  
William B. Hunt, M.D.  
Robert B. Jaskiewicz  
Cindy Kuykendall  
Charlotte Menk  
Julie Pendolino  
Joe Phillips  
Benjamin Sojka  
Frances Updike, R.N.  
J. Page Williams, J.D.

### 2. Corporate Officers

President - Robert B. Jaskiewicz  
Vice-President - Clinton Butts  
Secretary - Linda Butts  
Treasurer - Cindy Kuykendall

## ***D. Squad Operations***

### **1. Line Officers**

The Line Officers are responsible for day-to-day operations of the squad, including human resources and training, incident response and management, etc. The squad has a "flat" organizational structure, and, in keeping with tradition, continues to refer to its chief operations officer as 'Captain' rather than Chief or Rescue Chief. The following serve as Line Officers:

*Captain* - Lair Dayton Haugh, J.D.  
*First Lieutenant* - Robert Hamilton  
*Second Lieutenant* - D. Cory Perry  
*First Sergeant* - William P. Spencer  
*Second Sergeant* - Cliff Lewis

One of the Line Officers (or other senior member) serves as the "Duty Officer", and is on call 24 hours a day for emergency management and administrative matters, complimenting the on-duty supervisor (crew sergeant).

### **2. Support Officers**

The Captain appoints members to certain support positions, including:

a. *Motor Sergeant* (Ben Sojka) - responsible for maintaining the fleet of vehicles, performing minor repairs, coordinating major repairs and maintaining service records. A fleet protection program through the manufacturer covers most ambulances.

b. *Supply Sergeant* (J. W. Albright) - responsible for maintaining a sufficient stock of first-aid equipment and supplies for use on calls. Also maintains awareness of changes within industry and recommends substitution of supplies or additions to stock to the Investigation Committee to insure equipment and supplies are state-of-the-art and function to level of expectation.

c. *Rescue Lieutenant* (Pete Davidson) - supervises the dive rescue and technical rescue sergeants. Primarily responsible for equipment and operations of the heavy rescue trucks.

d. *Dive Rescue Sergeant* (Jim Miller, R.N.) - in charge of the dive rescue team and supervises its functions. Primarily responsible for setting team goals, all training and management of the budget.

e. *Technical Rescue Sergeant* (John Burruss) - in charge of the technical rescue team and supervises its functions. Primarily responsible for setting team goals, all training and management of the budget.



f. *Training Officer* (Matt Yanovitch) - responsible for all the training, certification and re-certification of all active members. The Training Officer is also responsible for handling the preliminary investigation of all complaints against Squad members performing in an emergency. Reports of the findings are made to the Captain.

g. *Health & Safety Officer* (Maria Odum, R.N.) - is the communicable disease liaison officer who maintains oversight and provides information to prevent exposure to infectious disease and investigates all incidents of exposure to infectious disease. Two other nurses (Darlene Rea and Roy Tomlin) and a hazardous materials (haz-mat) specialist (Clint Butts) assist with the hepatitis B immunization program as well as the tuberculosis testing program. All three nurses and the haz-mat specialist are active squad members.

### 3. Committee Structure

The By-laws set forth various committees that serve certain specific functions. The President appoints various interested members to the committees. The committees include:

a. *Executive* - the Executive Officers constitute this committee. It is the duty of the Executive Committee to transact business for the Squad.

b. *ALS/BLS* - made up of squad members, representatives of the University of Virginia and Martha Jefferson hospitals, the Pre-Hospital Coordinators and the Basic Life Support Training Coordinator, this committee is responsible for reviewing health care provider performance and releasing providers to practice as attendant-in-charge (AIC), shock-trauma, cardiac technician or paramedic based upon written evaluations of calls by senior members. Applicants for shock-trauma and cardiac classes are screened by the committee.

c. *Health and Safety* - investigates incidents involving damage to property or injury to determine adherence to standard operating procedures and to suggest improvements involving members health and safety. Assuring safe operation of vehicles and equipment is the goal of the committee. A sub-committee, the Infection Control Committee, is responsible for member inoculations and prevention of infectious disease. The sub-committee includes all the Communicable Disease Liaison Officers (CDLO's) and the Hazardous Materials Officer.

d. *Manpower and Training* - accepts completed applications and conducts a background investigation of applicants. Supervises a three month probationary period and reviews written evaluations of the applicants performance from as many as three different crew sergeants. If satisfactory, recommends acceptance as a probationary member. Supervises the probationary member process and reviews written evaluations of the probationary member. After six months recommends acceptance or denial of full membership based upon documented performance. Develops training according to needs discovered in the process of evaluation.

e. *House* - responsible for building maintenance and repair. One committee member is on-call 24 hours a day in the event emergency system repairs are required.

f. *Investigation* - certain squad officers make up the Investigation committee, which is responsible for reviewing all proposed purchases to insure that the best value is obtained for the best price.

g. *Report Board* - the line officers sit as a committee to hear and decide matters concerning violations of squad rules and regulations; their disposition may be appealed to the Board of Directors. The Captain has the authority to suspend any member up to 30 days.

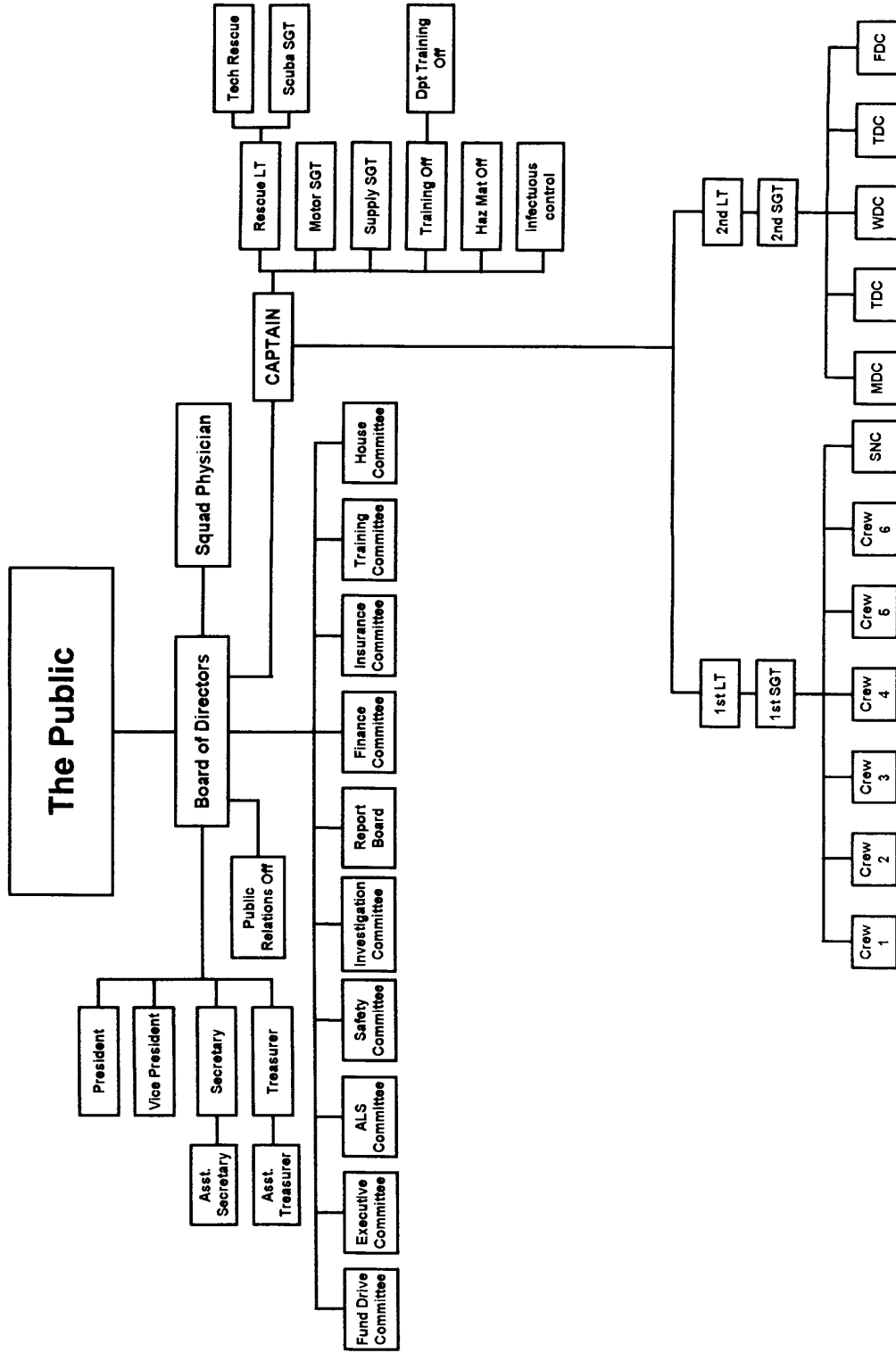
#### 4. Fiscal Management

C-ARS does not bill for service. Donations are handled by the Treasurer or her assistant only. Both are bonded, and the squad is audited annually by a firm of Certified Public Accountants. Purchasing is restricted to the Vice-President, supply sergeant, motor sergeant and house committee chair. The Board of Directors, Executive Committee or Vice-President must authorize all other purchases.

#### 5. Organizational Chart

On the following page you will find an organizational chart depicting the relationship among various squad divisions. (updated 10-1-96).

# Charlottesville - Albemarle Rescue Squad Inc., Organizational Chart

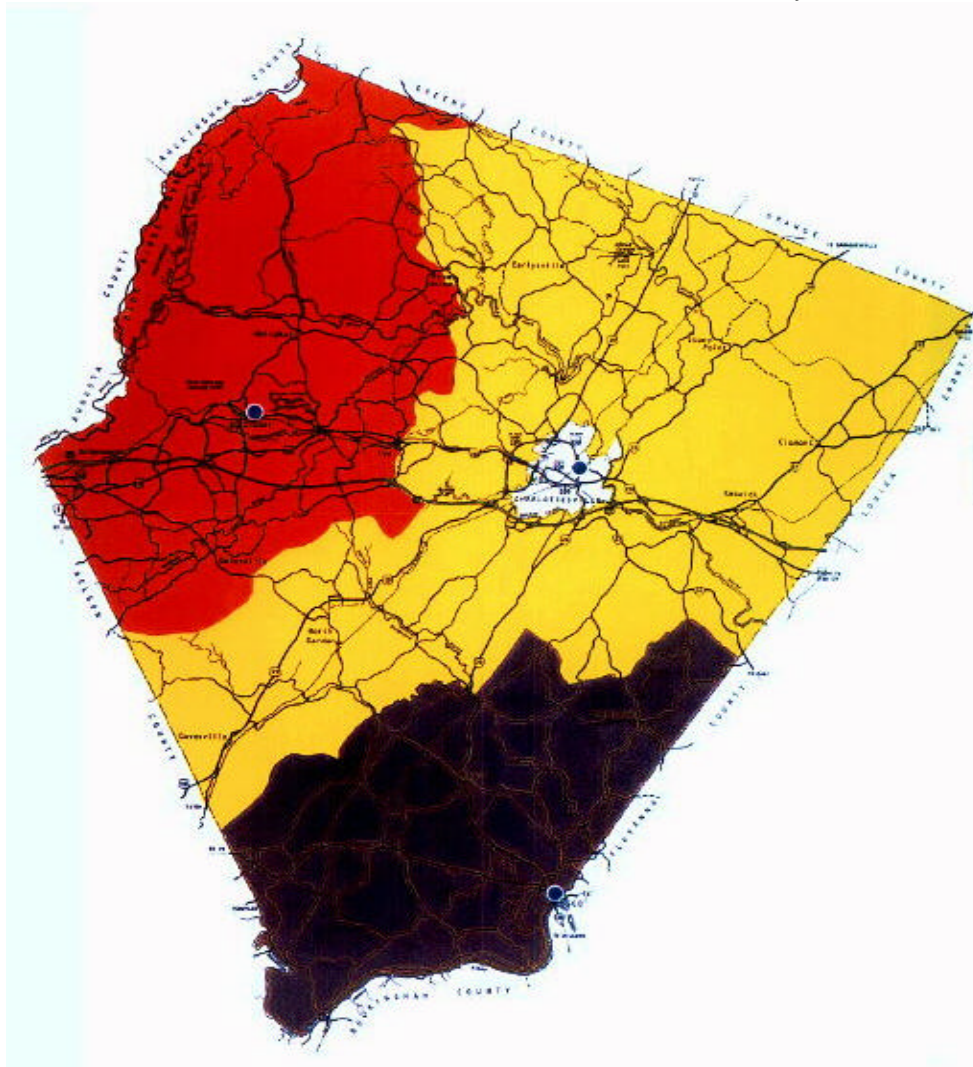


## II. THE EMERGENCY MEDICAL SERVICES (EMS) SYSTEM

### A. Rescue Squad Primary Response Areas

Western - Albemarle  
Rescue (WARS)

## **CHARLOTTESVILLE - ALBEMARLE RESCUE SQUAD**



Scottsville Rescue (SRS)

*Note: The areas shown are approximate and for illustrative purposes. Map courtesy Albemarle County Planning and Community Development.*

**Primary Service Area:** Interstate-64 from the Ivy exit East past the Albemarle/Fluvanna line; U.S. Route 29 from the Greene County line South to Nelson County; U.S. Route 250 from Ivy East into the Beaverdam area of Fluvanna County; Route 20 from the Orange County line South to Carter's Bridge; Route 53 East to the Fluvanna County line; Garth Road to Hunt Country Store; Route 601 North to Boonesville; and, the City of Charlottesville and University of Virginia.

C-ARS primary service area encompasses the following land area:

|                          |                         |        |
|--------------------------|-------------------------|--------|
| City of Charlottesville: | 10 of 10 square miles   | (100%) |
| County of Albemarle:     | 366 of 742 square miles | (49%)  |

**Secondary Service Area:** C-ARS assists both the Western Albemarle Rescue Squad and Scottsville Rescue Squad when possible if they are unable to take a call in their area, or if they need specific support from an advanced life support technician. Both agencies assist us when possible.

C-ARS also assists agencies from outside the area when possible when they need assistance for technical rescue or from an advanced life support technician. Several times each year we make emergency responses to calls in surrounding counties with a completely staffed ambulance when those counties are unable to respond. We receive more calls for such assistance than we are able to handle.

### ***B. System Access - Communications***

Callers in need of emergency medical or rescue services access help by calling the universal emergency number (9-1-1). Communicators trained in emergency medical dispatch at the Charlottesville-Albemarle-University of Virginia Emergency Communications Center (ECC), which is not associated with the rescue squad, answer calls.

Communicators determine the appropriate agency or agencies to respond, assign a priority level to the call, provide pre-arrival instructions and dispatch the call by radio. The EMS agencies have no contact with the calling party, and are unaware of the need for service until notified by radio page. The Center's operating medical director (Dr. George Lindbeck) approves the dispatch priority protocols and pre-arrival instructions.

The local governments of Planning District 10 (PD10), Albemarle, Greene, Louisa, Fluvanna and Nelson counties, and the City of Charlottesville, hold the

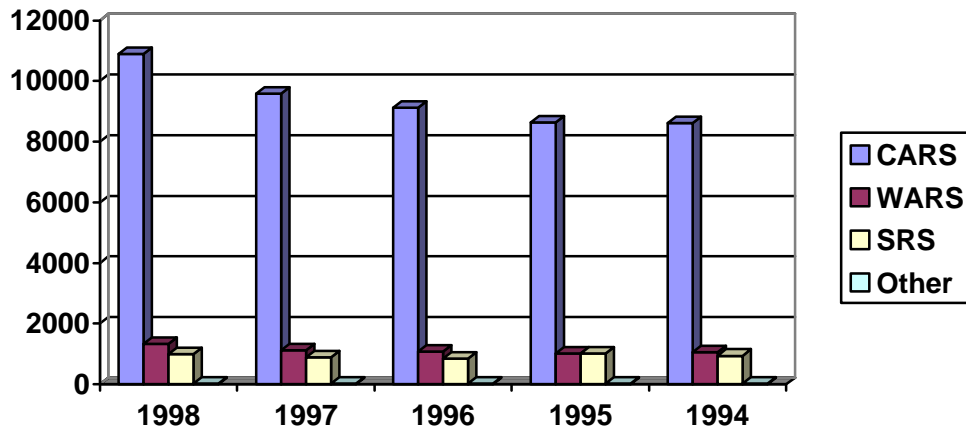
licenses for the PD 10 EMS radio system, designed and in place since the late 1970's. All EMS agencies in PD 10 have communications with each other. Locally, the main repeater has emergency auxiliary power, and there are two levels of back-up communication should the main repeater fail.

Access and communications generally comply with Section 204 of the Standards for the Accreditation of Ambulance Services of the Commission on Accreditation of Ambulance Services (CAAS Standards), and ASTM Standard F 1220-89.

***C. Total EMS Incidents Dispatched from the 9-1-1 Center***

| <b>Agency</b> | <b>1998</b>   | 1997   | 1996   | 1995   | 1994   | % Change |
|---------------|---------------|--------|--------|--------|--------|----------|
| <b>C-ARS</b>  | <b>10,897</b> | 9,587  | 9,112  | 8,631  | 8,621  | +13.6    |
| WARS          | 1,337         | 1,116  | 1,070  | 1,009  | 1,056  | +19.8    |
| SRS           | 982           | 887    | 846    | 1,007  | 938    | +10.7    |
| Other*        | 18            | 29     | 27     | 29     | 22     | -37.9    |
| <b>TOTAL</b>  | <b>13,234</b> | 11,602 | 11,044 | 10,676 | 10,637 | +14.07   |

\* The "other" category includes incidents in C-ARS' primary service area handled by outside agencies, such as Rockfish Valley Fire and Rescue, Orange County Rescue Squad, Greene County Rescue Squad, Nelson County Rescue Squad, University of Virginia Medical Center, etc.



### ***D. First Response***

Nationwide a system of 'first response' to medical and trauma emergencies has evolved. In cases of cardiac arrest and multiple system trauma the response of trained and equipped personnel can make the difference between life and death.

Locally, each dispatch protocol determines whether or not there will be a first response. In the City of Charlottesville the Charlottesville Fire Department provides first response and is licensed by the Commonwealth as an advanced life support non-transport agency.

The Albemarle County Fire Rescue Division is licensed as an advanced life support non-transport agency as well, and provides some daytime staffing of the Earlysville, Stony Point and Seminole Trail volunteer fire companies. The East Rivanna Volunteer Fire Company, North Garden Volunteer Fire Company, Earlysville Volunteer Fire Company, Stony Point Volunteer Fire Company, and Seminole Trail Volunteer Fire Department are all licensed as basic life support non-transport agencies and provide first response in their response areas. The rescue squad provides most patient care supplies.

### ***E. System Evaluation***

In April of 1996 the County of Albemarle distributed a Citizen Survey to residents as a part of the *Owner's Manual: Your Guide to the Programs and Services of Albemarle County Government*. All data was based upon those who had used the service at least once in the last 12 months. The results are summarized as follows:

“...An overview of the results indicates that the Fire/Rescue Squad had a higher satisfaction rate than any other county service. With an average importance rating of 1.1, and an average satisfaction of 1.2, the Fire/Rescue Squad received little criticism. Since 1 was the highest mark that could be received, these figures are quite revealing as to citizen's satisfaction.

...Despite the fact that the Fire/Rescue Squad has over 740 square miles to cover, not one comment was received in terms of the ability of the department to respond effectively.

...We hope you are as pleased about the results regarding the Fire/Rescue Squad as we are. The ratings stand out as the very best, with the Fire/Rescue Squad being identified as the most important service in the county as well as garnering the most satisfaction ratings among respondents...”

Richard E. Huff, II  
Deputy County Executive

Despite the fact that the “Fire/Rescue Squad” is not one department, but many departments working within one system, and that it is not technically a program or service provided by county government, but by 10 independent volunteer organizations and the Charlottesville Fire Department and Charlottesville Volunteer Fire Company, the results nonetheless indicate system effectiveness.

### **III. MEDICAL DIRECTION**

#### ***A. Operating Medical Director***

C-ARS Operating Medical Director (OMD) is George Lindbeck, M.D., an Emergency Department physician at Augusta Hospital Center. Dr. Lindbeck served as the OMD for all EMS agencies in PD10, except for commercial ambulance services, until 1998. (In 1998 Dr. Jeff Alberts, an Emergency Department physician at Martha Jefferson Hospital, and Dr. Scott Just, who leaves the University of Virginia Emergency Medicine Residency Program in July, 1999, to join Augusta Hospital Center, became OMD’s for some PD10 agencies.)

Dr. Lindbeck was graduated from the University of Maryland Medical School in 1986 and came to the University of Virginia as a Medical Resident. He is Board Certified in Internal Medicine and Emergency Medicine. Prior to attending medical school he was a paramedic with the Prince Georges County (Maryland) Fire Department. He lives in the Miller School area of Albemarle County with his wife and son.

Dr. Lindbeck was appointed to the Virginia Emergency Medical Services Advisory Board in July 1994 by Governor Wilder, and reappointed by Governor Allen. He rotated off the Board in 1998, having served the maximum term allowed by law. He chaired the Boards Medical Direction Committee, which is concerned with state-wide pre-hospital treatment protocols, medications and



procedures. Dr. Lindbeck received the Governor's Award as *Virginia Outstanding Operational Medical Director* in 1996.

### ***B. Treatment Protocols - Quality Assurance***

Treatment of patients in PD10 is governed by protocols approved by the OMD and the Medical Control Review Committee of the Thomas Jefferson EMS Council. These protocols specify accepted scope of practice for basic and advanced life support care. Provisions for on-line and off-line (standing orders) medical command are included.

Adherence to protocol is ensured by retrospective review of the prehospital patient care reports of all patients treated each month, and by observation by the OMD, Advanced Life Support (ALS) Prehospital Coordinators, and Basic Life Support (BLS) Training Coordinator. Hospital staff may also report noncompliance. The ALS/BLS Committee and/or OMD will review all reports of individuals not operating in conformance with protocols. The OMD has the ultimate authority over patient care.

The OMD, ALS Prehospital Coordinators and BLS Training Coordinator conduct evaluation of treatment modalities. Records of advanced skills (i.e., endotracheal intubations, Automatic External Defibrillation, Combitube placement, etc.) are maintained.

These protocols and procedures are in substantial compliance with Sections 201.01 and 201.02 of the CAAS Standards, and ASTM Standard F 1149-93.

### ***C. Medical Command***

Physicians (Second-year Emergency Medicine Residents or Attending physicians) at the University of Virginia Medical Center Emergency Department provide oversight of medical treatment. Providers may reach command by radio or telephone. Command physicians, including the OMD's, also ride on the ambulances periodically and provide care in the field. Incoming Emergency Medicine Residents at the U. Va. Medical School are assigned rotations on C-ARS ambulances as a part of their first year course of studies, observing and assisting with patient care.

### ***D. Continuing Education***

C-ARS members have a comprehensive continuing education program. Basic Life Support personnel meet monthly for instruction in required topics, have regular, required skills drills, and review and discuss patient care issues. The BLS Training Coordinator provides instruction from the TJ EMS Council. The Training Coordinator provides similar instruction for the other transport agencies in PD10. Her familiarity with region-wide trends allows a comprehensive, system-wide approach to training.

Advanced Life Support personnel also meet monthly, with similar instruction, skills drills, and call review, provided by the ALS Prehospital Coordinators from the University of Virginia Medical Center. The Prehospital Coordinators also cover PD10, and have the same familiarity with regional and statewide trends.

Supplemental classes are also available. These include Pediatric Advanced Life Support, Advanced Cardiac Life Support, and other specialized seminars. Advanced Life Support Training (Shock-Trauma and Cardiac Technician) classes are taught by the ALS Prehospital Coordinators on a regular, rotating basis, at the University of Virginia Medical Center.

## **IV. SERVICE EFFORTS AND ACCOMPLISHMENTS (Inputs)**

### ***A. Personnel - All Volunteer***

| <b>CERTIFICATION - MEMBER</b> (Current Applicant) | <b>1999</b>   | 1996     | Change   |
|---|---------------|----------|----------|
| (BLS) Emergency Medical Technician                | 47(3)         | 39 (20)  | +8       |
| (ALS) EMT - Shock-Trauma Technician               | 15            | 22       | -7       |
| (ALS) EMT - Intermediate*                         | 3             | 5        |          |
| (ALS) EMT - Cardiac Technician                    | 41            | 29       | +12      |
| (ALS) EMT - Paramedic                             | 25(1)         | 15       | +10      |
| Tactical / Dive Team / Support (not listed above) | 16            | 7        | +9       |
| <b>TOTAL</b>                                      | <b>147(4)</b> | 131 (20) | +16(-16) |
| M.D.  | 3             | 2        | +1       |
| Registered Nurse                                  | 11            | 18       | -7       |

As of 5-19-99

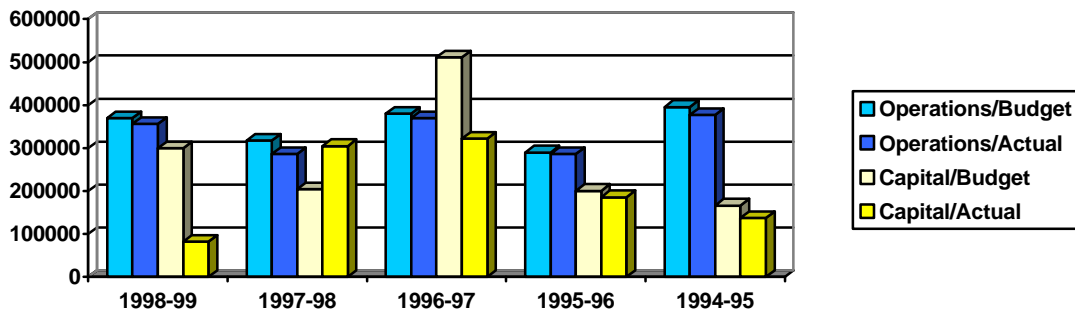
\* Five members attended the pilot EMT-Intermediate course at the University of Virginia Medical Center, one of 5 pilot courses held throughout the country to field test a new curriculum. EMT-I's have received an additional 8 hours of training and were also certified as Virginia Cardiac Technicians. Two of the original five have now received their EMT-Paramedic certification.

**B. Percentage of Personnel Meeting Virginia Minimum Certification Standards for Attendant in Charge**

**100%**

**C. Total Operations and Maintenance (O & M) and Capital Expenditures**

| <b>Year</b>               | <b>1998-99</b>      | <b>1997-98</b> | <b>1996-97</b> | <b>1995-96</b> | <b>1994-95</b> |
|---------------------------|---------------------|----------------|----------------|----------------|----------------|
| <b>O &amp; M (Budget)</b> | <b>\$370,106.00</b> | \$317,000.00   | \$380,000.00   | \$289,900.00   | \$395,901.00   |
| <b>O &amp; M (Actual)</b> | <b>\$355,829.86</b> | \$286,719.45   | \$369,370.28   | \$286,513.87   | \$377,211.34   |
| <b>Capital (Budget)</b>   | <b>\$299,779.00</b> | \$204,400.00   | \$510,769.00   | \$200,620.00   | \$166,375.72   |
| <b>Capital (Actual)</b>   | <b>\$82,672.17</b>  | \$305,015.13   | \$321,840.36   | \$185,545.38   | \$137,042.23   |



**D. Major Capital Budget Items**

(Proposed) **1999-2000**

- Upgrade SCBA to meet new NIOSH Regs.
- Forcible Entry Tools – Squads
- SCBA Escape Packs – Squads
- Replace Confined Space Air Monitor
- Replace Station Alerting System
- Renovate Station Training Room
- Renovate Station Bathrooms
- Refurbish Medic 141 (cont'd from 98-99)
- Replace Technical Rescue Truck
- Replace Water Rescue/Scuba Truck
- Upgrade/Replace Computer Equipment

**1998-99**

Pulse Oximeter  
 Portable Electric Generator – Squad 134  
 Hurst Extrication Equipment – Squad 134  
 Hurst High Pressure Air Bags – Squad 133  
 Electric Ventilation Fan – Squad 133  
 Zodiac Boat  
 Boat Trailer  
 Upgrade SABA for Confined Space  
 Renovate South Bay Doors  
 Repair Rear Patio and Retaining Wall

**1997-98**

Replace Medic 135  
 Refurbish Medic 141  
 Replace Radio Tower  
 2 Pulse Oximeters  
 ALS Intubation Manakin  
 2 Auto/Manual Defibrillators  
 Lifepak 10 Upgrades  
 Pagers  
 Replace Car 130  
 Replace Car 131  
 Replace Squad 134  
 Replace Station Windows  
 Concrete Pad at Station – South Bays  
 Upgrade SCBA for Technical Rescue  
 2 GPS

**1996-97**

3 Pulse Oximeters  
 2 Auto/Manual Defibrillators  
 2 Hurst Maverick Extrication Tools  
 Replace Electric Hurst Pump – Squad 133  
 Back-up Hurst Portable Power Unit  
 Confined Space Air Monitor  
 Replace Interior Station Lighting  
 Replace South Bay Roof  
 Renovate North Bay Doors  
 Refurbish Medic 140  
 Replace Medic 137

**1995-96**

2 Auto/Manual Defibrillators  
 ALS Trainer & Simulator  
 Replace SCBA – Squads  
 Replace Electric Generator – Technical Rescue  
 Collapse / Trench Rescue Air Shores  
 Replace Car 132  
 Replace Medic 136

**1994-95**

Computer Equipment  
 Major Building Maintenance  
 Replace Medic 135  
 Replace Medic 138  
 Refurbish Medic 141  
 Replace Medic 139  
 Remove Underground Fuel Tank  
 MCI Trailer

**D. Staffing per response (Average)**

|             |      |      |      |      |      |
|-------------|------|------|------|------|------|
| <b>1998</b> | 1997 | 1996 | 1995 | 1994 | 1993 |
| <b>2.85</b> | 2.83 | 2.77 | 2.74 | 2.81 | 2.72 |

**E. Personnel-hours (on calls only)**

|             |      |      |                 |                 |                 |
|-------------|------|------|-----------------|-----------------|-----------------|
| <b>1998</b> | 1997 | 1996 | 1995            | 1994            | 1993            |
| N/a         | N/a  | N/a  | 18,588.07 hours | 19,040.86 hours | 17,137.57 hours |

**F. Total Stand-by hours – 1,486.5\***

\* time at high school or U. Va. sports events, fun runs, public displays, etc.

**G. Apparatus**

| Unit Number      | Year/Manufacturer             | Model                     | Type                              | Value     |
|------------------|-------------------------------|---------------------------|-----------------------------------|-----------|
| Car 130*         | 1998 Chevrolet                | Suburban                  | ALS Zone Car                      | \$60,000  |
| Car 131*         | 1998 GMC                      | Tahoe                     | ALS Zone Car                      | \$52,000  |
| Car 131*         | 1995 GMC                      | Tahoe                     | ALS Zone Car                      | \$52,000  |
| Squad 133        | 1986 Mack/Saulsbury           | MC/18' Rescue Box         | Heavy Rescue Squad                | \$400,000 |
| Squad 134*       | 1998 International/<br>Pierce | 4800/13.5' Rescue<br>Box  | Medium Rescue Squad               | \$210,000 |
| Medic 135*       | 1993 Ford/Med-Tech            | E-350                     | Type II Ambulance                 | \$65,000  |
| Medic 136*       | 1995 Ford/AEV                 | E-350                     | Type III Ambulance                | \$85,000  |
| Medic 137*       | 1996 Ford/AEV                 | E-350                     | Type III Ambulance                | \$85,000  |
| Medic 138*       | 1993 Ford/AEV                 | E-350                     | Type II Ambulance                 | \$65,000  |
| Medic 139*       | 1995 Ford/AEV                 | E-350                     | Type II Ambulance                 | \$65,000  |
| Medic 140        | 1996 Ford/Horton              | E-450                     | Type III Ambulance                | \$95,000  |
| Medic 141        | 1994 Ford/Horton              | E-350                     | Type III Ambulance                | \$90,000  |
| Support 143      | 1979 Chevrolet/Baker          | C-60/Utility Box          | Technical Rescue Truck            | \$7,500   |
| Scuba 144*       | 1987 Ford/Horton              | E-350                     | Scuba Van                         | \$10,000  |
| Collapse Trailer | 1990 Wells Cargo              | 20'/14,000 lb.            |                                   | \$7,500   |
| MCI Trailer      | 1994 Wells Cargo              | 16'/7,700 lb.             | Mass Casualty Response<br>Trailer | \$7,200   |
| Boat 145         | 1997 Zodiac                   | 12'/55 hp. Jet Drive      | Rescue Boat                       | \$9,500   |
| Boat 146         | 1972 Boston Whaler            | 13'/30 hp. Prop.<br>Drive | Rescue Boat                       |           |
| Boat 147         | 1998 Zodiac                   | 11'/10 hp. Prop.<br>Drive | Rescue Boat                       | \$9,500   |

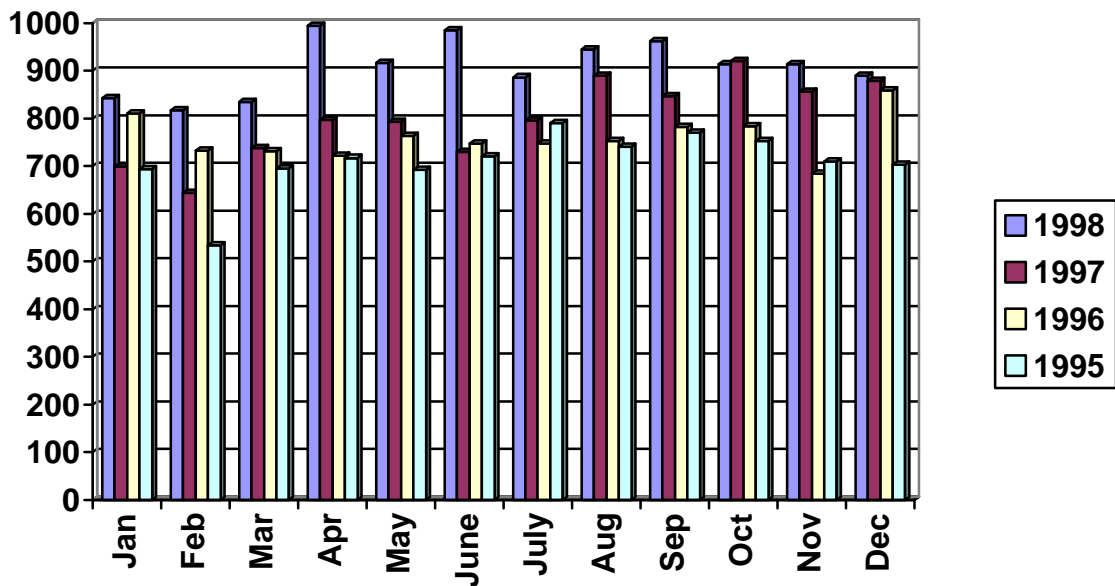
\* - Four-wheel drive vehicle

## V. SERVICE EFFORTS AND ACCOMPLISHMENTS (Outputs)

### A. Population Served

1. City of Charlottesville                      40,341 of 40,341 (100%)
2. County of Albemarle                      49,822 of 68,040 (73%)
3. University of Virginia                      16,000 (student population) (100%)

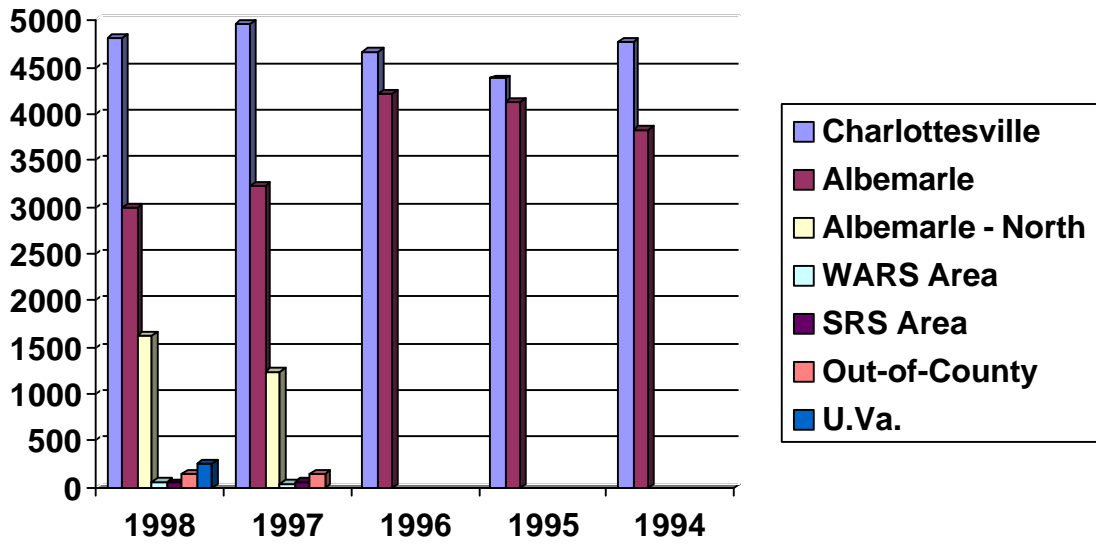
### B. C-ARS Incidents - By Month



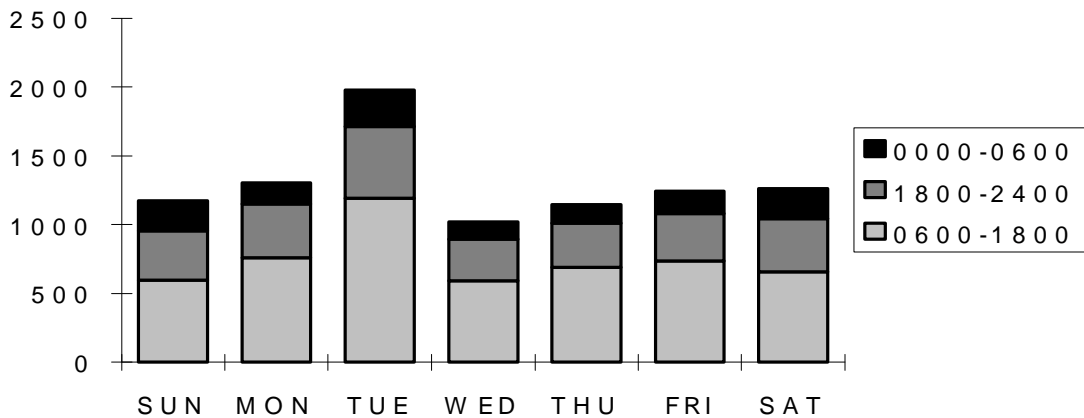
***C. Types of Incidents***

|  | <b>1998</b>   | <b>1997</b> | <b>1996</b> | <b>1995</b> | <b>1994</b> | <b>1993</b> |
|--|---------------|-------------|-------------|-------------|-------------|-------------|
| <b>Assault</b>   | 297           | 302         | 277         | 293         | 350         | 300         |
| <b>Chest Pain /<br/>Difficulty<br/>Breathing</b>                   | 1,859         | 1,837       | 1,872       | 1,691       | 1,748       | 1,579       |
| <b>Cardiac<br/>Arrest</b>  | 141           | 144         | 156         | 123         | 115         | 143         |
| <b>Other<br/>Medical</b>   | 3,283         | 3,350       | 3,135       | 2,833       | 2,891       | 2,818       |
| <b>Injury /<br/>Trauma</b>   | 1,632         | 1,545       | 1,630       | 1,497       | 1,717       | 1,447       |
| <b>Motor<br/>Vehicle<br/>Accidents<br/>/Aircraft<br/>Emergency</b> | 1,432         | 1,381       | 1,413       | 1,433       | 1,374       | 1,392       |
| <b>Diving /<br/>Drowning</b>                                       | 7             | 4           | 8           | 10          | 6           | 9           |
| <b>Mutual Aid</b>  | 178           | 181         | 207         | 206         | 146         | 96          |
| <b>Other / Stand-<br/>by / Public<br/>Service /<br/>Assist</b>     | 2,068         | 843         | 414         | 437         | 274         | 232         |
| <b>TOTAL</b>   | <b>10,897</b> | 9,587       | 9,112       | 8,631       | 8,621       | 8,016       |

**D. C-ARS Incidents by Jurisdiction**

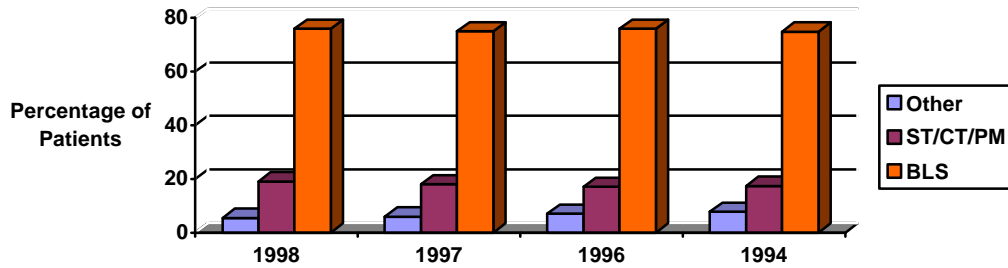


**E. C-ARS Incidents - By Day and Time (1996)**





**F. Patient Care Services**



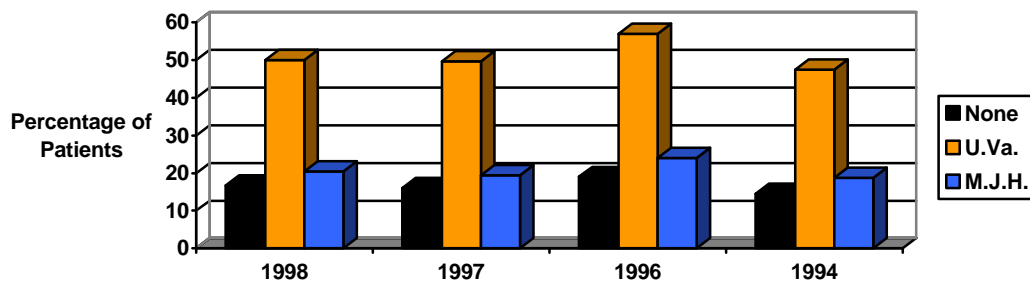
“Basic” patient care serves almost ¾ of our patients. Advanced levels of care are believed, but often have not been proven, to help some patients. Pre-hospital medicine was created in the late 1960’s. The research of Dr. Pantridge in Belfast, Northern Ireland, Dr. Richard Crampton and Dr. Richard Edlich, both of the University of Virginia, proved early that an emergency medical services *system* and emergency cardiac care saves lives. Only within the last five years has there been true scientific research to validate other advanced treatment modalities.

**Other** - Person denied injury, or was injured but refused treatment by the Rescue Squad; public service; manpower assists.

**B.L.S.** - Cardio-pulmonary resuscitation (CPR), bleeding control, splinting of fractures, delivery of newborns, oxygen administration, Automatic External Defibrillation (AED), etc.

**ST/CT/PM** (Shock-Trauma/Cardiac/Paramedic) - Establishing Intravenous (IV) lines, needle chest decompression, needle cricothyrotomy, Endotracheal (ET) intubation, Intraosseous (IO) lines, cardiac rhythm interpretation, manual defibrillation, external cardiac pacing, etc.

**G. Patient Disposition**



Patients may choose to which hospital they are transported, unless trauma triage or burn protocols require transport to U.Va. (a level 1 Trauma Center), or unless they are diverted by medical command.

**No Transport** - Person either was not injured, or was treated on the scene and not transported by ambulance.

**U.Va.** - University of Virginia Medical Center

**M.J.H.** - Martha Jefferson Hospital

## **VI. SERVICE EFFORTS AND ACCOMPLISHMENTS (Outcomes)**

### ***A. Average Response Time (1995)***

1. City of Charlottesville 5.371 minutes
2. County of Albemarle 10.521 minutes

NOTE: Response Time (the time between the call for assistance and arrival at scene) is often used to compare and evaluate systems. Time is critical only in cases of cardiac arrest and multiple system trauma. The patient in cardiac arrest who receives BLS (CPR) within four minutes, rapid defibrillation (which may be provided by first response agencies here), and ALS within eight minutes, has the best chance for survival.

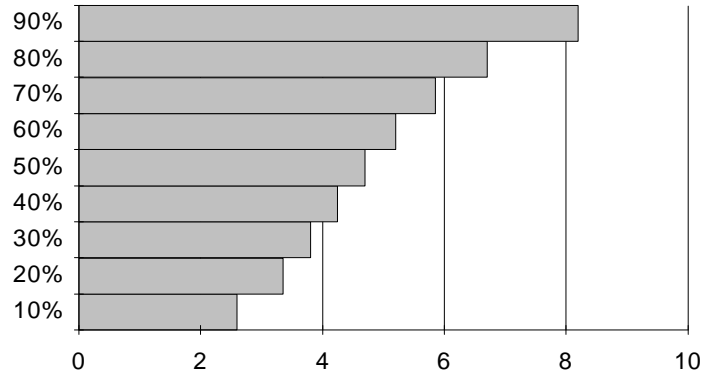
The victim of multiple trauma that reaches the operating room within 60 minutes (the "golden hour") of the injury has the best chance for survival. Locally, pre-arrival instructions are provided callers to the 9-1-1 Center, allowing the caller to begin BLS care immediately. First Responders are dispatched on life-threatening emergencies and often arrive before the Rescue Squad. The Charlottesville Fire Department, North Garden Volunteer Fire Company, Seminole Trail Volunteer Fire Department, and Earlysville Volunteer Fire Company are equipped with Automatic External Defibrillators as well.

Response time goals vary between systems. The American Ambulance Association rates an urban system that responds to life-threatening emergencies within eight minutes and 59 seconds, 90% of the time, as a high performance system. The City of Richmond follows the 90%/8:59 standard.

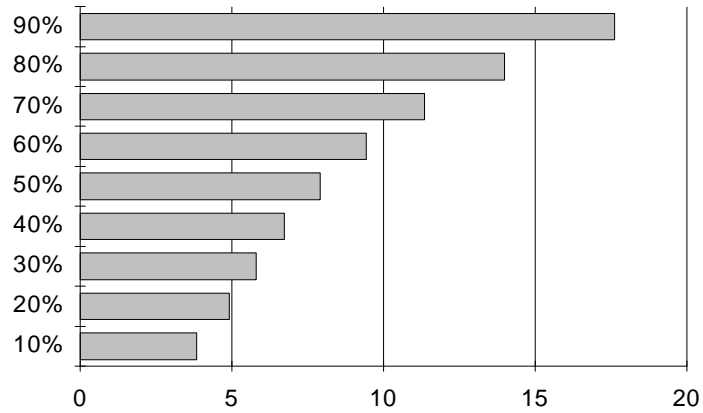
The National Institutes of Health, National Heart, Lung, and Blood Institute, suggests a 90%/9:00 standard for high priority emergency cardiac calls. The Albemarle County Community Facilities Plan objectives call for an average response time (receipt of call at station to arrival at scene) of four minutes or less in the growth area, and 13 minutes or less in the Rural Areas. Response time measurement is currently impeded by the lack of computer aided dispatch (CAD) at the 9-1-1 Center, and by rural route addresses. An RFP for a CAD system has been developed and distributed, and the E-911 street addresses should help pinpoint locations, both insuring more accurate measurement.

**B. Fractile Response Times (1995)**

**1. City of Charlottesville**



**2. County of Albemarle**



**C. Percentage of Citizens Rating Performance Satisfactory - See Section II(D).**

**VII. SERVICE EFFORTS AND ACCOMPLISHMENTS (Efficiency)**

**A. Operating Expenditures per Capita - \$3.95 (Target - \$4.10)**

**B. Capital Expenditures per Capita - \$0.92 (Target - \$3.32)**

**C. Cost of Service -**

1. per response \$40.24 (Target - \$61.47)

2. per capita \$ 4.87 (Target - \$ 7.42)