
ANNUAL REPORT 2003 - 2004



Duke University EMS

Proudly Serving the Duke Community

Duke EMS

Annual Report 2003-2004

Written and Compiled by

**Julie Daniel
David Strauss**

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EXECUTIVE MESSAGE**September 14, 2004****To the Duke Community:**

Duke Emergency Medical Services (EMS) is a unique organization comprised of 25 University students certified by the state of North Carolina as emergency medical technicians (EMTs). Duke EMS provides first line response to medical emergencies on campus and throughout Duke's extensive medical center as well as emergency standby service at campus events. During the academic year 2003-2004 Duke EMS experienced important changes but also great successes, and I am pleased to inform the Duke community that our organization is exceptionally well positioned to continue its vital role in the future.

On July 1, 2003 Duke EMS changed from a program operating under Student Affairs to being a division of the Duke Police Department. While daily operations remained the same and the eight-member officer corps continued to govern the organization, Duke EMS began reporting to the Medical Center Affairs Manager within Duke Police. Soon after the organization change, Duke EMS submitted a proposal to Chief Clarence Birkhead outlining Duke EMS's need for a response vehicle.

While vehicle discussions continued throughout the year, Duke EMS continued doing what it does best – serving the community. The squad responded to 361 emergency medical calls, provided stand-by service at campus events, provided EMT instruction to students interested in joining the squad, and led public health education programs. Furthermore, Duke EMS raised its standard of care by implementing intra-squad training programs and developing improved ride-a-long and clinical training opportunities with Durham County EMS and the Duke Emergency Department. Seven members also became EMT-Intermediates (which includes starting intravenous lines, giving IV medications and performing intubations), a level of care that Duke EMS is striving to provide to the community.

As the academic and fiscal year ended, Duke EMS received news that Chief Birkhead and Duke's Executive Vice President Tallman Trask were providing money to help Duke EMS obtain a quick response vehicle (QRV). Duke EMS purchased a 2004 Chevy Trailblazer that has been detailed, equipped, and certified by the North Carolina Office of EMS. The QRV went into service in August, 2004 and is already helping the squad provide more efficient care to the community. This crucial step puts Duke EMS ever closer to its immediate goal to provide 365-day, EMT-intermediate level coverage to the Duke campus and surrounding community. This goal can be reached by creating a central squad base, offering annual EMT-Intermediate classes on campus, and developing special programs to entice and reward members to work for the squad during school breaks. Duke EMS is well on its way, as squad members are already employed by Durham County EMS, teaching EMT classes for Durham Tech and pursuing research projects with the Duke Emergency Medicine Department. If interested, see page thirteen about providing support. Thank you.

Sincerely,

David Strauss, EMT-Intermediate
Director, Duke University EMS
Employee, Durham County EMS
Faculty, Durham Technical Community College

MISSION

Duke EMS provides 911-response and special event emergency medical care to the 30,000 people who pass through the Duke community and medical center every day. In addition, Duke EMS trains its student members to effectively think and respond under pressure, exercise leadership and manage a professional non-profit organization that must coordinate with the University, Medical Center and local government.



Serving the Duke Community through Dependable Emergency Care

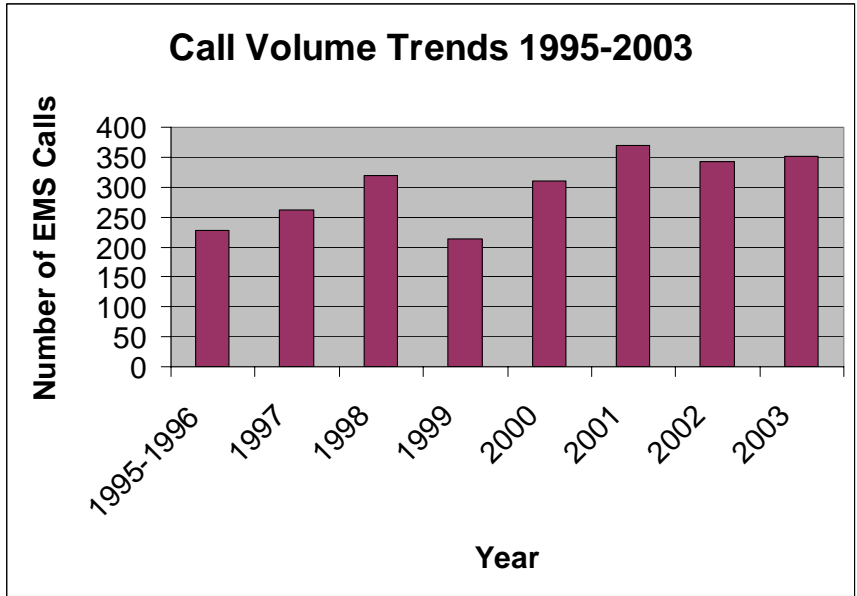
Duke University Emergency Medical Services (Duke EMS) provides EMT-Basic level care with additional advanced life support skills to the Duke community including the campus, medical center, and research forest. Duke EMS responds to all 911-initiated and encountered medical emergencies along with providing standby service at special events.

The group consists exclusively of volunteer members who are trained and certified as North Carolina Emergency Medical Technicians at either a Basic or Intermediate level. These dedicated members operate on a rotating crew schedule to provide dependable twenty-four hour, seven day coverage while classes are in session and during finals periods. In the future Duke EMS hopes to expand its operation to a 365 day service providing emergency care to both the Duke community and surrounding area.

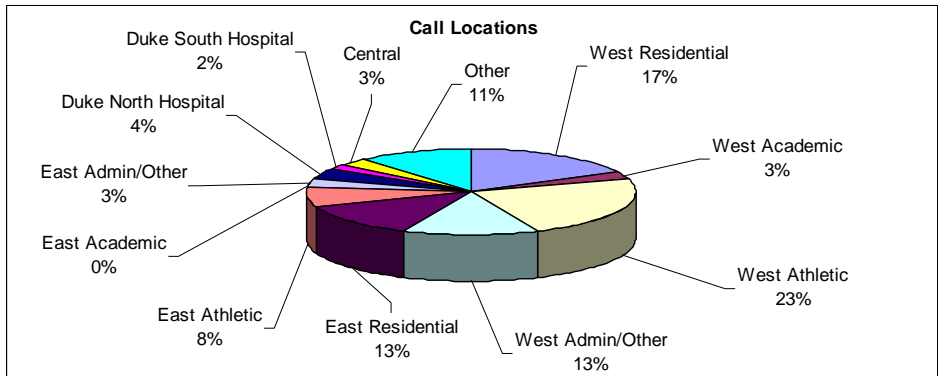
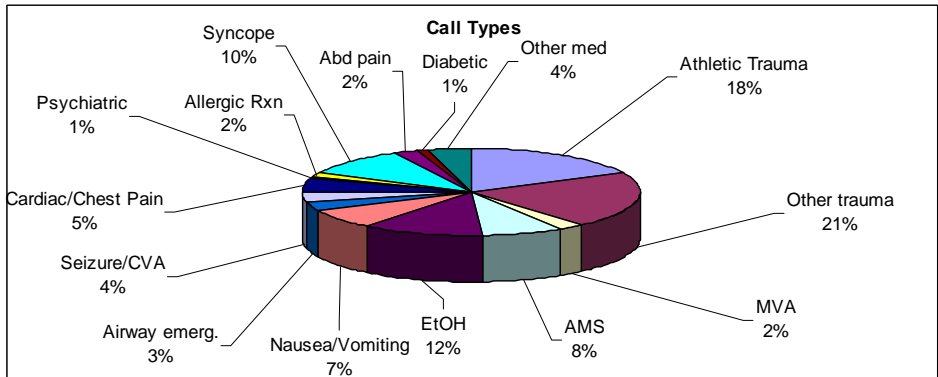
In addition to the daily service provided, Duke EMS responds to about a fifth of its calls at special events on campus. These are events at which Duke EMS has been contracted to provide standby service for the safety of the Duke community and its visitors. In the 2003-2004 academic year Duke EMS responded to 69 special event calls. Primarily, Duke EMS staffs sporting events such as men's basketball games, women's basketball games, football games, and the annual Fuqua Rugby Tournament. Other events staffed by Duke EMS include Sunday chapel services, performances on campus, and even East Campus move-in.

The Duke EMS squad is divided into four levels of membership to ensure quality service to the community. With a focus on leadership development and mastery of skills, each level has defined requirements and members ascend only through the approval of the Crew Chief Corps. The first level is Cadets who may only treat patients under the supervision of a higher level member and are under constant review by the officer corps. The second is On-call members, who are permitted to respond to emergency calls alone, or with other Duke EMS personnel. The third level is Driver, which involves background driving checks, completion of driver training classes and a period of observation by Crew Chiefs. The Crew Chiefs function as the lieutenants of each crew. They are ultimately responsible for the actions and safety of other Duke EMS members while their crew is responding.





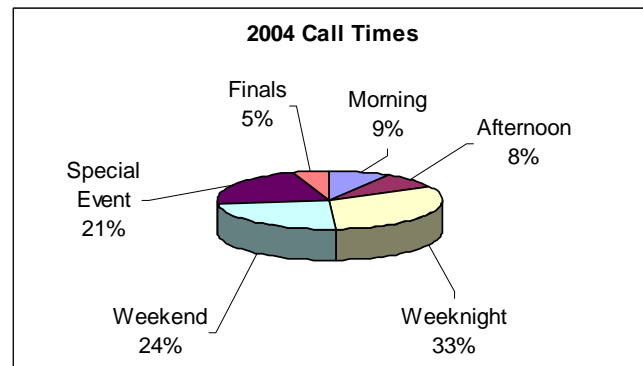
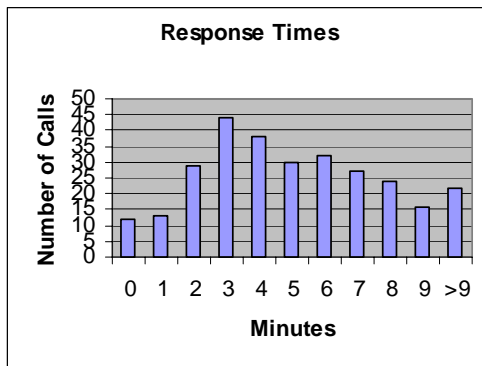
Academic Year 2003-2004 Statistics
Spring 2004



Serving the Duke Community through Improved Efficiency

In the past Duke EMS has responded to emergency dispatches on foot or by police transport. The recent purchase of a 2004 Chevy Trail Blazer is expected to improve response time, thus increasing the level of care provided to the Duke community. This past summer the vehicle was detailed, equipped, and certified by the North Carolina Office of EMS as a North Carolina Non-Transporting EMS Vehicle. The vehicle allows Duke EMS members to transport even more equipment, while making the on call members increasingly mobile. Additional equipment carried in Duke EMS's rapid response vehicle includes adult and pediatric immobilization devices, oxygen tanks, albuterol and nebulizer treatments, burn kits, and a collection of equipment designed to allow Duke EMS to respond to a mass casualty incidents. At the current time, the rapid response vehicle is used primarily as an equipment transportation vehicle. While Duke EMS members are currently permitted by the North Carolina Office of EMS to respond emergently (lights and sirens, also known as "code 3"), Duke EMS is holding its members to a higher standard and will not seek approval for code 3 response until further training is performed. Plans are in place for intensive driver training from the Durham County Sheriff's Office as well as Duke University Police.

Duke EMS is striving to decrease the average response time, increase utilization of the quick response vehicle (including training), expand on call operation to the entire calendar year, and establish a Duke EMS base as the center of operations (where members can spend night shifts and respond as a unit).



Serving the Duke Community through Education

Continually committed to a higher quality of emergency care, Duke EMS educates both the community and its members on a continual basis.

In conjunction with Durham Technical Community College, Duke EMS offers an EMT-Basic level class on Duke's Campus. This class, which was formerly held in both the fall and spring semesters, now begins in the fall and continues into the spring because of a sharp increase in state-mandated curriculum. This year two Duke EMS members who also work for Durham County EMS are being employed by Durham Tech to serve as official instructors. The applicant pool for the class has ranged from 50 to 75 students. The Duke EMS officer corps selects approximately 25 students through a brief application and interview process. First-years and sophomores are often given priority because they are more likely to contribute to Duke EMS after finishing the course. Students successfully completing the course and passing their state exam may apply for membership with Duke EMS. Regardless of whether students join, a large number of EMTs are infused throughout Duke's campus. In this way, Duke EMS promotes service through education.

In addition to reaching out to the community, Duke EMS focuses on continually educating its current members. To maintain its status as an EMS provider, members receive four hours per month of continuing education taught by certified instructors. This allows members to have the latest information available to them and reduces their need to re-certify every two years. Internal education is an integral part of ensuring quality emergency care. Through experiential education such as scenarios and drills, members improve their patient interview skills, scene evaluations, teamwork, leadership and practical experience. Scenarios are run weekly for each crew and are customized for each member to strengthen weak areas. Members are further required to do Duke Emergency Department clinical shifts, as well as ride-a-longs with Durham County EMS. This real world experience, combined with training within the squad, is continually raising the level of care at which Duke EMS is able to serve the Duke community. Many members of Duke EMS also seek classes outside of this training at Durham Technical Community College, which offers EMT-Intermediate level and Paramedic level classes.

Duke EMS also runs annual Mass Casualty Incident (MCI) drills. These test Duke EMS's ability to triage and treat large numbers of patients while operating within an Incident Command System that involves police, fire, EMS and tactical rescue teams. An extensive county-wide drill will be held at Duke in the spring of 2005.

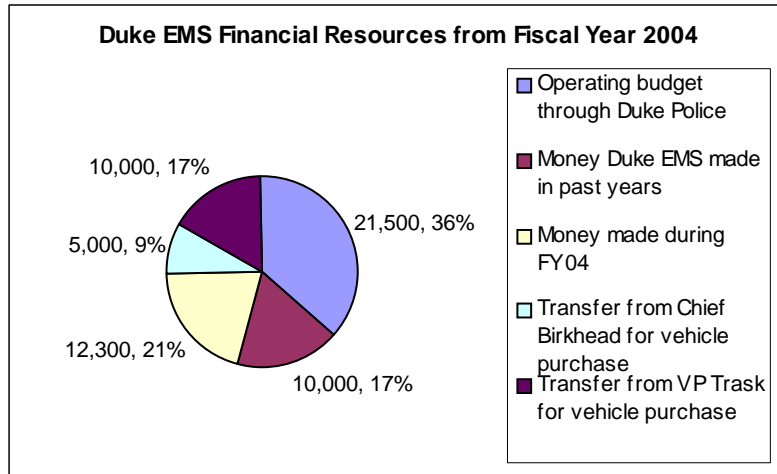


FINANCIAL ANALYSIS

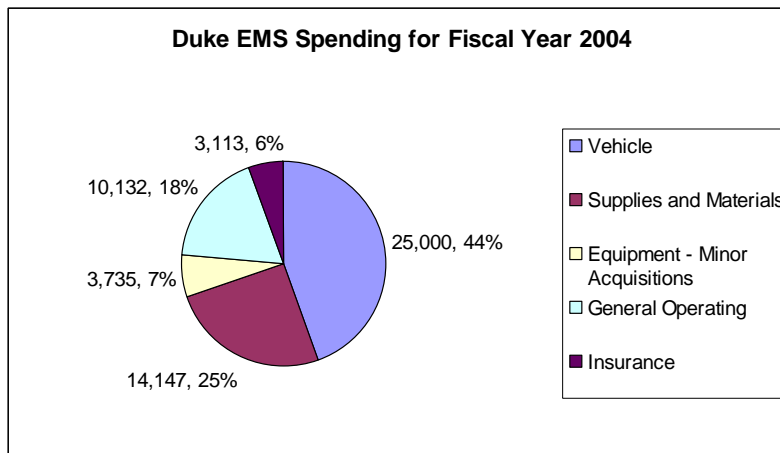
Spending for fiscal year 2004 is divided into 5 main categories for simplicity. A detailed financial report for fiscal year 2004 is available by request. Examples of category items are as follows:

- Supplies and Materials
General care, (i.e. gauze, splints) Drugs, Pharmaceuticals, Uniforms,
- Administrative Supplies
Equipment, Office Computer, Backboards, Radio Devices
- General Operating
Communications Service Fees, Postage Fees, Association Membership Dues, Parking Fees, Travel
- Insurance
General Liability, Umbrella Liability, Automobile Liability
- Vehicle
2004 Duke EMS Trailblazer

We expect spending to increase in FY '05 due to equipment purchases necessary to meet NCOEMS standards (eg: folding back-board), equipment purchases necessary to increase our quality of care (eg: pulse oximetry and ECG) and an increase in automobile liability cost.



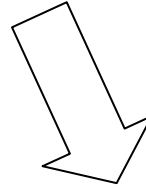
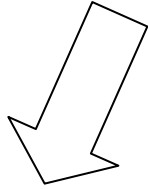
Total: \$58,800



Total: \$56,100

STRATEGIC PLAN

Central squad base with living accommodations
Spring 2005
 365-day coverage **2005**



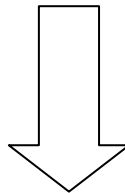
Opportunities for Duke EMS Students

Expanded collaboration with the Duke Emergency Medicine Program

- Summer internships **Summer 2005**
- Undergraduate research opportunities **Summer 2005**
- Paid ER-Tech Positions (academic year internships) **Spring 2005**

Opportunities for Expanded Education and Service for the Duke Community

- EMT-Intermediate class on Duke's campus **Spring 2005**
- Upgrade Duke EMS from EMT-Basic to EMT-Intermediate level coverage. Similar to the Volunteer Fire Departments in Durham County, which function at the EMT-intermediate level **Fall 2005**



Mutual Response as necessary with Durham County EMS to area surrounding Duke's campus **Fall 2005**

Purchasing a transporting ambulance **Summer 2006**

How does Duke EMS compare to squads at peer institutions?

In recent years Duke EMS has become increasingly more involved with the National Collegiate Emergency Medical Services Foundation (NCEMSF). Duke EMS attended the annual NCEMSF conference in 2003 and will attend the 2005 conference in February. In addition, Duke EMS officer Julie Daniel was recently elected Southeast Regional Coordinator for NCEMSF, a role that involves working with 25 collegiate EMS squads. The active role that Duke EMS plays on the national level facilitates an influx of new ideas and initiatives for the squad. Continually comparing ourselves to peer institutions has prompted a drive within the squad to become more professional, increase our coverage level and expand our service to year-round.

As Duke EMS has discussed in this report, the squad is currently striving to obtain a base with living accommodations and provide full-transporting EMT-Intermediate level coverage. These goals are very obtainable and have been achieved by many of our peer universities. These are the three universities that are most comparable to Duke:

Emory University: Emory EMS operates as a division of the University Police Department. The squad offers a year-long EMT-Intermediate class, has a squad base and operates at the EMT-Intermediate level with four vehicles.

Columbia University: Columbia EMS operates with two full transporting ambulances and offers 365-day coverage.

Georgetown University: Georgetown EMS operates with three vehicles and offers 365-day coverage.

THE UNIQUE EDUCATIONAL EXPERIENCE OF DUKE EMS

In addition to providing emergency medical care and education to the Duke community, Duke EMS provides a unique educational experience that students do not find in the classroom. Through experiential education, each squad member learns how they interact with others in group projects and how they personally react under time constraints when their actions have very real consequences. In addition, through peer review the skills and mentalities needed to succeed in these situations are explored and realized, not taught in a textbook. On the whole, collegiate EMS is an invaluable experience that trains its members to effectively think and respond under pressure, exercise leadership, manage an organization, and proudly serve their university community. Where can this unique training take a Duke graduate? While Duke EMS has only existed for 10 years, the squad has helped numerous individuals develop as leaders and pursue passionate careers and higher education. The following highlights what some alumni are currently doing.

Matthew Womble, 95

Duke University Hospital Administrative Manager
Masters in Hospital Administration (MHA) from UNC
School of Public Health
EMT-Paramedic, Durham County EMS

Karyn Stitzenberg, MD, 96

General surgery resident at the University of North
Carolina

Fletcher Penney, MD, 96

Completed medical school in Charleston, SC. Residency
in Emergency Medicine resident at Eastern Virginia
Medical School.

Laura Krech, 97

Masters of Public Health, Yale University

Mike Dombeck, 98

Health Outcomes Researcher for RTI-Health Solutions
Duke University MBA and Masters in Public Policy

Peter Messick, 99

UNC-Chapel Hill School of Medicine, Class of 2003
Orthopedics, Trauma Surgery, and Emergency Medicine

Jamie Salsberg, 99

Executive Medical Coordinator at RenalTech
International medical device company
Masters in Public Health, University of Columbia

Derek Isenberg, 99

Paramedic with Durham County EMS and as a clerk in
the Duke ED
EMS Management Masters Degree at the University of
Maryland-Baltimore County
Tulane Medical School

Davin Min, 00

Project Coordinator - Office of the Vice Chancellor for
Health Affairs, Duke University

Adam Berg, 00

Durham County EMS
Chapel Hill Police Department
Duke University Police Department
UNC-Chapel Hill Law school

Sunny Wang, 00

Duke University School of Medicine, Class of 2007

Jim Yen, 00

University of Maryland School of Medicine, Class of
2006

Aba Coleman, 01

Master's Degree in International Health Education

Justin Odegaard, 02

Stanford University Medical School, Class of 2006

Emma Archibong, 02

Duke University School of Medicine, Class of 2006

Doug Segars, 03

DO/MPH University of Texas Health Sciences Center

Marcia Wong, 03

University of California – Davis School of Medicine

Steve Barmach, 04

EMT-I, Durham County EMS
Thomas Jefferson Medical School, Class of 2009

Scott Atkinson, 04

Vanderbilt University School of Law, Class of 2007

David Dyson, 04

Duke University Police Department

**Duke EMS is currently working to survey its Alumni
in an effort to research both the quantifiable and
qualitative effects of one's involvement in the squad.**

Duke EMS Management and Advisors

2004-2005 Officer Corps

Director	David Strauss, EMT-I
Internal Coordinator	Matt McDaniel, EMT-B
Operations	Scott Tabakman, EMT-B
Training	Omaira Pacheco, EMT-I
Personnel	Lexie Riofrio, EMT-B
Finance	Michael Cheung, EMT-I
Equipment	Justin Marcus, EMT-B
Administrative	Julie Daniel, EMT-B

2003-2004 Officer Corps

Director	Steven Barmach, EMT-I
Internal Coordinator	Scott Atkinson, EMT-B
Operations	Jared Miranda, EMT-I
Training	David Strauss, EMT-I
Personnel	Sue-Ellen Katz, EMT-B
Finance	Jen Farrell, EMT-B/Omaira Pacheco, EMT-I
Equipment	David Dyson, EMT-B
Administrative	Stephen Jones, EMT-I

Advisors within Duke Police:

Bill Garber (Duke EMS Liaison, Medical Center Affairs Manager)

Medical Director:

Richard Serra, MD (Duke Emergency Medicine, Durham County EMS Medical Director)

Informal Advisors:

David Marcozzi, MD (Director of Disaster Preparedness, Duke Medical Center)
 Kathy Finch, RN (Clinical Operations Director, Duke Emergency Department)
 Mickey Tezai (Director, Durham County EMS)
 Kathy Mellown, EMT-P (Special Programs Coordinator, DCEMS)
 Kevin Underhill, EMT-P (Special Programs Coordinator, DCEMS)

Duke EMS Roster 2003-2004

Brandon Jones
Jennifer Farrell
Scott Atkinson
Kristin Wong
Sue-Ellen Katz
Steve Barmach
David Dyson
Alexia Hernandez-Soria
Jared Miranda
David Strauss
Roni Prucz
Mrnali Patel
Marshal Jones
Lexie Riofrio
Stephen Jones
Matt McDaniel
Dinushi Perera
Michelle Hu
Shiyi Teo
Scott Tabakman
Omaira Pacheco
Richard Lee
Shelby Addison
Mike Cheung
Anriada Mehmeti
Julie Daniel
Justin Marcus
Anna Priestler

Interested in supporting Duke EMS?

Make a tax deductible donation to our Development Fund.

**Please make checks payable to Duke University and designate it as a contribution to Duke EMS. For more information please see the University's website:
<http://www.giftrecords.duke.edu/howto.cfm>**

**Comments? Questions? Contact Director David Strauss
919-308-2139
dgs6@duke.edu**