EMERGENCY MEDICAL SERVICE INSTITUTE

2011-2012 ANNUAL REPORT
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2011 – 2012

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From the Director

Often the hardest part of change is not really change, itself, but rather anticipation of the impending change. Change, by definition, means to make something different. Most of us fear the unknown simply because we don’t know what to expect. It follows that the anticipation of change brings with it concern, or even fear, that we will not be prepared for what comes next. Will we be able to manage our staff, our resources and our patients appropriately, effectively or efficiently? Will the change really bring something better, or will we move several steps backward? Usually, only time will tell, but there is more that we can do.

Rather than looking at change merely as making something different, I prefer to think of change as an opportunity to pass from one stage to another, more akin to evolution, growth, progress or advancement. If we always see our glass as half empty, if we always expect the worst, if our outlook never shifts from negative to positive, we will always be in reaction-mode, fighting against change just because we must move away from the status quo, no matter how ineffective the status quo may be. I have listened to countless colleagues who loudly proclaim how bad a process or situation may be, and then listen to those same people argue just as vehemently against making any change at all because the result might be worse than what exists.

Both at the regional and statewide levels, we have seen numerous changes in the past several years that dramatically and positively impacted patient care and our EMS system as a whole. Just for example, we have implemented new CPR standards that give our patients the best chance for return of circulation, new protocols related to 12-lead ECG interpretation, recognition and interventions for ST-elevation MI, advances in post-cardiac arrest care including use of hypothermia pre-hospital, and, of course, the use of CPAP devices that has produced favorable, even lifesaving, results in countless patients. We have begun to embrace a culture of safety that helps to ensure everyone goes home, statewide ALS and BLS protocols that have become a model for other states, passage of the new EMS Act which will carry us into the future, and health and fitness awareness for our EMS providers.
Dr. Louis Pasteur once said that chance favors only the prepared mind. I am certain that Dr. Pasteur did not mean that it is better to be lucky than good. Rather, I believe his emphasis was on preparation – anticipating the future and developing strategies to be successful in any environment that may exist. I suggest that change also favors those who are prepared. We must be ready to adapt our vision and our actions whenever necessary to remain viable in new situations.

The past year has been one of anticipation, looking ahead to the impending changes that will certainly impact all of us in Pennsylvania’s EMS system during the next year and far beyond. We will see changes in EMS education standards, in evaluation and certification of EMS providers, in the way EMS is provided, administered and overseen, and in the EMS system structure itself. We will see changes in our national, state and local leadership, and in laws and regulations impacting the provision of EMS, reimbursement and patient care.

Some of these changes will directly benefit us, while other changes will create enormous challenges that we must overcome in order to survive and grow as an industry. To succeed, we must be prepared to meet these challenges, not simply denounce or protest against them. Some of the changes we face are beyond our control, or are an inevitable result of the advancement of EMS in our country and beyond. An unfortunate truth in life is that not everyone can have things their own way – often we must give way to the greater good, to growth, and to evolution.

Our glass must always be half full; we must look to the future with anticipation, not trepidation. We must be ready to move forward to create a better system in which EMS can thrive and do what it is that we all desire most – to do the best for our patients. Only then can we truly succeed.
The Emergency Medical Service Institute is a nonprofit organization designated by the Pennsylvania Department of Health, Bureau of EMS as the Regional EMS Council for Southwestern Pennsylvania. The Institute is one of 16 Regional EMS Councils in Pennsylvania, and is the largest EMS Council in terms of area served, population served and number of EMS practitioners in the Region.

The Institute is responsible for overseeing all EMS activities in the 10 counties of Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington and Westmoreland. The Institute is responsible to ensure certification and continuing education of EMS practitioners (over 15,000 in this Region including First Responders, EMTs, Paramedics, Pre-hospital Registered Nurses and Pre-hospital Physicians), licensure of all EMS agencies including ambulance services, air-medical services, Recognized Quick Response Services and Certified Voluntary Rescue Services (over 270 in this Region), and oversight of all clinical aspects of emergency medical care including accreditation of Training Institutes, Medical Command Facilities and Medical Command Physicians. The Institute performs a dual role, representing the interests of the Department of Health through the Bureau of EMS and the interests of both the general public and the EMS/Emergency Response community.

The Institute is also heavily involved in local and regional planning and coordination for any major incident or “all hazards” response and is a member and active participant in the Region 13 Task Force.

Within its region, the Institute is primarily responsible for:

- Licensure of EMS Agencies
- Education and Credentialing of EMS Personnel
- Accreditation of Education Institutes
- Quality Assurance within the EMS Community
- Public Information and Education
- Data Collection regarding EMS Activities
- Mass Casualty/All-Hazards Preparedness and Mitigation
- Recognition of Medical Command Facilities and Physicians
Education is the most powerful weapon which you can use to change the world. Nelson Mandela

EMS Education is evolving as we speak, and the role of an EMS provider will also evolve as we move forward. The need for EMS providers is increasing and the skill set and knowledge they need must be more diverse. The EMSI Education Department continues to set the standard by assisting in the development of programs for continuing education, the evaluation of instructors and the processing and validation of new and existing EMS professionals.

In 2011/2012, we continued to raise the bar by recruiting and monitoring new evaluators for the psychomotor (practical) examinations as well as streamlining the processing of cognitive (written) exams. This effort is to provide fair, equal and timely validation of provider skills and knowledge, as well as to minimize the turnaround time of receiving results. These advances are on the eve of 2013, at which time EMS education will be evolving once again as we begin to administer the National Registry for EMT examinations for all levels of certification. This undertaking will be a giant progressive step for EMS education in Pennsylvania as we utilize this nationally accepted and validated exam for providers. The National Registry exam is the standard currently for 45 states as a validation exam for providers to receive their EMS certifications. The necessary cooperation among EMS Education Institutes, instructors, evaluators and EMSI will be nothing short of monumental. The implementation of the National Education Standards at all certification levels places Pennsylvania on track for what the future of EMS can and will become, with our providers and educators at the forefront. The addition of the Advanced EMT certification level will provide a level of ALS provider new to Pennsylvania who will be able to administer lifesaving care that had been reserved for paramedics in the past. While the scope of practice has yet to be finalized (and while we are sensitive to concerns regarding reimbursement), we are confident that this level can enhance our EMS system and create flexibility for urban and rural environments. We believe that our EMS system, as a whole, operationally and clinically, will ultimately be enhanced.

For all EMS certification programs that will complete and test in 2013, EMS Education Institutes must tailor their curriculum to the National Education Standards, which were developed over many years and then released in 2009. These new standards are a major byproduct of the EMS Agenda for the Future, drafted more than a decade ago. The National Education Standards replace the National Standard Curriculum, which was devised as a minimum standard to meet the goals of EMS certification through an hour-based format. In the National Education Standards, the education is a competency based approach that provides Education Institutes with the ability to be creative, flexible and dynamic with its student population. This helps ensure that instructors identify students’ successes and areas for improvement and modify their teaching styles to best serve the students as well as the patients. These standards are constructed to both emphasize the importance of knowing the skill as well as the science behind those skills.
In addition, the new Education Standards are created to work as a building block of education through the various certification levels. While some information is repeated to promote mastery of the skill and knowledge, moving to the next certification level will not require a complete re-education of material already learned.

For continuing education, the creation and implementation of ConEdLink in February of 2012 helped EMSI and over 190 con-ed sponsors achieve quicker validation, greater proficiency and precision in roster submission and uploading of con-ed hours to the EMS Registry System. ConEdLink was put to the test during EMS Update 2012, where all con-ed processing and completed courses were uploaded to providers' profiles in the EMS Registry system by the end of the conference. Updates are continuing to improve this system, including the addition of the certificate module which will allow any student completing a class to receive a certificate of completion by email, regardless of who the con-ed sponsor is or where the course was taught. This efficiency is to assist the con-ed sponsors in processing ease and elimination of time required by the sponsors, post-course, to create completion certificates. Another new addition was the ability of con-ed sponsors to add expired practitioners to the rosters to receive con-ed credit. This helps promote former EMS practitioners, who are working on reinstatement, to attend con-ed classes to meet their requirements to once again be active in the EMS field. This fail-safe is also to help identify practitioners who are expired and notify them to start the reinstatement process.

The Education Department has also implemented a PHRN Prepare Program to educate RN's who have an interest in becoming EMS providers, guiding them through the credentialing process. EMSI also entered into a partnership with the Epilepsy Foundation of Western PA to create and present con-ed to EMS providers on the specifics of treating persons with Epilepsy. Education offerings were also presented at the EMSI Information and Career Events that focused on pediatric simulation education and provider situational awareness.

We continue to meet the needs of providers that are entering Pennsylvania to work for EMS agencies through the reciprocity process, and we offer substantial help to expired providers who wish to reenter the EMS community.

There are continuous improvements being made to streamline these processes to best serve the provider, the region and the Commonwealth. A significant portion of our efforts are to inform and retain EMS providers so they may continue to serve the patients in Pennsylvania with the highest level of skill, knowledge and care.

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Save the date

March 21-23, 2013
**EDUCATION HIGHLIGHTS**

**EMS Update 2012 - Seven Springs Resort**

- Number of Active EMS Instructors - 227
- Number of Training Institutes - 12
- New EMS Education Institutes Accredited - 2
- Education Institutes Re-accredited - 1
- Number of Rescue Exams Administered - 43
- Number of Certification Courses Registered - 181
- EMSI administered 30% of the EMR Courses statewide.
- EMSI administered 27% of all EMT Courses statewide.
- EMSI administered 29% of all Paramedic Courses statewide.

- Inspected 7 new sites where certification classes are to be conducted.
- Offered 29 In-House written exams.
- Coordinated 44 Exam Evaluators who assisted with 73 state-level practical exams.
- Observed 34 EMS Instructors during 53 classroom visits.
- 2545 Con Ed Courses were conducted by 180 Sponsors.
- 57 New ConEd Courses processed, 150 ConEd by Endorsement apps reviewed and processed.

**Number of Certification Courses Registered**

- EMR: 79
- EMT-B: 11
- Paramedic: 11
- Basic Vehicle Rescue: 3
- Special Vehicle Rescue: 3
- EMSI Instructor Course: 43

**Practitioners Certified**

- EMR: 17%
- EMT-B: 1%
- Paramedic: 75%
- PHRN: 6%
- Pre-Hospital Physician: 1%
CONTINUOUS QUALITY IMPROVEMENT

EMSI has established the Total Quality Management Committee (TQM) which is part of the Regional Quality Improvement Committee that meets quarterly and includes all levels of EMS services. The committee is chaired by Dr. Richard J. Wadas, MD, FACEP.

The regional QI requirement was fulfilled through an analysis of EMS agency completion of the 2011 statewide protocol update.

The committee also expanded on a research project that Dr. Martin-Gill conducted on the availability of emergent cardiac catheterization and therapeutic hypothermia in the region. The committee sent out a survey to all emergency department directors within the EMSI 10 county region to obtain an expanded list of hospital capabilities, including specialized medical services, and identified which facilities can provide certain levels and types of care. ED directors agreed to allow publishing those results on the EMSI website (emsi.org) to serve as a guide for EMS providers.

A recent regional inspection of controlled substances used by EMS found that all EMS agencies utilize and store controlled substances appropriately. However, it was found that only a small percentage of reports documented how the unused drugs were disposed of, and the method varied greatly. With direction from the Regional Medical Direction Committee, a survey was sent to all EMS agencies to determine how each EMS agency disposed of the drugs.

EMSI is participating in a statewide project to train the lay public in Hands-Only CPR in association with the American Heart Association. This easy 2 step process teaches people that see a teen or adult suddenly collapse to call 911 and start chest compressions, pushing hard and fast. EMSI has also launched a web page where the public can view instructional videos, study fact sheets, and download posters. Each person completing the training online is asked to take a very short survey to provide feedback. More information can be found at: http://www.emsi.org/handsonlycpr.asp

EMSI is encouraging other EMS agencies to offer Hands-Only CPR in their town. Simply complete a roster and send it to EMSI and we will count your public Hands-Only CPR training as your EMS agency’s participation in this fiscal year's QI/QA project.

The TQM QI Committee has also been monitoring progress of a Point of Care transfer form pilot project. Information Bulletin # 2012-009 includes the form and instructions.
Non Transport of Patient Project

Patients who receive an EMS response that does not result in transport to a hospital are common. These patients have an increased risk for suboptimal outcomes. A detailed analysis will be completed to determine the frequency of non-transport throughout the EMSI region. If problems are identified, a corrective action plan will be developed. This may include development of educational components in patient reporting and documentation, development of a more specific regional non-transport protocol, and consistent implementation of the EMS Patient Refusal Checklist. A grant was given to assist with this project from the Jewish Healthcare Foundation through its EMS Champions program. Several projects promoting patient and provider safety are being worked on throughout this year long fellowship grant program.

The most common medical complaint categories of non-transported patients are:

1. Other (documentation issue)
2. Falls
3. Traffic Accidents
4. Diabetic Problems
5. Unconscious/Fainting

Data is being analyzed from January 1, 2010 to December 31, 2011.

Outcome of patient transport is categorized on patient reporting system using these groups:

- no treatment required or necessary
- patient refusal
- treated and released
- treated and care transferred
- treated and transported by law enforcement
- treated and transported by private vehicle

A research proposal entitled “Field Trial of Hypotensive Resuscitation versus Standard Resuscitation in Patients with Hemorrhagic Shock after Trauma” was approved. This research, a part of the National Resuscitation Outcomes Consortium, seeks to determine the feasibility and safety of hypotensive resuscitation for the early treatment of patients with traumatic shock compared to standard fluid resuscitation.

A pilot project evaluating the use of racemic epinephrine for the treatment of croup in pediatrics is also ongoing. Dr. Johanna Rosen from Children’s Hospital of Pittsburgh of UPMC is reviewing the collected data from this multi-region program.

A prehospital lactate study was also begun this past year. This project is studying the lactate measurements for detecting occult shock in patients with severe trauma.

Drs. Adam Tobias and James Dickson developed minimum guidelines for EMS Agency Medical Directors.
The first step in preparing for an emergency is being prepared yourself. A vital component is having the operational readiness of a safe vehicle that has the necessary supplies along with functional and safe equipment to respond, treat and transport patients. The Operations Division was busy again this year making sure that the EMS Agencies in Region 04 were prepared and safe for the staff and patients they serve. We need to continuously reinforce a culture of safety and readiness. As we upgrade our vehicles, modify our fleet and have staffing changes, the Operations Division is there to assure the compliance of these changes to benefit the patients and communities at large.

Licensure applications processed – 144

- Number of EMS Agencies – 140
  - ALS Agencies – 116
  - BLS Agencies – 21
  - Air Ambulance Agencies - 3

- Number of new ALS Agencies – 1 (Forbes Prehospital Response)

- Number of licensure inspections conducted for renewal of license:
  - 5 BLS Ambulance Services – 7 vehicles
  - 59 ALS Ambulance Services – 338 vehicles

- Number of EMS Agencies Adding / Replacing Vehicles:
  - 43 agencies / 68 vehicles.

- Inspected one replacement helicopter.
- Conducted six surprise inspections of ALS ambulance services.
- Conducted three Statewide Ambulance Safety Inspections.
- Monitored one inspection for CAAS accreditation.
EMSI's Clinical Division facilitated development of a new course on the Center Learn LMS system, “AHA 2010 CPR & Emergency Cardiac Care Guidelines for ALS and BLS”. EMSI worked with Vincent Mosesso, Jr., M.D. to develop this course and originally presented it at the EMS Update Conference. This presentation explains, in detail, the science behind the changes made in emergency care and resuscitation. This course provides 1.5 medical/trauma CEU for ALS providers, 1.0 medical/trauma CEU for BLS providers, and 0.5 medical/trauma for EFR. To date, 190 providers have completed this course.

As we move forward, the clinical division has begun working on development of a primary stroke center education module soon to be available on the EMS Learning Management System. We are also researching the usage of IV pumps in the region on emergency transports, studying the usage of lights and sirens in the region, and assisting in the development and availability of regional ECG transmission.

Seven new complaints were received at EMSI and investigated.

266 fatal accident reports were researched.
LaCrosse Wireless Temperature stations with batteries were distributed to 185 EMS agencies. The intent of these temperature stations are for EMS personnel to check the front and back of each vehicle to ensure patients have access to air conditioning and heat.

613,000 Patient Care Reports were submitted to the EMS Institute.

32 Medical Command Facilities are accredited; 19 were inspected this year.

There are 490 Medical Command Physicians.

There are 1,813 ALS Practitioners with Medical Command Authorization.

Seventy percent of all EMS calls are handled between 0700 and 1900 HRS.

The Regional ALS Medication List was updated to reflect the revised statewide protocols and issues related to medication shortages.

EMS Update 2012 was held March 22 thru 24, 2012 at Seven Springs Resort:

- 69 Courses offered
- 3080 Medical/Trauma CEUs granted; 1247 Other CEUs granted
- 58 Exhibitors
- $580 was raised by attendees for the National EMS Memorial Fund
- Nearly 800 participants, 60% BLS providers, 11 states and 30 PA counties represented.

EMS Institute Annual Meeting was held Thursday, October 27, 2011 at Hilton Garden Inn Southpointe. Dr. Richard Heath of Emergency Resource Management, Inc. and Marion Jones of STAT Medevac were presented with EMS Recognition Awards.

Pete Frejkowski received the EMSI Practitioner of the Year award at EMS Update 2012.

Dr. Paul Paris, Regional Medical Director for EMSI, was recognized at the 2012 EMS TODAY conference in Baltimore as one of 2011’s EMS 10 Innovators in EMS. This national award is given annually to the top 10 innovators who drove the EMS industry forward in 2011. Dr. Paris was recognized for creating a unique partnership with the Jewish Healthcare Foundation (JHF), a foundation in Pittsburgh that is nationally recognized for their leadership in patient safety efforts.

Under his leadership, JHF funded an EMS safety fellowship/quality champions program to help translate the quality improvement and patient safety work they pioneered in the hospital setting to EMS services throughout Western Pennsylvania.

This past year, the champions program chose 20 EMS fellows to participate in cutting-edge quality improvement and safety training exercises. Many of the participants brought their own ideas for projects and initiatives to work on during the year long program. The goal of the program is that the fellows will take both the tools and the insight they have garnered during the program back to their own EMS agencies once their fellowship is complete.
One of the mandated responsibilities of the Regional EMS Councils is to assist federal, state or local agencies in the provision of onsite mitigation, technical assistance, and situation assessment, coordination of functions or post-incident evaluations in the event of potential or actual disasters, mass casualty situations or other substantial threats to public health. As part of its fulfillment of these tasks, the Institute actively participates with the Region 13 Task Force, as well as with the Emergency Management officials throughout the Region.

During the past year, EMSI Staff participated in 63 Task Force and Committee meetings, 14 Table Top Exercises, and nine Full Scale Field Exercises. EMSI participated on the Medical Subcommittee of the Region 13 Task Force, the MMRS Health & Medical Subcommittee and Steering Committee, the Western Pennsylvania Tactical Medical Support Council, the Allegheny County Local Emergency Planning Committee, and the Allegheny County Citizen Corps Council.

Under the direction of the Department of Health Bureau of EMS, the Institute is well positioned to fulfill its mandate and has participated in the following events during the last 15 months:

- Response to Hurricane Irene
- Response to Tropical Storm Lee
- Exercise Operation Runway Overpass
- Baily Mine CONSOL Energy, mine collapse exercise
- Emergency Preparedness demonstration in Westmoreland County
- Emergency Preparedness demonstration in Allegheny County/City of Pittsburgh
- Environmental Support for City of Pittsburgh during two mass gathering events
- Environmental Support for a mass gathering event in Ross Township
- Environmental and Medical Support for the PGA Senior Open
- Environmental Support for Jameson Hospital during a power outage
- Environmental Support at Friendship Ridge Nursing Home during power grid switchover
- Environmental Support for Redstone Highlands Assisted Living Facility
- Supplied Disaster Relief Centers throughout Commonwealth post Irene/Lee
- Beaver Valley Nuclear Power Plant full scale drill
- Simulated commercial bus accident over hillside utilizing ATVs
- Region 13 Counter Terrorist Task Force Regional Joint Tactical SWAT Exercise/Training in City of Pittsburgh.
REGION 4 STRIKE TEAM

“April Showers” Command Staff Gathers

Joe Schmider directs field operations

Pennsylvania Regions 1, 3, 4, 7, 8 and 15 during the “April Showers” Statewide Full Scale Exercise at Ft. Indiantown Gap Military Training Base
As most of you know, Pennsylvania’s EMS system is funded primarily through revenues generated from the legislatively created Emergency Medical Service Operating Fund. Money is paid into this fund by violators as a result of a fee on certain traffic related offenses. The EMS system shares the proceeds of the Emergency Medical Service Operating Fund with the Brain Injury Foundation. Annual contributions into the Fund have remained flat for several years.

During Fiscal Year 2011-2012, the Institute received a total budgeted amount of $2,356,027 from the Department of Health. In accordance with its Agreement with the Department of Health, the Institute spent the entire amount of $2,356,027 to support the EMS system in its ten-county region. Of that amount, $370,000 was allocated directly to licensed EMS Agencies for the purchase of essential ambulance, training and safety equipment through the annual Provider EMSOF equipment purchase program. Administrative (overhead) costs totaled only 5%, while 95% of budgeted funds were spent in support of the EMS system in the Region.

An independent financial audit was conducted by the firm of Maher Duessel. The auditors confirmed and validated funds received and expended, as well as reviewed management controls and procedures. The final audit was presented to the Institute’s Board of Directors, to the Pennsylvania Department of Health’s Bureau of EMS, and to the Pennsylvania Bureau of Administrative and Financial Services. Once again, the audit firm did not identify any findings or material weaknesses in any financial transactions or in the management of the Institute.

The following chart shows a breakdown of the use of funds.
2011 REGIONAL ACTIVITIES

Top Left: Preparing for the Muddy Angels National EMS Memorial Bike Ride is from L to R: Dave DiDesiderio- Noga Ambulance, Rob McLafferty- Children’s Hospital, Brian Shaw-Noga Ambulance (EMSI President), David LaCovey- Children’s Hospital. Not pictured, Rick Lippert – Children’s Hospital.

Below – AGH Skill Review at EMSI office classroom

Participants from the 2012 TAKE A STEP FOR YOUR HEROS 5K RUN/WALK helped raise funds for The National EMS Memorial.

Greater Pittsburgh Paramedics Bagpipe & Drum Band and Regional EMS Honor Guard with Governor Corbett following 9/11 Ceremonies at the State Capitol.

EMSI Education Specialist, Todd Nicholson was the recipient of the 2011 "Jim McCaffrey EMS Instructor of the Year" Award.
L to R: Tom McElree, Executive Director, EMSI; Martin Raniowski, Deputy Secretary of Health; Dr. Richard Heath and Marion Jones, EMS Recognition Award Recipients; Bill Groft, Board of Directors; Joe Schmider, Director, Bureau of EMS/DOH.
About the cover: Dante Sicchitano and Courtney Hilderbrand, EMT's affiliated with EMS and Fire Services in Washington County, demonstrate proper CPR techniques.

*Photo by George Mendel*