

The Division of Educational Development (DED) presented a program to the EMS Advisory Board in August of 2005 titled “Initiative 2009” outlining steps the EMS system in Virginia should take to implement relevant recommendations in the “National EMS Agenda for the Future” and the “EMS Education Agenda for the Future: A Systems Approach.” These recommendations address initiatives suggested by DED staff with input from the Professional Development Committee. The following concepts described in the “Initiative 2009” document were supported by the state EMS Advisory Board:

Initiative 2009

In a pledge to address future system needs, the Division of Educational Development (DED) will work in partnership with localities, EMS agencies, training institutions and the regional EMS councils to respond to the following EMS issues: access to training; educational standards; workforce development; and economic opportunity.

DED commits to achieving the following eight goals:

- Accreditation of EMS Programs
 - Assure the education component provides adequate and appropriate resources to promote student success.
- EMS Training Funds Program
 - Promote and expand quality EMS training by providing an equitable and standardized system for the distribution of educational funds.
- Competency-based Training Programs
 - Align the EMS educational process to that of other allied health professions to promote the professionalization of EMS by assuring competent entry-level providers.
- Access to New Education Technologies (convergence)
 - Enhance electronic services to promote educational access and opportunities, including web-based continuing education programming.
- Enhance the Certification Process
 - Strengthen the certification process by substituting the practical examination with successful completion of a recognized competency-based training program conducted by an accredited site and the use of computer technology for written state EMS certification examinations.
- Expanding Quality Assurance
 - Provide feedback upon which improvements can be identified through maintenance and review of program documentation based upon accreditation standards.
- Increasing Automation
 - Enhance the Office information technology and telecommunications platform through improvements to the course management system and implementation of an improved provider management information system.
- Promote Dual Enrollment
 - Support the VCCS dual enrollment initiative to foster EMS education in the high schools as a workforce development tool.

Following the August 2005 EMS Advisory Board meeting, the division launched the process to achieve the objectives listed in Initiative 2009. As a result of lack of understanding and misinformation, these initial attempts by the Office of EMS to implement the objectives outlined in Initiative 2009 were met with strong resistance and concern. Many of the concerns came from EMS agencies and providers in rural areas of Virginia. Concerns ranged from all EMS training would be placed in the community college system resulting in direct expenses to volunteers to limited access and availability of advanced life support training programs in rural Virginia, resulting in limited ALS care in rural areas of the state. Due to the inability of the Office to educate and inform the EMS community about the purpose and desired outcomes of Initiatives 2009, initial efforts to develop and implement programs had to be delayed. The good news is that many of the objectives outlined in “Initiative 2009” have occurred naturally over time as the EMS system has developed, evolved and matured.

Today the EMS system in Virginia is viewed as a leader across the country. In order to understand “where we are” and “how we got here,” it is important the Office of EMS communicates the status of major program achievements that have occurred in the four (4) years following the approval by the EMS Advisory Board of the concepts of Initiative 2009.

- **Accreditation of EMS Programs**
 - **Assure the education component provides adequate and appropriate resources to promote student success.**

Purpose: To assure students enrolled in Intermediate or Paramedic training programs have the greatest opportunity for success based on their investment of time and money by providing a mechanism accepted by the EMS educational community that ensures adequate resources exist for conducting all aspects of the EMS educational program.

History: This program was actually initiated in 1996 for Paramedic programs. With the adoption of the EMT-Intermediate 99, the timing was appropriate to address some of the growth issues experienced with the Shock Trauma and Cardiac levels that resulted in inconsistent educational programs and variations in patient care. Beginning in 2002, all Paramedic and Intermediate programs must be accredited, either from a national organization such as CoAEMSP/CAAHEP or from the Office of EMS. These program requirements were placed in EMS Regulations and adopted by the Board of Health in 2003. Because of greater resource requirements, it was necessary to develop an accreditation process for Intermediate 99 and Paramedic programs. In spite of continued concerns expressed by some stakeholders in the EMS system about accreditation of EMS

educational programs, the Office of EMS resisted removing this program. In fact, this program was considered so important for the continued growth and maturation of the EMS system that OEMS requested and was granted permission to hire a full-time employee dedicated to monitor the quality of ALS educational programs in VA.

Impact: All of Virginia's Intermediate 99 and Paramedic programs are either state accredited or nationally accredited through CoAEMSP. The numbers of total ALS providers have continued to increase. In January 2002 there were 2,677 cardiac technicians, 81 EMT-Intermediate 99s (total 2758), and 2,984 paramedics. As of April 2009, Intermediates total 2879 (all cardiac technicians phased out as of December 2008) for an increase of providers at this level of 121 and paramedics number 3,891 for an increase of 907. Further, Virginia is at or above the national pass rate average for the National Registry exam.

National Registry has indicated that as of January 2013, National Registry Paramedic test eligibility will require the applicant to graduate from a nationally accredited paramedic program. Virginia had the foresight to initiate this process 13 years ago placed greater emphasis again in 2003. As such, Virginia is among only a handful of states that are prepared for the National Registry requirements. Many states have not even begun this process which can take from 12 to 18 months to achieve for each program.

Status: Completed – As of April 2009, there are a total of 43 accredited primary and alternate Intermediate and or Paramedic sites in Virginia that provide an estimated coverage such that 95% of the state is within a 30 mile radius of a program. Paramedic programs are beginning to be re-accredited. All paramedic programs seeking state re-accreditation must obtain national accreditation issued by CoAEMSP. OEMS is now in the maintenance phase of the accreditation process and current focus is on the re-accreditation of Intermediate programs.

- **EMS Training Funds Program**

Purpose: Promote and expand quality EMS training by providing an equitable and standardized system for the distribution of educational funds.

History: EMS funding had been available for EMT Instructors only as a re-imbusement program since the early 1980s. In the early

1990s, approximately \$280,000 was set aside to initiate an ALS grant funding program. With the initiation of the Intermediate program and the requirement that adequate educational resources must be available prior to starting, the Office was able to establish the ALS Training Funds (ALSTF) program. Fortunately, this was at the same time that the Office funding stream was increased, making more funds available for system support. With about 10 years of experience with the ALS Funding grant program, the Office was able to identify many procedural improvements and enhancements. The Office with the aid of the Professional Development Committee and the Regional EMS Councils developed an outcomes based ALSTF program. Financial support for the program is based on the number of candidates that successfully complete a course, become certified and affiliate with a licensed EMS agency. These incentives were developed to help improve the recruitment and retention of EMS providers. The program awards funding for:

- 1) Accreditation
- 2) Initial Courses
- 3) CE
- 4) Auxiliary Programs
- 5) Tuition
 - a. Individual
 - b. Organizational

The ALSTF allowed for greater flexibility and funding sources than did the EMT Instructor Re-imbusement program. Because the EMT Instructor re-imbusement program was more rigid and utilized a completely different administrative process, instructors experienced some confusion between the two. The Office desired to standardize the two programs, promoting their flexibility and retaining the outcomes based process for both. During the 2008 General Assembly, a bill was introduced and passed that provided an additional \$.25 to the Four for Life funding stream dedicated for the certification and recertification of EMS personnel. The additional revenue for EMS approved by the legislature allowed the Office to standardize the two processes and establish a new EMSTF (Emergency Medical Services Training Fund). Originally the Office had \$1.2 million for ALSTF and \$300,000 for EMT Instructor funding. With the new funding stream and moving all funding to a standardized process, there now exists \$3 million to support EMS educational opportunities that will lead to improved recruitment and retention of EMS providers. The EMSTF started July 1, 2008 and as of mid March 2009 all funds for this program had either been expended or obligated.

Impact: Funding to conduct EMS training programs was increased for the first time in fifteen (15) years. The EMT Instructor and ALS Training Funds programs were standardized and EMT instructors can now accept funding from sources other than the state. Funding to pay for the true costs of conducting EMS Training programs is available to EMS Instructors. Tuition funding for students to attend EMT level training courses is now available. In the first year of its existence, the fund has been able to provide just over \$3 million dollars toward EMS education. The funding is providing greater resources for training, certification and re-certification than has ever existed. The program provided state of the art simulation manikins, adult and child, as well as virtual intravenous trainers to all accredited programs. With the growing need for EMS providers, this fund will help fill the pipeline of individuals available to volunteer and work in EMS. Due to the state budget deficit, there is \$600,000 less in funding available for FY2010 to support EMS education, affecting both volunteer and career EMS providers and agencies.

Status: Completed –A standardized, outcome based funding stream for the Virginia EMS system exists to support training, certification and recertification of EMS providers. Unfortunately, due to state budget deficits, the Office lost \$600,000 from this funding stream to support the Virginia State Police MedFlight program. With the loss of the \$600,000, it is anticipated that the funding, which only lasted 9 months in FY2009 to be exhausted in less time during the upcoming fiscal year.

- **Competency-based Training Programs**

Purpose: Align the EMS educational process with other allied health professions to promote the professionalization of EMS by assuring adequate educational resources that promote competent entry-level EMS providers.

History: As far back as the 1970s, concern has always been how to best assure the skill competency of the EMS providers. In the 1980s, additional time was added to the EMT curriculum to address skills competency. With a total re-write of the EMT curriculum in the early 1990s, skill competency was seen as an ever increasing concern, noted by instructors and evaluators alike while evaluating candidates at Virginia practical certification examinations. Over the many years, various ad hoc subcommittees of the Professional Development Committee

submitted reports that repeatedly identified three specific weaknesses of EMS education in Virginia: 1) EMT Instructors were not doing their job. 2) EMT certification test evaluators were not properly assessing the students' performance. 3) Students lacked motivation to pursue greater competency. After multiple attempts to correct these issues, the Office proposed to initiate a voluntary accreditation process for BLS training programs modeled after the success seen at the ALS level. Such a program would require specific resources, the ability to use individuals to teach classes that do not possess EMT-Instructor certification, and the use of labs and field internships to assess the competency of students to successfully demonstrate and perform a specified number of applications of identified patient care skills. This approach, although very successful at the ALS level, had never been applied by the state to the EMT level. Once again, these proposed changes were met with resistance and misinformation. In response to these concerns, the Office formed a subcommittee that ultimately stopped meeting before their work was completed. In order to objectively evaluate the proposed program standards, the Office established four (4) additional subcommittees of PDC to address the identified weaknesses in the EMS educational process used in Virginia. Once these committees were established and began investigating their assigned tasks, the Office received and ultimately denied a variance from an EMS training program to allow partial use of the proposed BLS accreditation process to conduct EMT education. Approval of the variance without established guidelines would have resulted in de-standardization of EMT Basic education.

The Office designed a competency based program and authorized several EMS agencies to conduct EMT-B pilot programs using a draft proposal of the BLS accreditation standards. The pilots were intended to help refine the Office's draft proposals for accreditation at the BLS level. The EMS agencies conducting pilot programs met regularly and offered recommendations to improve basic EMT training to the Professional Development Committee. The approved EMS agencies were given two years to conduct competency based EMT pilot programs. During this time, four rural EMS agencies requested and were incorporated into the pilot study.

Impact: Based upon the evaluations of instructors, students, and evaluators from multiple programs from various areas of the state, this approach was a resounding success. Evaluators at test sites indicated it was easy to identify students in the pilot

programs based solely on their competency performing the practical skills. The instructors all had nothing but good things to say about the program and felt students demonstrated greater confidence and competency in performing skills.

Status: Completed - The program was such a success, that the Office authorized the approved pilot programs to continue until the new proposed EMS regulations that include as an optional BLS accreditation process are approved.

- **Access to New Education Technologies (convergence)**

Purpose: Enhance electronic services to EMS personnel and promote access to educational opportunities, including web-based continuing education programming.

History: For the past several years, the division has been working to establish and expand web based educational opportunities. After investigating various Learning Management Systems (LMS) “TrainVA” was selected. TrainVA is a LMS sponsored by the Health Department through a grant from the Public Health Foundation which allows the Office and EMS providers unlimited, free access to educational content hosted on the site. The continuing education credits obtained by Virginia EMS providers for completing programs on TrainVA are automatically transferred to their technician database maintained by OEMS. This process was initiated in the spring of 2007 and the first program was posted in the summer of the same year. The Office designed and implemented a policy for the inclusion of “third party” vendors. In addition to TrainVA, there are four commercial vendors who participate in providing online continuing education:

- 1) 24-7 EMS
- 2) Centrelearn
- 3) TargetSafety
- 4) HealthStream (in the later stages of being confirmed)

Impact: To date, the Office has posted 41 programs on TrainVirginia. A combined total of approximately 358 programs are available from commercial vendors recognized by OEMS. There are 6,900 EMS provider accounts on TRAINVirginia and over 14,588 CE hours have been earned.

Status: On-going. The Office continues to receive inquiries from vendors requesting information on how to become a Virginia EMS recognized continuing education program provider.

- **Enhance the Certification Process**

Purpose: To strengthen the certification process by substituting the practical examination with successful completion of a recognized competency-based training program conducted by an accredited site and the use of computer technology for written examinations.

History: Part of this initiative has been discussed above in review of the third component; “Competency Based Training Program.” Other items under consideration for this component are allowing competency based accredited programs to use course practical evaluations in lieu of state certification practical examinations and the use of computer testing for the written state EMS certification exam. Due to difficulty developing programming for the accreditation/competency based procedures and insufficient time to develop the necessary policies to implement these processes, the remaining two items had to be placed on hold.

The Office, working closely with the Atlantic Emergency Medical Services Council (AEMSC) has been able to initiate the necessary steps toward implementing computer testing. The AEMSC is completing work to move the test generator program to a web interface. Once this is accomplished, the next step will be to develop the web testing component. The development of a web testing component will take some time and will require financial support from each member state (NJ, PA, WV, DE, MD, DC, VA, and NC). However, this project will remain as a significant focus of the council.

In addition, the AEMSC is looking to re-introduce the concept of developing written ALS examinations similar to that of BLS written examinations.

Impact: The Office has developed a competency based program and BLS accreditation standards and is awaiting the outcome of the proposed EMS regulations for implementation. OEMS will continue to work with other AEMSC member states to ensure valid, psychometrically sound and legally defensible written certification examinations are available. Virginia currently conducts in excess of eight thousand state certification examinations a year.

Status: The division considers this component 50% complete.

- **Expanding Quality Assurance**

Purpose: To provide feedback to Program Directors of accredited EMS Educational programs in order to make improvements in the quality and administration of these programs.

History: Although optional for many years, the division initiated the requirement that all basic BLS programs must submit enrollment forms starting July 1, 2006. This process was initiated to verify the eligibility of EMS provider applicants sitting for the state certification examination. The Office also uses data collected from these forms to determine the impact of attrition, failure and successful program completion rates and the overall impact on the certification of EMS providers. In addition, these efforts provide information to measure performance of EMS education programs and identify weaknesses and strengths in the system. OEMS is now at a point where the data collected can be used to help promote a stronger EMS education system. To further quality assurance, the Office initiated and supported a collaborative effort with the Virginia Community College System (VCCS) to standardize the EMS curricula among their various campuses. Quality educational programming was further assured at the high school level through Office coordinated meetings with Department of Education (DOE) that established EMT program standards and guidance to high schools desiring to conduct EMS training.

Impact: The Office and EMS Instructors are able to produce outcome reports that demonstrate the level of success for their programs. OEMS is now able to produce outcome reports for state, regional, local and individual instructors that can assist in identifying areas requiring improvement. With this data, the Office, working with EMS educators, is looking to establish standards for program outcomes as a measure to assure the quality and success of EMS education programs.

Status: This component is dynamic and must be maintained to assure the continued appropriate maturation of EMS Education in VA.

- **Increasing Automation**

Purpose: Enhance the Office information technology and telecommunications platform through improvements to the course management system and

implementation of an improved provider management information system.

History: Due to new technology standards initiated by the state, the ability to promote greater use of electronic resources has been delayed. These delays are related to changes required to assure a greater degree of security, standardization and recovery for state data operations. A great deal of time and effort has been spent to ensure all OEMS database applications are operating on the appropriate version of our data management system. Although these activities have taken a majority of our IT development time, it positioned the division to open access to EMS constituents via web interface. In addition, the Office has developed software that allows the use of optical scanners and bar-coding technologies to record continuing education credits and update the technician and recertification records of EMS providers. Tested at the 2008 EMS Symposium, the Office anticipates release of this technology EMS Instructors and other authorized users by summer 2009.

Impact: The upgrade and web interface capability has allowed the Office to offer real time and improved access to the following resources and information:

- 1) Approved courses and search capability
- 2) Improved search capabilities for EMS providers by primary EMS agency affiliation and name
- 3) EMS agency list by location
- 4) EMS instructor module
- 5) Continuing education report (available to instructors only, until new server is installed and operational)
- 6) Change of address (available to instructors only, until new server is installed and operational)
- 7) File update feature for external vendors to upload CEe
- 8) EMS Provider access to CE reports and ability to complete change of address requests (waiting for new servers to be placed online)
- 9) Interface to upload the electronic CE records to oracle for total automation.

The implementation of scanner technology will significantly reduce the number of errors associated with the submission of CE. Once the new server is placed online, EMS providers and agencies will have access to real time data and the ability to update personal data. In addition to CE records, OEMS anticipates the provider will also be able to perform an online query and print their test eligibility letter.

Status: Completed. Further development will occur in the future.

- **Promote Dual Enrollment**

Purpose: Support the VCCS dual enrollment initiative to offer EMS education in the high schools as a workforce development tool.

History: The Office initiated this component prior to *Initiative 2009*. Efforts have continued using EMS instructors active with high school programs and in conjunction with the Virginia Department of Education. Standards and criteria for high school based EMT programs were developed and are accessible from the Office web page as well as DOE. High school based EMT programs are supported by the EMS community as an opportunity to increase and improve the recruitment and retention of EMS providers.

Impact: The results of this program, although well received by the more mature high school students, have not had the desired impact on recruitment and retention of EMS providers. The latest data shows the following statistics based upon data starting from August 2006:

High School Programs

Enrolled	Certified	Passed	Failed	Withdrew	Incomplete	No status	Totals
1017	268	691	77	73	131	45	1017
% of enrolled	26%	68%	8%	7%	13%	4%	100%

The difference between certified and pass is that pass indicates successful completion of the program. Certified indicates the number passing the state EMS certification exam.

The overall state statistics for the same time frame for all EMT programs excluding high school classes:

For all EMT Basic Programs

Enrolled	Certified	Pass	Failed	Withdrew	Incomplete	No Status	Totals
14090	7989	10720	599	2149	419	203	14090
% of Enrolled	56%	76%	4%	15%	3%	2%	100%

Status: Completed. Although this program has established guidelines, the local school systems seem to participate with various levels of compliance. OEMS is looking at this process to determine if there is evidence that the program is beneficial and achieving the desired effect of increasing the number of providers in the EMS workforce. The future use of EMSTF for these programs will be examined.