

PROGRAM REVIEW FOR NON-DEGREE COMMUNITY OUTREACH AND PARTNERSHIP PROGRAMS

EMERGENCY MEDICAL TECHNICIAN PROGRAM SPRING, 2001

PROGRAM PURPOSE

Program Mission

The EMS Program Mission is to provide a comprehensive education program that prepares participants to:

- successfully complete the Commonwealth's Emergency Medical Technician (EMT) certification examination appropriate to their level of training, and, further
- prepares them to be responsive to the real and perceived needs of the patients and to perform according to the accepted standard of care within the system.

The EMS program mission dovetails nicely with the mission of the College. Students who complete the EMS program take home knowledge and skills they can use both personally and professionally. Once students successfully complete the certification examination, they are then eligible to be employed, particularly by private ambulance services and sometimes by hospital emergency departments, as EMTs. Success also improves candidate standing on the Civil Service examination for those who want to be firefighters (they are given an extra point for being certified as EMTs).

Program Size

In any given year within the borders of the Commonwealth, there are approximately 2,800 new EMTs trained at the EMT-Basic level and 2,400 are certified. Anecdotally from the Office of Emergency Medical Services (OEMS) observations, when the economy is good, EMT class sizes have historically tended to be small. When the economy takes a downturn, EMT class size has tended to increase as people look for training that will quickly put them into the job market.

In the fall of 1999, classes in Region III (northeastern Massachusetts) averaged 12.78 students successfully tested. In the spring of 2000, 14.27. Fall of 2000 saw classes averaging 12.56 students tested. Classes this spring are showing similar numbers (final numbers are not yet available from the Office of Emergency Medical Services).

There are nine (9) programs in Region III that offer similar programs. Of particular local note are EMS 2000, Inc. (Westford) and Emergency Services Training (Chelmsford). Commentary on program simi-

larities and differences are attached separately (Attachment 1). Course numbers comparisons are provided as Attachment 2.

Local programs include:

- *EMS 2000, Inc.* offers programs in Lowell and most recently for the fire department. Fall programs have historically been conducted in Groton, Topsfield, and Tyngsboro. Their Lowell courses have been offered in conjunction with and through the University of Massachusetts/Lowell campus and have been affiliated with Saints Memorial Hospital.
- *Emergency Services Training* generally runs courses in Chelmsford. They did complete an EMT course for the Lowell Police Department in the spring of 2000, 42 of whom were certified. They ran no course in the fall of 2000.
- *ALS Training* runs programs in the Lawrence area.
- *Healthworks Education Inc.* runs programs in the Amesbury/Groveland and Lynn areas.
- *Northeast EMS Inc.* (Region III) runs EMT-Basic training programs in the Salem and Wakefield areas. Recently revised regulations now prohibit the regions from offering courses that compete with providers in their area of oversight.
- *Northern Essex Community College* runs their program in Haverhill (Rte. 495, exit 52).
- *North Shore Community College* runs their program in Danvers (Rte. 95, Rte. 1 exit).

TARGET POPULATION

Program participants include those seeking:

- employment in with private ambulance services, in law enforcement, and/or with the fire services;
- knowledge for use in their hobby pursuits (hiking, mountain climbing, etc.);
- knowledge as a springboard for furthering their education (nursing, a medical degree, etc.).

Participants generally range in age from 18 to 70, although the oldest student in the Middlesex Community College courses to date turned 50 during his class written final exam and our youngest turned 18 just the week before classes ended.

EFFORTS TO MAINTAIN PROGRAM RELEVANCE

We monitor the program's relevance in a variety of ways. It requires ongoing effort on the part of program staff, both the EMS Program Coordinator and all teaching assistants. We talk to students following their State certification exam to determine effectiveness of training testing and evaluation. We talk to past students as we see them socially and/or run into them in any variety of public settings.

In addition, the EMS Program Coordinator:

- participates on the State Training Subcommittee as the recording secretary,
- subscribes to a variety of trade journals,
- teaches the PreHospital Trauma Life Support program, both in Massachusetts and New Hampshire,
- maintains part-time employment with an emergency services ambulance in New Hampshire,

- participates as a member and Co-Chief of the Race Emergency Services Team for the Sports Car Club of America for sports car race events in Connecticut and New Hampshire (including the Mount Washington Hill Climb), and
- is affiliated with several national organizations involved in EMS education (National Association of EMTs, National Association of Emergency Medical Services Educators, International Society of Fire Service Instructors).

There are national conferences focusing on EMS, Participation in these conferences on an annual basis would further improve the program's access to the most current information available.

Participation on the Region's Professional Education Sub-Committee would also improve access to the most current information available.

Our affiliation with Trinity EMS, Inc. and association with the Lowell Fire Department's Training Division help ensure we are sensitive to the needs of the community of Lowell. Establishing an EMS Coordinator's Committee (to meet quarterly) to address issues of area police/fire/EMS providers would be helpful to ensure we are sensitive to the needs of all of our service area communities.

Discussions have been held periodically with the Dean of the Health Careers Division as to the best way to recruit students for the program. Currently, efforts are underway to enlarge the program by making training at the next level (EMT-Intermediate) and an Associates' Degree with a concentration in EMS available through the College.

Recruiting is done through word-of-mouth and the College's course catalog. We did advertise the program one semester in one newspaper advertisement which brought in a large number of new students for that semester. The communities served by Middlesex Community College are still learning that we offer the EMT-Basic program. Although we have discussed it at various times in the past, we have not yet attempted a direct mail flyer to be distributed to area police, fire, and EMS services.

EMS PROGRAM CURRICULUM

The EMS Program curriculum is a national curriculum established by the US Department of Transportation/National Highway Traffic Safety Administration. It was most recently updated in 1994, becoming a more consensus-based rather than a medicine-based curriculum. The Commonwealth of Massachusetts adopted and implemented this "new" curriculum in the fall of 1998. The Commonwealth and some of its EMS instructors reviewed the changes and noted what they felt were serious program deficiencies. The delay in implementing the 'new' curriculum was the result of this evaluation. It revealed the "'new" curriculum needed a significant portion of material from the "old" curriculum reintegrated into the program requirements to ensure adequate preparation of the student for the examination process and for actually functioning in the field as emergency medical technicians.

There are seven (7) modules in the 'new' curriculum that must be completed in order to successfully complete the course. At Middlesex Community College, it is expected students will complete the course with an average of 80 or better and will successfully complete the Commonwealth's written and practical skill evaluations (minimum Commonwealth passing grade is 70). The passing grade is set at

80 to accommodate the fall-off in knowledge and skills retention that occurs between the time the student completes the course and the time their certification examination is conducted (time elapsed is generally 4 - 6 weeks can be as many as 10 - 12 weeks).

The Commonwealth of Massachusetts is developing an accreditation process for the basic and advanced EMT level training programs. The purpose is to enable training sites to set up and conduct training programs without the lead time currently required (i.e., six weeks minimum lead time for continuing education programs). Accredited training programs will be able to conduct the Commonwealth's practical skill certification exam for their students.

The accreditation process will include both a site visit and written application which details program policies and procedures as well as institutional support(s) for students. At this time, there is no expectation that a fee will be charged. A pre-accreditation site survey was conducted for Middlesex Community College during the summer of 2001.

The current EMT certification process will change when OEMS has formalized their expectations for the accreditation process. Accredited facilities will be able to evaluate their students' skills and certify them as competent at course end. Accredited facilities will need to hire "trained EMS evaluators" to verify student competencies at course end. A separate fee will be charged to offset costs associated with this evaluation. Trained EMS evaluators will need to be paid as well. Students will then be eligible to complete the State written certification exam at a State-approved vendor site. It is hoped the time lag between course end and certification by OEMS for written test eligibility will not exceed three weeks.

The "Massachusetts" Curriculum (enhanced USDOT/NHTSA EMT-Basic curriculum) is included as Attachment 3. Changes are highlighted in italics.

Strategies to help students achieve success include use of a textbook with an associated workbook. A web-site has been established and is supported by the textbook publisher to enhance student understanding of material. The web-site also provides the student opportunities for self-testing and review. Students are encouraged to form study groups. Past experience has shown these groups are enormously helpful to students who may be struggling.

Exam reviews are conducted the same night the exam is taken. A question-by-question review is conducted to help ensure student understanding and future success. Differences between exam bank answers, real-world answers, and likely State exam answers are discussed.

Students are encouraged to ask questions during class and are invited to contact the instructor by phone and/or e-mail if questions arise outside of class hours.

PROGRAM GOALS AND OBJECTIVES

The goals and objectives for the program cannot be changed. At least, they cannot be reduced. They have been established by NHTSA/DOT. A review of the goals and objectives shows that some items are not directly addressed in the curriculum. The challenge is to ensure everything gets done. Re-

quired program goals are included as Attachment 4. General knowledge and practical skills outcomes are assessed:

- On one level, by the student's successful completion of the State certification exam.
- A second level of assessment includes the student's feeling they could provide needed service, regardless of certification, if a family member or friend became ill or injured and could do so until additional trained help arrived.
- A third level of assessment includes those students who return to take part in future classes as teaching assistants. Incoming classes frequently have one or two students that report ""so-and-so told me about your class and said I should take it".

PROGRAM DATA

Enrollment in an EMT-Basic course is typically much larger at the start than at the finish. Many students enroll to see what the course is going to be like. When they realize they must read (and be responsible for all of the information in) an 887-page textbook, a 438-page workbook, the CPR textbook, numerous handouts, the State EMS laws and regulations, and the edited USDOT/Massachusetts EMT curriculum, many students simply don't come back. Many students never get to the supplemental texts that are strongly recommended for students to purchase and read.

Students who successfully complete the course may not successfully complete the State exam. Some simply choose to NOT take the State exam. Others require so much assistance in test taking to be successful in the course, they are unable to be successful at the State exam because the State does not offer the exam review and assistance offered by the Middlesex Community College EMS Program staff.

Students may certify at course end but may fail to renew their certification when it expires.

Student enrollment is generally more sizeable when the economy is poorer than when it is not. People are looking for training programs that will get them jobs quickly in a poor economy. In a better economy, people are more willing to look at the longer-term programs.

No formal outcome assessment has been conducted. Certification tracking has been done to compare student completions with EMT certifications. Many folks who complete the course go on to complete the State certification exam. Some course graduates have pursued advanced education, becoming EMT-Paramedics, nurses, etc.

PRE-ACCREDITATION SURVEY

On Friday, 1 June 2001, the Middlesex Community College EMS Program underwent a preliminary review, in preparation for the accreditation process being developed. Although our current training program is offered at the EMT-Basic level, the review was conducted for the ALS level - in preparation for the advanced level training programs (EMT-Intermediate) we plan to offer.

The Director of Training from the Department of Public Health/Office of Emergency Medical Services conducted a site visit. He was most impressed by the program we offer and the site itself. The proximity and availability of the nursing lab, which permits us to work with students on patient transfer skills, was seen as a tremendous plus. The nursing lab computer set-up which, if we purchased EMS programs, could be used for training was also seen as a plus. The "smart" station enhances the program by expanding the number of multi-media options available to speakers. We have equipment we use (helmets) during the course that most other courses do not and, in some cases (infant/child car seats) *all* other courses do not.

SUMMARY

In conversation with staff from the Office of Emergency Medical Services, it becomes clear that the Middlesex Community College has several outstanding features. Program strengths include:

- The Middlesex Community College program requires student participation for 152 classroom and 20 field internship hours. The majority of EMT classes throughout the Commonwealth require 120 - 130 classroom and no field hours. This is only 79 - 86% of the classroom hours the Middlesex Community College Program offers and 100% fewer field hours. While some believe it is a miracle the EMT program content can be "taught" is 110 hours (per the National Curriculum), more believe it is impossible to teach in less than twice that number. Offering programs that are conducted in twice that number of hours, however, virtually guarantees an empty classroom.
- The field internship program we require at Middlesex Community College requires that all program participants complete the field internship. The student response to this experience has been overwhelmingly positive. It allows them an opportunity to see the field evaluation and treatment of a patient with congestive heart failure (or other injury/illness) in a way a classroom discussion can never provide. This field experience replaces the hospital emergency department observation hours required in the past but now considered optional.
- The majority of Middlesex Community College program teaching assistants have advanced training/certification - EMT-Intermediate, EMT-Paramedic. Numbers of EMS personnel acting as teaching assistants varies from a ratio of teaching assistants to students of 5:1 or better. State requirements are a ratio of 6:1. The EMS Program Coordinator encourages teaching assistants to further their education as a means of enhancing the College's program. All program assistants are trained to the level of CPR Instructor. The EMS Program Coordinator teaches this training program.
- A large number of specialty lecturers are used. Although the State no longer requires (but strongly recommends) use of specialty lecturers, use of such lecturers enhances the student experience and often teaches the instructional staff as well.
- A specialty lecturer list is included as Attachment 5. Middlesex Community College EMT Program offers presentations that most EMT courses do not. Of particular note are the geriatric emergencies and hazardous materials lectures.
- EMS program students participate in an auto extrication field day. The Lowell Fire Department Rescue Team brings the Jaws of Life and other hand extrication tools to a local junkyard. The Race Emergency Services Team from the Sports Car Club of America/New England Region brings its mechanical and hand-tools for students to use. EMS program students have an opportunity to practice patient removal from previously wrecked automobiles before the fire department tears the cars apart. This affords the student the opportunity to see just how a patient might need to be protect-

ed during an actual extrication. While this exercise is required by the curriculum, many instructors use a classroom simulation or videotape viewing to accomplish this goal.

- The recent addition of the "smart station" availability in the EMS program classroom has greatly expanded the types of media adjuncts that can be used to enhance speakers' presentations. Many programs rely on the instructor's ability to draw and/or purchase multi-media equipment.
- Middlesex Community College students are invited to participate as members of the Race Emergency Services Team for the Sports Car Club of America. Again, a unique learning experience that only a few pursue. Because the Race Emergency Services Team provides both initial, follow-up/discharge, and short-term (day long) evaluation and care of patients, students are exposed to a wide variety of patient assessment and patient care situations.
- The EMS Program Coordinator participates as Secretary to the MDPH/Emergency Medical Care Advisory Board Training Subcommittee. This affords Middlesex Community College early notification of impending changes and upcoming concerns within the Massachusetts EMS arena.
- The EMS Program Coordinator is a member of a variety of national EMS education groups. One in particular (comprised of national leaders and movers in EMS) serves as a vital resource and sounding board for upcoming issues and changes at the national level that can impact training and certification.
- The EMS Program Coordinator enjoys an excellent working relationship with staff at the State Office of Emergency Medical Services (OEMS). This facilitates resolution of any problems that may require OEMS ruling and keeps the EMS Program Coordinator one step ahead of the pack when it comes to access to credible information.
- The EMS Program Coordinator maintains teaching affiliations with several in-state and out-of-state organizations (non-competitors with Middlesex Community College). This allows exposure to other instructors and a chance to see different teaching styles and materials (which can then be incorporated into the Middlesex Community College program if appropriate).

Program weaknesses include:

- The need for 100% attendance. While this is an absolutely critical component, it places an additional burden on both student and staff when students occasionally miss a session (due to accidents, health, family emergencies, etc.). Recent OEMS changes now afford the instructor more flexibility in determining an appropriate "'make-up'. Time remains an issue. Discussions are ongoing at a number of state and national levels with regard to the appropriate minimum course length. Many feel the minimum 110-hour requirement should be increased and spread over two semesters.
- The schedule. There are nights when the four-hour classroom session is simply too long and some when four hours are woefully insufficient. The need to have Saturday sessions to complete the program within the established semester length can add to student's difficulties in completing all program requirements.
- Evening access. The College closing time of 10:00 p.m. affords no opportunity for students to meet with the instructor after class to clarify a point, ask a question, schedule an appointment. Most EMS program students work full-time jobs during the day and are unavailable for an appointment during the day.
- Periodic instructor frustration. Students frequently and increasingly want to be spoon-fed. There have even been requests that the instructor read the tests to students the class session before the test will be given to help the student better prepare.

- Student skills. Many students come to the program with academic weaknesses already identified by prior teaching institutions. Each semester, the EMS Program Coordinator requests students submit copies of any Individualized Education Plan (IEP) the student might have had while in high school to better help the instructional staff in meeting student needs. The Spring 2001 semester class saw the first student actually do this. Above and beyond any ADA or similar requirements, having this knowledge can greatly enhance the student experience by helping the staff be better prepared to make their experience meaningful.
- Student skills. Students whose poor study skills, poor test-taking skills, and poor attitude have not been previously identified present a particular challenge. Many are unwilling to seek the assistance of the student services support personnel.

PROGRAM SUGGESTIONS – SHORT-TERM

Some weaknesses are cannot be changed. They are part of the program design.

- The 100 percent attendance requirement is mandated by the State and cannot be changed. Nor should it be changed. However, the flexibility currently being given to instructors with regard to what is acceptable for "make-up" will ease some of the burden associated with meeting this requirement.
- Many students enter the program without the pre-requisite CPR training. Perhaps scheduling a CPR course for the week preceding the start of an EMT course would alleviate this problem. Those who register for the EMT course could be sent a postcard announcing the CPR class availability and reminding them of the requirement to have such training prior to the start of their EMT program.
- Changing the schedule will affect everyone involved with the program - and may have a significant negative impact on the student population. Traditionally, EMT programs have met two nights a week and occasional Saturdays. Options might include:
- Increasing the number of weeknights - instead of a Monday/Wednesday and monthly Saturday schedule, perhaps a Monday/Wednesday/Thursday schedule could be tried. Other options might include:
 - ☞ Reduce the number of Saturday sessions to one (for the auto extrication piece). This would decrease course hours. This is an unacceptable option unless paired with the increased number of weeknight sessions.
 - ☞ Increase the number of Saturdays. Schedule the course one weeknight and every Saturday for the semester. This could cut into the number of students likely to take the course. Course hours would increase from 152 to 168, an increase of 10%. CPR would need to be completed in a separate session.
 - ☞ Offer the course ONLY on Saturdays (holiday weekends would have to be *into* meet course minimum hours requirements). This would decrease course hours to 128 (a decrease of 16%) and is unacceptable unless the Saturdays in the January inter-session were included. Including the January Saturdays would increase course hours from 152 to 160 (a 5.2% increase in hours). CPR would need to be completed in a separate session.
 - ☞ Offer the course one night a week but schedule it over two semesters (to meet the minimum hours requirements). One Saturday session would be required to meet the auto extrication requirement. This would change course hours to 144, an unacceptable decrease of 5.3%. Clas-

ses would need to continue through the first summer session to meet the 152 hours currently scheduled for the program. CPR would need to be completed in a separate session.

- ☞ Changing student attitude may be impossible.
- ☞ Supporting instructional staff and addressing frustrations is an on-going effort on the part of the EMS Program Coordinator.
- Storage space needs to be re-worked. As new equipment is acquired and new programs are added (necessitating additional equipment), efficient organization will be critical. Current shelving needs to be secured to the wall to ensure staff and student safety when manipulating equipment into and out of storage space.
- Currently, the program is established as a six-credit program. To accurately reflect both the number of hours students spend within the program and the increased content (effective September, 1998), program credits should be increased to seven. An application will be sent to the curriculum committee to initiate this process.
- Placement exams should be considered for all incoming students. A referral mechanism needs to be developed. Many EMS students have reading and testing disabilities that are undiagnosed but that have plagued them throughout their educational career. Some students are unable to keep up with the reading workload for the program. Enhancing their reading comprehension skills will likely lead to a greater number of students both starting and completing the program successfully.
- There is an increasing volume of training software available for EMS programs (at both the EMT-Basic and EMT-Intermediate levels). Purchasing this software and using it for student reinforcement during skill lab sessions will enhance the program's ability to foster improved thinking skills among program graduates.
- The EMS curriculum is constantly evolving and developing. Participation by the program coordinator in the variety of National and Regional curriculum conferences that are held will enhance the program and improve our ability to continue at the forefront of EMS education.

ADDITIONAL COMMENTS

Often, EMT courses are the forgotten stepchild of the program under which they fall. There are peculiar equipment and scheduling needs, faculty-to-student ratios, and an OEMS testing/approval process which can be confusing and time consuming to get a good handle on. At Middlesex Community College, however, the Dean of the Health Careers Division has been continuously and actively supportive of program efforts, for which program staff is extremely grateful.

PROGRAM SUGGESTIONS – LONG-TERM

Work is currently underway to expand the EMS program to include the next-higher level of certification training - the EMT-Intermediate. An effort to partner with Trinity EMS Inc., a local private ambulance provider, is part of this expansion activity.

Future goals would include offering the EMT-Intermediate program on an annual basis and upgrading to the "new" curriculum as well as offering the EMT-Paramedic program in a modular format. Work is also underway to establish an Associate's Degree with a concentration in EMS.

Consideration has been briefly discussed for offering an EMT for Student Nurses program. This would require an evaluation of the nursing curriculum and program development to ensure second semester nursing students who wanted to could complete the EMT program with a minimum of fuss. Successful completion of the EMT exam would provide nursing students with an additional credential, one that could change their employability upon graduation and while they wait for their registry exam results.

Offering an "EMS College" - a week of continuing education offered during the summer semester(s) and again during the winter recess would be a way to expand provider and public awareness of the EMS program at Middlesex. Programs could be offered both in the day and the evening.

Offering EMS providers the weekly or monthly opportunity to recertify their CPR credential - on a walk-in basis - would also be a means to expand provider awareness of the program offerings. The EMS Program has staff that would be interested in being part of providing this opportunity.

Currently, the student pays an examination fee to the Commonwealth of Massachusetts. As accreditation progresses, accredited institutions will be able to test and certify their own students in the practical skill component of the State certification exam process. There will be a need to either incorporate a State testing fee into the student fees or the students can pay the fee to a private agency with whom the Program Coordinator makes arrangements (with OEMS approval) to test the class. The fee will offset payments made to "examiners" who will certify the student can successfully perform the practical skills required as part of the overall testing process. Additional arrangements may need to be made to accept fees from outside (non-Middlesex) students who need to be examined. If a private agency is used, then no unusual arrangements will need to be made for processing fees. This will ease the burden on the JAF process significantly as each exam session would require 12-to-15 examiners plus a representative from the State OEMS office to ensure compliance with all appropriate rules and requirements.

As the accreditation process moves forward, the need throughout the Commonwealth for training and credentialing personnel to function as instructors and examiners will change. Institutions may find themselves in the position of needing to train examiners. Likely, it will fall to one or two institutions to offer such programs and make them available on a statewide basis. These are generally multi-day programs offered over several weekends. An "Instructor's Institute" during a summer session or the January inter-session would be well received. An "Examiners Institute" during the same time period would also be well received. As with every other EMS program, there is an approval process through OEMS that needs to be completed before these programs could be offered. The EMS Program Coordinator has access to resources that would allow these programs to be conducted effectively.