

Emergency Medical Services - Departmental Performance Report

Emergency Medical Services						
The mission of the Department of Emergency Medical Services (EMS) is to deliver valued services to the community that preserve life, improve health, and promote the safety of citizens and visitors, who live, learn, work and play in our community while maintaining a sustainable systems approach that is focused on dynamic resource utilization to enhance the overall quality of life in Virginia Beach.						
Objective/Performance Measure	Unit	Annual Target	Actual 2008	Actual 2009	Est. 2010	Proj. FY 2011
Customer						
Provide Rapid Basic Life Support (BLS) and Advanced Life Support (ALS)						
Number of Advanced Life Support (ALS) Calls Treated/Transported	#	11,084.0	10,993.0	10,860.0	11,084.0	11,306.0
Number of Ambulance Calls for Service	#	39,064.0	38,051.0	38,315.0	39,064.0	40,049.0
Number of Basic Life Support (BLS) Calls Treated & Transported	#	15,307.0	14,495.0	15,020.0	15,307.0	15,613.0
Percentage of Time that 9 Ambulances are Continuously Staffed	%	100.0	81.0	86.0	85.0	85.0
Volunteer Speciality Team Response Program						
Number of Requests for Response of EMS SWAT Team	#	16.0	13.0	15.0	16.0	17.0
Number of Requests for Response of Marine Response Program	#	190.0	151.0	186.0	190.0	194.0
Number of Requests for Response of Search & Rescue Team	#	6.0	6.0	5.0	6.0	7.0
Financial						
Recruit and Retain Volunteers						
Number of Applicants Registered for Orientation Program	#	870.0	854.0	816.0	870.0	900.0
Number of EMS Volunteer Credentialed Personnel	#	225.0	200.0	215.0	225.0	250.0
Number of EMS Volunteer Recognition Activities	#	23.0	17.0	22.0	23.0	24.0
Number of EMS Volunteer Recruitment Events	#	68.0	64.0	59.0	68.0	74.0
Learning & Growth						
Emergency Medical Services Training Program						
Number of ALS Continuing Education Students	#	935.0	819.0	1,031.0	935.0	1,000.0
Number of Re-certification CPR Students Taught	#	1,140.0	1,219.0	1,423.0	1,140.0	1,100.0
Number of American Heart Association CPR Students Taught	#	295.0	356.0	297.0	295.0	300.0
Number of BLS Continuing Education Students	#	110.0	85.0	106.0	110.0	120.0
Number of Cardiac & Pediatric ALS Recertification Students	#	130.0	144.0	216.0	130.0	200.0
Number of EMS Recruits Trained as Emergency Medical Technician-B	#	84.0	58.0	66.0	84.0	90.0

Major Changes

In total, the Department of Emergency Medical Services (EMS) operating budget decreased 1.8% or \$133,663. To maintain its emergency response capability, retain full career staffing, and support costs for operations and the Volunteer Rescue Squads, cost reductions in excess of \$133,663 were made by changing delivery of lifeguard services at Sandbridge, a one year deferral in replacing defibrillators, and other efficiency savings as shown below.

Change	Impact
Change in the delivery of lifeguard services to Sandbridge Beaches from an outside contractor at a cost of \$270,785 to in-house service at a cost of \$164,800. This change in service delivery was made in late FY 2009-10 for the start of the 2010 summer season and involves part-time lifeguard and lifeguard supervisors.	<ul style="list-style-type: none"> • Providing the service in-house will address performance issues with the current contractor and provides at least \$105,985 in annual savings.
One-time savings from the reduction of \$200,000 for the second year of funding for replacement of aged and obsolete defibrillators in EMS and the Fire Department (Fire).	<ul style="list-style-type: none"> • These electrocardiogram monitors are approximately 10 years old and no longer supported by the manufacturer. EMS and Fire were first funded in FY 2009-10 with \$200,000 to begin a five-year phased approach to replacing their inventory of defibrillators (51 in EMS and 34 in Fire). With the use of State and Federal grants along with City funding, EMS replaced 14 units and Fire replaced 23. • EMS has applied for a State FY 2010-11 Rescue Squad Assistance Fund grant to replace 15 units (4 12-lead and 11 3-lead) for ambulances and fire apparatus, but will need a 50% match of \$124,563 if the grant is awarded. This funding could come from the General Fund Reserve for Contingencies.
Continued reduction in State Four for Life Grant funding is anticipated totaling \$24,454, which is an 8% reduction. This follows a 5% (\$14,449) reduction in FY 2009-10.	<ul style="list-style-type: none"> • Revenue estimates will be refined once the State FY 2010-11 budget is finalized. The impact will be reductions in media advertising, basic support to the volunteer rescue squads, medical training supplies, and uniforms; however based on prior years' spending patterns, there is flexibility in the budget to change the focus of the spending as circumstances change.

Additional information about program reductions is available in the Requested But Not Funded listing in the Resource Management Plan document.

Departmental Overview

The core services of the Emergency Medical Services Department fall into five areas:

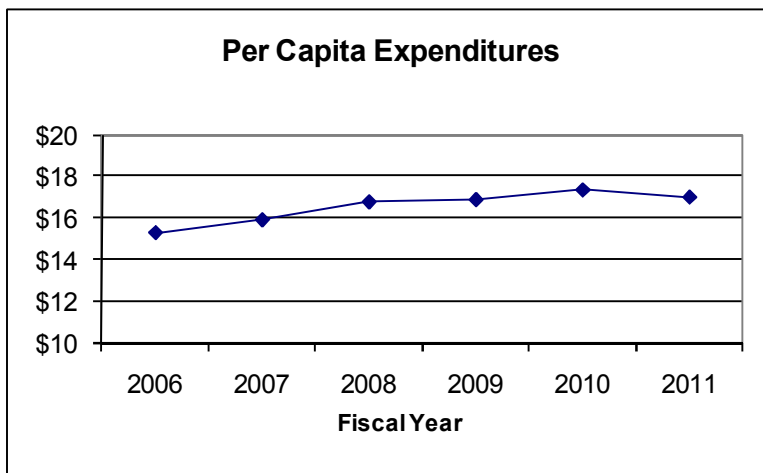
- **Administration** - Provides for leadership, direction and support through the provision of manpower (retention and recruitment, human resources), development of policies, management of departmental budgets and finances, performance of liaison activities with related State, local and Federal agencies; processing of public inquiries, provision of logistics support, gathering and analysis of data and research, and development of programs.
- **Operations and Emergency Response** - Provide for the rapid response to and proper provision of basic and advanced patient care pre-hospital and Interfacility care services, as well as specialized services to the general public to reduce patient morbidity and mortality. This involves oversight of ten independent Volunteer Rescue Squads comprised of 598 highly trained and certified volunteer medics distributed throughout 15 Fire and EMS stations throughout the City, and supervision of 37 career medics that augment volunteers to ensure staffing of a minimum of 8-to-9 ambulances daily. In addition, provides specialized rescue teams (marine rescue, bike medics, SWAT tactical medical and rescue, squad

truck technical rescue), anti-terrorism incident response, mass casualty operations, and disaster preparedness and response.

- **Regulation and Enforcement** - Provides the oversight of medical control to ensure medical protocols are followed; conducts quality assurance assessments; inspects commercial EMS ambulance agencies operating in the City; manages the lifeguard contract serving the resort area beaches from 2nd Street to 42nd Street including 57th Street; and provides oversight for infection control as well as mandates promulgated by the Federal and State governments.
- **Training** - Provides basic life support, advanced life support and specialized training for EMS volunteers, career medics and specialty team members, Fire, Police, emergency dispatchers, and hospital personnel. Keeps personnel certified, in compliance with State requirements, to work on ambulances and perform medical duties.
- **EMS Lifeguard Services** - Provides in-house lifeguard services to Sandbridge Beach, from Memorial Day weekend to Labor Day weekend 9:30 a.m. to 6:00 p.m. This service will consist of 11 lifeguard stands (8 at Little Island and 3 at the Market area) staffed with part-time lifeguards and lifeguard supervisors. Staffing and placement of these stands may vary to address weather, volume of visitors on the beach and condition of the surf.

Trends and Issues

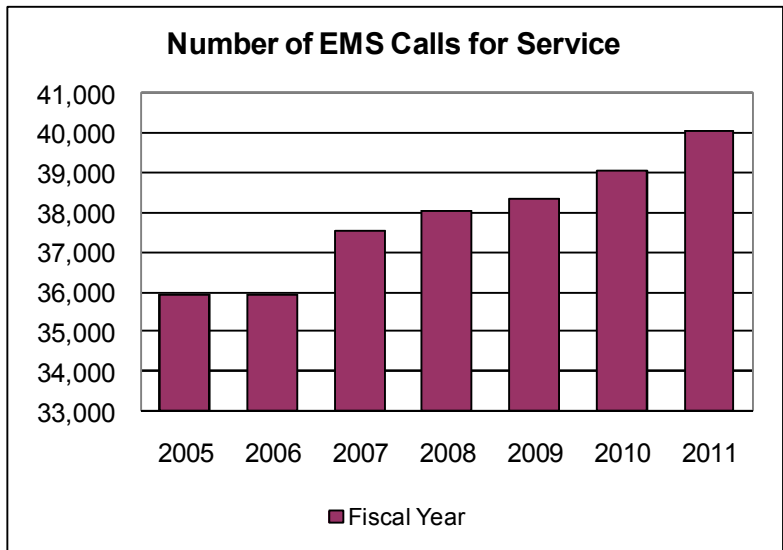
- The department’s expenditures are decreasing from \$17.35 per capita in FY 2009-10 to \$17.00 per capita in FY 2010-11 due to the funding reductions mentioned previously as well as efficiency savings. Also, a key driver in keeping costs extremely low despite increasing calls for services is the extensive use of 598 volunteers that staff 83% of the ambulances, as well as 353 volunteers that assist in other areas of the department, such as administrative support, Marine Rescue, Search and Rescue teams, etc.



- The department’s expenditures are comprised mainly of personnel costs for 62.55 FTEs (62.6% totaling \$4.6 million), primarily for 37 career medics (\$3 million). Only 37.4% (\$2.8 million) of EMS’ budget is for operating support costs for the volunteer rescue squads and career medics, such as training, fuel, vehicle radios and other equipment maintenance and repair, utilities for Volunteer Rescue Squad owned stations, risk management costs, etc. The resort area lifeguard service contract that covers service from the middle of May until the end of September totals \$1,177,676 in FY 2010-11, and comprises 43% of operating costs and 16% of the department’s budget.

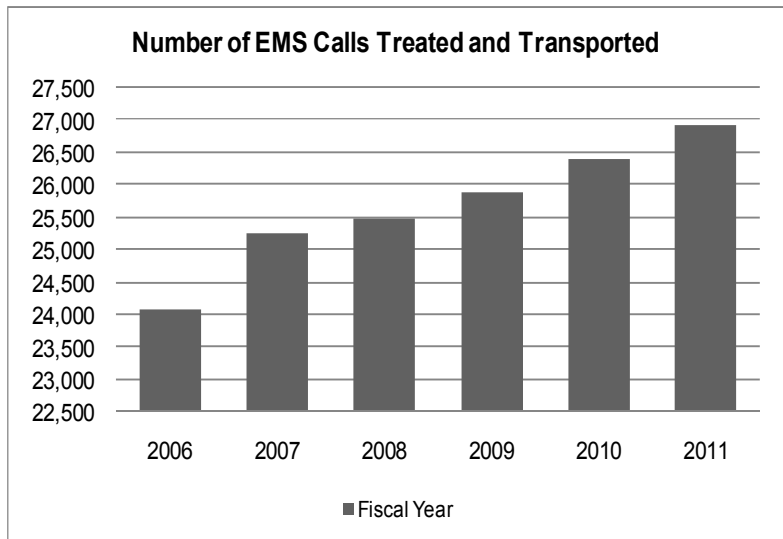
- Efficiency savings of \$14,353 will be achieved through the elimination of contracted manpower staff that maintains medical certifications of current medical providers and past providers over the past 7 years to comply with State Health Department regulations. During FY 2009-10, paper certification files are being converted to electronic data files. This efficiency improvement provides savings in excess of 10% of this year’s budget reduction, and over the course of the 7 years lifespan requirement, will avoid over \$100,471 of future costs.
- The primary driver of EMS Department expenditures is the increase in citizen demand for services. Calls for service are anticipated to increase from 38,315 in FY 2008-09 to 40,049 in FY 2010-11. The average annual increase in the number of calls for service from FY 2004-05 through FY 2008-09 is 1.6%, with a difference in call volume from FY 2004-05 to FY 2008-09 of 6.7% or about 2,400 calls. By FY 2010-11, 26,919 of the total calls for service are anticipated to involve treatment and transport to one of the area’s hospitals. As the City’s population ages, the nature of these calls and treatment required will increase in complexity, which will increase the need for additional staffed ambulances.

- Attracting additional volunteers to join the rescue squads continues to be a priority for EMS. For FY 2010-11, EMS anticipates 900 applicants registered for the department's orientation program and plans on holding 74 recruitment events. In addition, a recent campaign held by the Volunteer Rescue Squads was successful in attracting 244 new volunteers to the City's emergency response system to address the increase in calls for service.



- The new Virginia Beach Department of Emergency Medical Services (EMS) Air Medical Unit was placed in service October 17, 2009, at the NAS Oceana Air Show after receiving an operations permit from the Virginia Department of Health/Office of Emergency Management. This new service will supplement Sentara's Nightingale helicopter service, and is provided through a partnership between the Virginia Beach Police Department and EMS. The EMS Air Medical Unit has outfitted the Police Department's new Bell 407 helicopter with specific equipment for medical evacuation (Medevac) flights through State Four for Life Funds and Federal Homeland Security Grants. The crews are comprised of volunteer and career EMS Advanced Life Support providers who have attended more than 120 classroom and in-flight hours of safety and specialized patient care training. All Virginia Beach Police Department pilots completed the EMS Air Medical training and are approved to fly Medevac missions.

- EMS continues to be at the forefront of identifying and deploying new and improved medical treatments to ensure high quality pre-hospital medical care to patients. With the use of 12-lead defibrillators on the Volunteer Rescue Squad ambulances rather than the less capable 3-lead units, EMS providers can identify whether a patient is experiencing a heart attack (i.e., ST-elevation myocardial infarction known as "STEMI") on-site, and provide direct transport to the cardiac catheterization lab for "balloon" treatment (i.e., percutaneous coronary intervention/coronary angioplasty) rather than first stopping at the emergency room for this initial diagnosis. Use of 12-lead defibrillators in the field reduces "door to door-to-balloon time" to less than 120 minutes, which is a significant reduction from the average of 146 minutes. This savings in time means significantly improved outcomes for patients' chances of survival. It also means returning ambulances to the field quicker to maintain adequate coverage in the City.



- In addition, EMS recently began deploying an innovative medical technique that induces mild hypothermia in patients experiencing cardiac arrest using chilled saline intravenous treatments. This medical intervention has shown to improve outcomes from the heart attack. EMS has just initiated a new medical treatment in the field called Therapeutic Hypothermia. This new treatment is shown to greatly improve long-term survival by minimizing neurological impairment typically encountered in the cardiac arrest patient. This treatment involves rapid, but controlled cooling of the post-arrest patient by introducing cold fluids intravenously and cold packs or ice to those areas of the body responsible for rapid temperature uptake.

Emergency Medical Services - Departmental Resource Summary

	FY 2009 Actual	FY 2010 Adjusted	FY 2011 Adopted	Variance from FY 2010
<u>Program Summary</u>				
<u>002 General Fund</u>				
<u>Expenditures</u>				
Administration	585,452	603,211	593,414	(9,797)
Operations	1,164,855	1,468,883	1,304,111	(164,772)
Emergency Response System	2,857,729	2,892,240	3,014,520	122,280
Training	517,201	565,475	549,828	(15,647)
Regulation and Enforcement	1,617,757	1,631,729	1,492,381	(139,348)
EMS Lifeguard Services	0	66,725	164,800	98,075
Total Expenditures	6,742,994	7,228,263	7,119,054	(109,209)
<u>Revenues</u>				
Administration	0	1,440	2,200	760
Operations	2,170	0	0	0
Total Revenues	2,170	1,440	2,200	760
General City Support	6,740,824	7,226,823	7,116,854	(109,969)
<u>183 Grants Consolidated Fund</u>				
<u>Expenditures</u>				
State Four-for-Life Grants	357,298	308,651	284,197	(24,454)
Total Expenditures	357,298	308,651	284,197	(24,454)
<u>Revenues</u>				
State Four-for-Life Grants	428,877	308,651	284,197	(24,454)
Total Revenues	428,877	308,651	284,197	(24,454)
General City Support	(71,579)	0	0	0
Total Department Expenditure	7,100,292	7,536,914	7,403,251	(133,663)
Total Department Revenue	431,047	310,091	286,397	(23,694)
Total General City Support	6,669,245	7,226,823	7,116,854	(109,969)

Position Summary by Program

<u>002 General Fund</u>				
Administration	7.50	7.50	7.50	0.00
Operations	2.00	2.00	2.00	0.00
Emergency Response System	37.00	37.00	37.00	0.00
Training	7.00	7.00	7.00	0.00
Regulation and Enforcement	3.00	3.00	3.00	0.00
EMS Lifeguard Services	0.00	2.25	6.05	3.80
Total	56.50	58.75	62.55	3.80
Total Position Summary	56.50	58.75	62.55	3.80