



2006 ANNUAL REPORT



**National Registry of  
Emergency Medical Technicians®**  
THE NATION'S EMS CERTIFICATION™



It is Important  
to Our Nation



## Serving the American Public

The founding of the NREMT in 1970 came as a result of recommendations made by President Lyndon Johnson's Committee on Highway Traffic Safety. The committee proposed the establishment of uniform standards for training and examination of personnel active in the delivery of emergency ambulance service. Since then, uniform standards have been established for training and examination of the people who provide out-of-hospital emergency medical care. As a non-profit, non-governmental, independent certification agency, the NREMT provides four distinct areas of service:

- Entry level competency assessment
- A Registry of nationally certified EMS professionals
- Re-certification of competence
- Research that benefits the EMS community

The NREMT is governed by a Board of Directors representing the broad EMS community. The Board consists of twenty-one individuals—including physicians, state EMS office officials, EMS professionals, educators, and members of the public—highly regarded in their respective areas of practice.

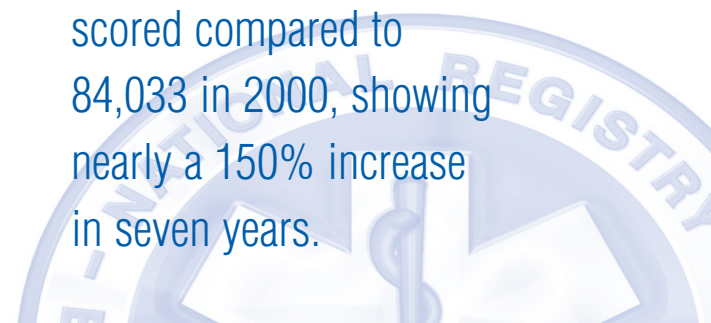
The National Registry is accredited by the National Commission For Certifying Agencies

(NCCA). This is the highest assurance that the health, welfare and safety of the public is being met through a credible exam and certification process. Accreditation also ensures that the NREMT complies with the standards outlined in the "Standards for Education and Psychological Testing," developed jointly by the American Psychological Association (APA), American Educational Research Association (AERA) and the National Council on Measurement in Education (NCME).



The NREMT is proud to serve the EMS community and play an important role in the protection and safety of the American public.

In 2005, there was a total of 124,343 exams scored compared to 84,033 in 2000, showing nearly a 150% increase in seven years.



## Letter from the Chairperson – Sandy Bogucki, MD, PhD Associate Professor Yale Emergency Medicine



Perhaps you noticed last summer when the major newspapers, news magazines, and television networks all covered the findings of the Institute of Medicine's Committee on the Future of Emergency Care in the United States Health System. The Institute of Medicine, or IOM, is part of the National Academies of Science. It is a highly prestigious, non-governmental advisory group that analyzes scientific evidence and makes recommendations to policy makers, health care providers, and the public.

The Committee on the Future of Emergency Care was convened by the IOM in 2003 to examine all aspects of the emergency care system in the US, including current challenges and a vision for the future. They looked at the full spectrum of emergency medical care from the start of a 9-1-1 call through dispatch, EMS response, care in an Emergency Department, and either admission to the hospital or discharge home. The committee worked for almost three years to produce three reports: Hospital-Based Emergency Care: At the Breaking Point, Emergency Medical Services At the Crossroads, and Emergency Care for Children: Growing Pains. As you may recall from the publicity when the reports were released, the overall assessment was that there was a crisis in emergency medical care. Some of the symptoms of this crisis include the loss of emergency care facilities, Emergency Department overcrowding, ambulance diversion, and other problems with which we've become all too familiar in recent years.

The second of the reports focused on EMS and emphasized some themes relating to workforce quality that are very important to the National Registry of EMTs and to all EMS stakeholders. The IOM Committee endorsed the concept that there are five components that should be integral to a 'system' of EMS education in this country. These five components have been proposed and described previously in a number of documents, including initiatives that have grown out of the National Highway Traffic Safety Administration (NHTSA) EMS Agenda for the Future project.

A great deal of federally funded effort has already gone into establishing the first two components. Working groups convened by NHTSA have proposed definitions of the National EMS Core Content, or the total body of knowledge, skills and abilities that comprise the medical discipline we know as EMS, and the National

EMS Scope of Practice Model, or what interventions EMS providers at various license levels are allowed to perform. Both the IOM and previous NHTSA panels have recommended a change from reliance on the Department of Transportation's National Standard Curricula and movement toward the use of consensus education standards. These should integrate learning theory and instructional methodology with the material described in the core content. Such standards would make up the third of the five components of EMS education systems.

The final two components considered essential to the EMS education system by the IOM are accreditation of training/education programs by a single agency that is nationally recognized, and national certification of providers who complete accredited education programs and then pass a valid, standard exam that demonstrates minimum competency. Together, these two steps could substantially advance the EMS profession in many ways, but there are hurdles that must be overcome to achieve the gains. A requirement for national accreditation of education programs could increase the cost of taking the courses. Many students and departments already have difficulty paying for EMS education, especially paramedic programs. In addition, some educational programs that do not meet the standards for accreditation would be closed, decreasing access to such training. While these are legitimate concerns, the IOM indicated that the advantages of requiring accreditation outweigh the drawbacks. They believe that accreditation assures course participants (and their future patients) that they are getting a quality education in return for the investment of their time and money. In recent studies, we have observed that graduates of accredited programs score substantially better on their National Registry exams, lending additional credence to the IOM's position.

As with all of the health professions, it will always be up to individual states to license all levels of EMS providers, but all of these reports envision the levels to be the same across the nation rather than variable from state to state. The IOM Committee recommends that like most of the other health professions, state licensure of EMS providers should be based on a national certifying exam that has been validated to assess entry-level competence. As the profession moves toward these goals, the NREMT will become less of a competitive vendor of EMS exams for different states, and more of the national certifying entity focused solely on verifying the competence of each individual EMS practitioner.



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Associate Director

Sherry A. Mason  
Systems Manager

Terry Markwood, MS Ed, NREMT-B  
Certification Coordinator

Robert L. Wagoner, BS, NREMT-P  
Associate Director

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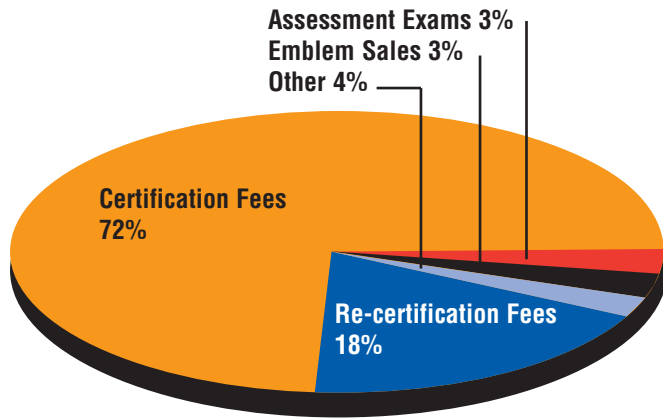
Marilyn Gifford, MD  
Norman E. McSwain, Jr., MD



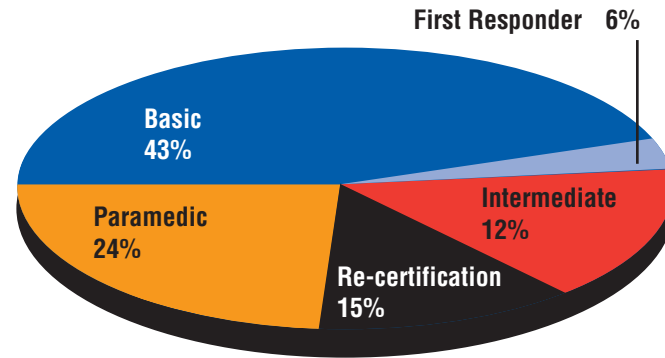
EMS needs valid, evidence based, and standardized approaches to education, training, evaluation, and patient care. The National Registry of EMTs is the premiere organization in demonstrating these principles in provider evaluation. The rigor and validity of what the NREMT does drives the rest of EMS to a higher level. As an EMS educator, I depend on the NREMT to reliably test my students; as a medical director, NREMT certification is a mark of distinction for my providers.

Jonnathan Busko MD MPH EMT-P  
Medical Director, Operations  
Eastern Maine Medical Center Professional  
Emergency Services  
Medical Director, EMS Education  
Eastern Maine Community College / Northeast EMS

## Operating Revenue – \$4,582,578

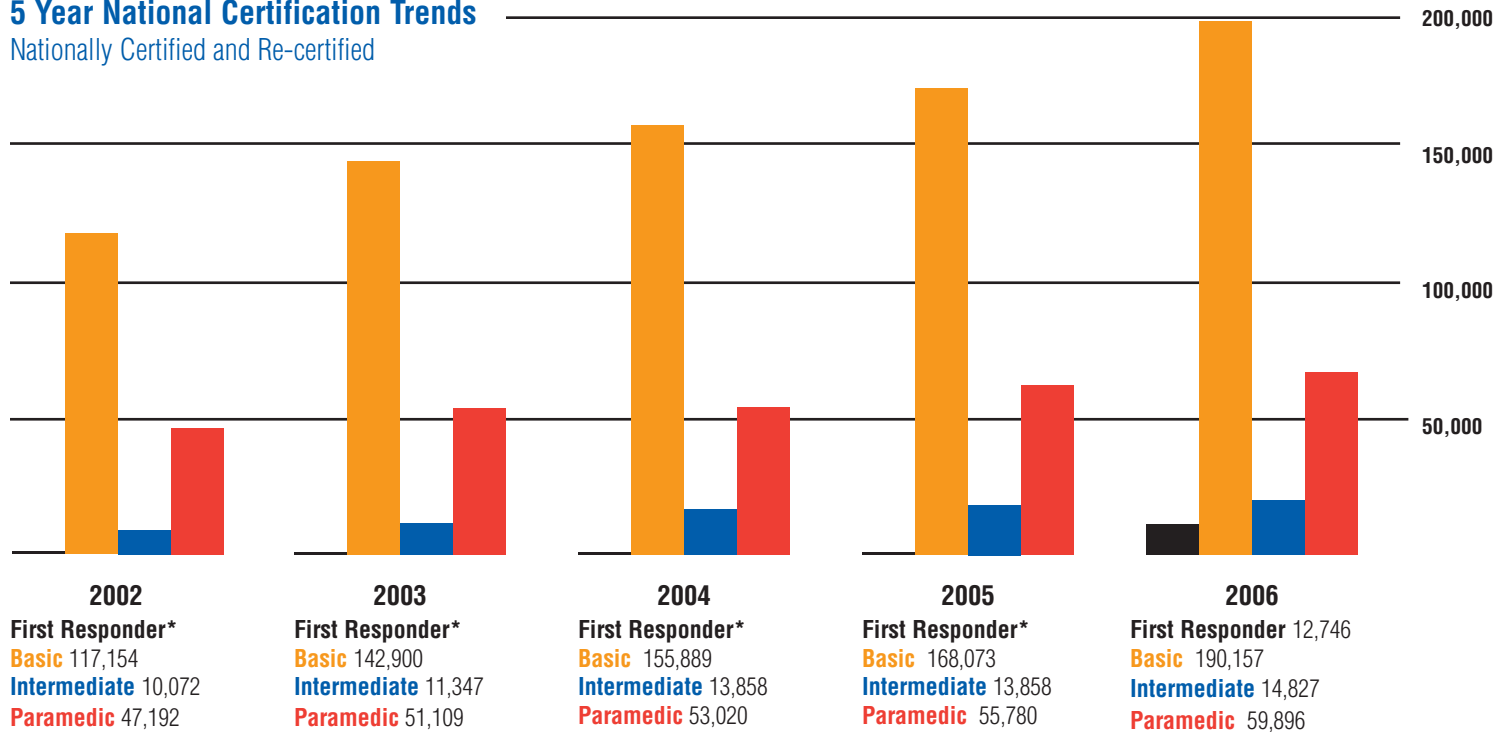


## Operating Expenses – \$3,901,699



## 5 Year National Certification Trends

Nationally Certified and Re-certified



\*Not available

# Strategic Plan and Key Initiatives



Over 160,000  
incoming phone  
calls were  
received in 2006.

## **William E. Brown Jr., MS, RN, NREMT-P**

Executive Director

A daunting task laid ahead of the NREMT staff in 2006: prepare for the historical transition to computer based testing without compromising customer service. I am pleased to announce the NREMT staff worked relentlessly as a team to see that this goal would be successfully realized.

Certainly, the most visible strategic goal for 2006 was implementation of computer based testing as the method for delivering NREMT written examinations. This included a host of necessary tasks including gathering empirical data for items, defining event testing, psychometric issues of CBT, hosting a meeting of state training coordinators involved in the beta test as well as implementing a beta test of CBT, providing testing policies to the Board regarding CBT, and completing all tasks in the Pearson Transition Plan for 2006.

In addition, other tasks outlined in the 2006 Strategic Plan that were accomplished include: validating NREMT Airway and Cardiology Items in regards to changes in the American Heart Association Guidelines; examining the NREMT response to the Americans with Disabilities Act; continuing current functions and planned enhancements to the NREMT's administration and operations; convening the NREMT Finance Committee; participating in development of the National EMS Education Standards; hosting Standard Setting Committees for all levels of

certification and addressing revised standard setting processes; continuing the NREMT Community Relations Program; continuing the NREMT Research Program; commencing long-range planning and review of re-certification; and convening a committee to explore NREMT certification on an international basis. These were no small tasks in themselves to tackle in the midst of the transition to computer based testing.

We continued to experience a record year, with a record number of calls received, a record number of emergency medical professionals serving the American public, and a record amount of examinations scored. To see that the number of examinations scored by NREMT staff increased by 150% in just seven years seems incredible to me. However, the NREMT staff is dedicated to their work in serving the EMS community.

Of course there are others who are responsible for the successful year and transition to computer based testing who must be recognized. The NREMT works with an outstanding Board of Directors comprised of some of the medical industry's brightest professionals. In addition, the EMS community provides invaluable support to the work of the National Registry. I look forward to continuing to oversee the passionate work that is carried out by the NREMT as we enter a new era in serving this wonderful nation in which we live.

## Examination Department

### Robert L. Wagoner, BS, NREMT-P

Associate Director

Preparing for the switch to computer based testing (CBT) took priority in 2006, as the National Registry held item writing meetings to continue to expand our item banks in preparation for CBT.

In June and July, a beta test was conducted to help assure a smooth transition when CBT was adopted in January, 2007. Information and feedback was reviewed including demographics, statistics, pass/fail rates, average test lengths, and other information.

With the input of state EMS offices, the National Registry set up additional testing sites in areas where access needed to be increased. Furthermore, a method of CBT delivery to rural areas was developed to ensure improved access to testing opportunities.

As an interim phase-in during the last quarter of 2006, exams at all levels were AHA (American Heart Association) "neutral." The switch to the new 2005 AHA guidelines occurred as of January 1, 2007.

Standard Setting meetings held in 2006 were conducted for the first time using the modified Angoff approach, in which expert judgements are used to determine the passing standard for the test.

Five training sessions were held for advanced level NREMT representatives, and a total of 55

versions of the exam, 6,505 items, and 62,585 booklets were rotated as the last of the paper-and-pencil method. The Examination Department looks forward to the more efficient and accurate method of CBT.

## Certification Department

### Terry Markwood, MS Ed, NREMT-P

Certification Coordinator

The single focus this year has been the successful conversion from paper applications to an electronic system. This move provides states and education programs with improved customer service by way of more accurate data, and provides candidates with faster exam results. This direction ultimately benefits the public by getting competent candidates in the workforce sooner.

The electronic system also allows the National Registry to provide candidates who do not pass the exam with input, including valuable references that will help them improve their future exam attempts. The National Registry's goal is to continue to expand this service.



As the State EMS Director for Nevada, I am very pleased with our original transition from a home-grown testing instrument to our relationship with the National Registry, which could not have gone smoother. Now we are excited about seeing the implementation of computer based testing. National certification puts Nevada and other states on the same level field for determining core competencies of our emergency medical profession. Our reason for transitioning to national certification is that it provides for us a psychometrically sound and legally defensible testing instrument without added cost to our agency.

Fergus Laughridge  
President NASEMSO  
State EMS Director  
Nevada State Health Division  
Carson City, Nevada





The transition to computer adaptive testing has been a very professional and thorough process from my view as an EMS educator. I felt that the National Registry took great care to seek appropriate input from a diverse group of instructors from around the country; to develop the test, and then communicate this major change through diverse vehicles to ensure that educators were informed. I am confident that the new testing process will be fair and much more convenient for our students. I look forward to their continued leadership in the EMS community.

Kim McKenna RN BSN CEN EMT-P  
Director of Education  
St. Charles County Ambulance District  
St. Peters, Missouri

## Community Relations Department

**Gregg S. Margolis, PhD, NREMT-P**

Associate Director

Communicating the implementation of CBT to stakeholders was the primary focus this past year, with major energy placed in the production of the DVD "Making the Switch." This 45-minute DVD provides step-by-step instructions for applying to take the certification exam online, a thorough explanation of how computer adaptive testing is more accurate than pencil-and-paper exams in measuring a candidate's competency, a tour of a testing center, and a history of the NREMT. The DVDs are distributed to program directors after their programs are approved, made available at various fall conferences and sent to state directors, state training coordinators, and NREMT advanced level representatives. Elements of the DVD are also readily accessible on the NREMT website.

Another significant development was the Education Network (Ed Net), an electronic network system that links approved EMS educational programs to the National Registry and state offices. Ed Net makes it possible to verify students' course completion electronically and replaces written applications. Ed Net makes the verification system more timely and efficient. Community Relations Coordinator Heidi Erb is commended for her diligent work in keeping the channels of communication opened between State EMS Offices, Education Program Directors, and the NREMT.

Certification brochures were also updated to reflect the transition to CBT and were redesigned in a more user-friendly format. Recruitment brochures

were produced to help address the nation's shortage of EMTs and Paramedics.

Community Relations will continue to provide support as the NREMT communicates to stakeholders in this important period of transition to CBT.

## Re-certification Department

**Jeffrey K. Scott, MBA, NREMT-P**

Re-certification Coordinator

With the goal of encouraging re-certification and making the process more accessible, the Board of Directors approved the concept of developing an on-line re-certification system. Because implementing such a system will require a significant amount of work, it may be two or more years before on-line re-certification can be made available.

The Board of Directors also authorized the option of using computer based testing to validate continued cognitive competency as a part of meeting the NREMT re-certification requirements. Passing the CBT test can be used in lieu of taking a refresher and completing the continuing education classes. Policies regarding use of CBT testing are available on the NREMT website.

A sub-committee of the Board worked on identifying the direction of the re-certification program, including revising the re-certification date for EMT-Basics as a way to provide better customer service.

The Re-certification Department will continue to identify methods for retention of nationally certified providers as a way to increase the professionalism of EMS. Improvement of the re-certification process will also be an on-going goal.



## Research Department

### Gregg S. Margolis, PhD, NREMT-P

Associate Director

The National Registry's Research Department is committed to improving out-of-hospital care through research.

Working with The Ohio State University Center on Education and Training for Employment, the Research Department was able to identify core competencies necessary for a Paramedic to possess.

The Research Department conducted a study to help define best practices of EMT-Basic educational programs. Titled "Strategies of High Performing EMT-Basic Educational Programs," the research project identified valuable strategies for improving EMT-Basic educational programs by using existing high-performing programs as the model.

Data continues to be collected for the LEADS program, which is in its eighth year. This year, input was gathered from EMS professionals regarding recruitment retention and size of workforce. The LEADS project serves as one of the main sources for the data the Research Department uses to analyze EMS workforce issues.

The EMS Research Fellowship Program continues to flourish. Jonathan Studnek received his master's degree and has been admitted to a doctoral program in epidemiology. Antonio Fernandez is making steady progress toward his master's degree.

## NREMT Research Productivity

- Dickison PD, Hostler D, Platt TE, Wang H (2006). Program Accreditation Effect on Paramedic Credentialing Examination Success Rate. *Prehospital and Disaster Medicine* Apr-Jun 2006; vol. 10, no. 2.
- Brown WE, Studnek J, Levine R (2006). "Relationship Between Shift Work and Work Life of Emergency Medical Technicians: A Preliminary Analysis." Poster presentation during the 134th Annual Meeting of the American Public Health Association (APHA).
- Russ-Eft D, Dickison P, & Levine R (2006). Examining career success of minority and women emergency medical technicians (EMTs): A LEADS study. In F. Nafukho (Ed.) *Proceedings of the Academy of Human Resource Development*.
- Pirrallo RG, Levine RL (2006). The Incidence of Sleep Problems and Their Effect on U.S. Emergency Medical Technicians: The Longitudinal Emergency Medical Technician Attributes & Demographics Study (LEADS) Project." Poster presentation at The 8<sup>th</sup> World Conference on Injury Prevention and Safety Promotion.
- Fernandez AR, Studnek J (2006). Quantifying the Educational Background of EMS educators. Poster presentation at the Prehospital Care Research Forum at the annual symposium of the National Association of EMS Educators.
- Studnek J, Porter K (2006). The Relationship between Ambulance Crashes and Emergency Medical Technician Age. Poster presentation at the annual meeting of the Society for Academic Emergency Medicine.
- Margolis GS, Studnek J (2006). How Many Volunteer EMTs Are There, Really? Poster presentation by the Prehospital Care Research Forum and presented at EMS Today, the annual meeting of the Journal of Emergency Medical Services.
- Studnek J, Porter K (2006). Are Paramedics Practicing as Traditional EMS Providers? Poster presentation by the Prehospital Care Research Forum and presented at EMS Today, the annual meeting of the Journal of Emergency Medical Services.
- Dickison PD, Hostler D, Wang H, Platt T (2006). Program Accreditation Effect on Paramedic Credentialing Examination Success Rate. Oral presentation at the annual meeting of the National Association of EMS Physicians.
- Margolis GS, Levine RL, Wijetunge G (2006). The Change in Full-Time EMS Provider Career Satisfaction in their First Three Years of Employment. Oral presentation at the annual meeting of the National Association of EMS Physicians.
- Studnek J, Crawford JM (2006). Predictors of Back Problems among Emergency Medical Technicians. Poster presentation at the annual meeting of the National Association of EMS Physicians.

Average  
website visits  
per day  
in 2006 were  
9,087

### EXAMS PER YEAR (Time frame January 1– December 31)

	2002	2003	2004	2005	2006
First Responder	6555	6900	7774	6761	7307
EMT Basic	71225	81505	88222	92090	94616
EMT-I 85	5498	5383	6004	5231	5518
EMT-I 99	599	1013	1521	1869	1704
Paramedic	12847	14054	15339	15815	17380
<b>Total</b>	<b>96724</b>	<b>108855</b>	<b>118860</b>	<b>121766</b>	<b>126525</b>

### FIRST TIME PASS RATE (Time frame January 1 – December 31)

	2002	2003	2004	2005	2006
First Responder	76%	72%	73%	71%	65%
EMT Basic	70%	68%	64%	65%	71%
EMT-I 85	63%	63%	55%	61%	65%
EMT-I 99	66%	67%	65%	63%	59%
Paramedic	64%	63%	63%	64%	62%

(The NREMT transitioned from a fiscal year to a calendar year in 2005. The statistics shown below from previous years have been adjusted to reflect reporting on a calendar year.)

### Re-certification (Time frame July 1 – June 30)

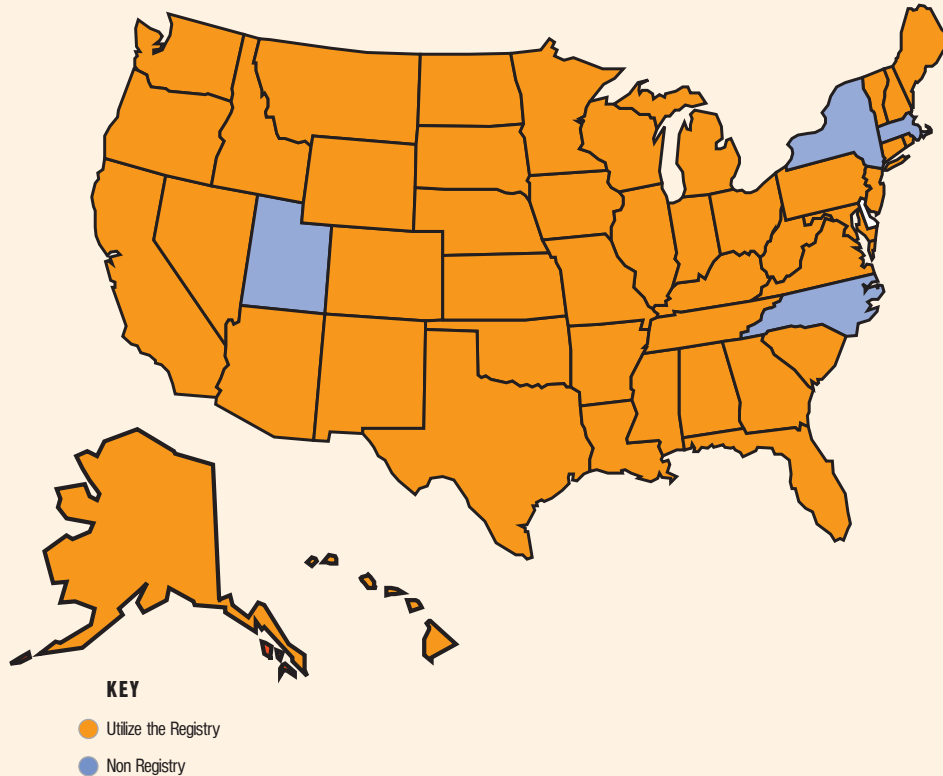
	2002*		2003*		2004*		2005**		2006**	
	%Accepted		%Accepted		%Accepted		%Accepted		%Accepted	
First Responder	815	23%	1074	25%	815		1497	27%	1477	27%
EMT-Basic	20751	40%	22396	40%	24541	42%	29211	40%	31377	43%
EMT-I85	3070	60%	2725	58%	3046	56%	3107	54%	3311	60%
EMT-I99			58	55%	113	47%	251	52%	435	63%
Paramedic	15862	75%	16675	77%	17473	75%	18217	75%	20224	76%
<b>Total</b>	<b>40498</b>	<b>49%</b>	<b>42928</b>	<b>50%</b>	<b>45988</b>	<b>53%</b>	<b>52283</b>	<b>49%</b>	<b>56824</b>	<b>51%</b>

\*Time frame July 1–June 30

\*\* Time frame January 1- December 31

## State Utilization

The map below illustrates the states that utilize National Registry certification to issue EMS licenses as of December 31, 2006.

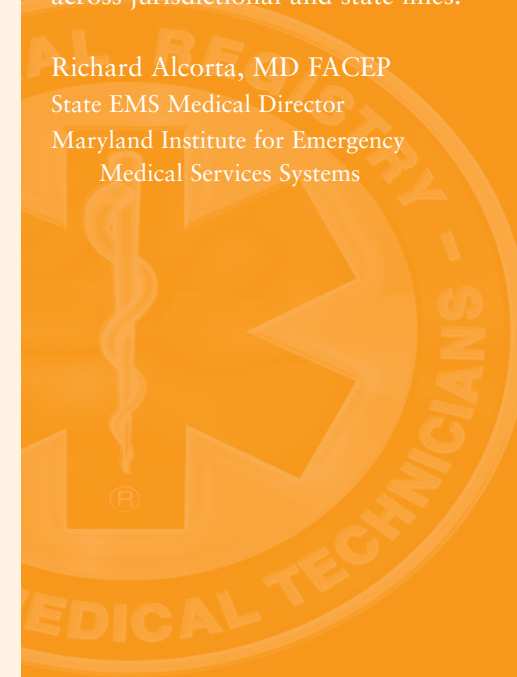


Florida and Maine use the National Registry for Basic certification only.

Alaska, Indiana, Maryland, New Mexico, Pennsylvania, Virginia, Washington DC, and Washington use the National Registry for Paramedic certification only.

The profession of Emergency Medical Services is growing into its rightful place among the health care professions. As referenced in the NHTSA “National Scope of Practice” and in other health care professions, it is essential to have an impartial national board that certifies EMS providers who meet the high educational, professional, and competency standards for the individual of EMS provider levels. The NREMT has established a nationally recognized process that provides this service and facilitates recognition of NREMT certified EMS provider competency and reciprocity across jurisdictional and state lines.

Richard Alcorta, MD FACEP  
State EMS Medical Director  
Maryland Institute for Emergency  
Medical Services Systems







## National Registry of Emergency Medical Technicians®

THE NATION'S EMS CERTIFICATION™

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P.O. Box 29233  
Columbus, Ohio 43229

(614) 888-4484  
[www.nremt.org](http://www.nremt.org)



We are very pleased with the validation and standardization of the National Registry exams, as well as the process used to develop them. Using the National Registry puts us in line with the EMS Agenda for the Future and the EMS Education Agenda for the Future. A validated and well-produced exam is key to us for the protection of the public. Adoption of a national standard levels the playing field for applicants coming from out of state, because we know the standards these folks have met and don't have to waste our time validating their abilities. The fact that other states use the National Registry is a pretty good mark of the quality of the exams.

Greg Natsch  
Pre-hospital Operations Coordinator  
Unit of Emergency Medical Services  
Missouri Department of Health & Senior Services  
Jefferson City, Missouri

I often hear EMTs commenting that the NREMT exam is difficult. As a medical director, this is welcomed feedback! If passing the exam were easy, the NREMT would not be doing its job of accurately assessing the EMT's knowledge and skills prior to entering the practice of out-of-hospital medicine. The valid examination process provided by the National Registry is part of the foundation to support the recognition of what we do as a profession.

Jim Upchurch, MD, NREMT-P  
Big Horn County Emergency Medical Services  
Indian Health Service Emergency Medical Services  
USFS Region I Incident Medical Specialist Program  
Big Horn County, Montana