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December 1, 2011

Forty years ago, men and women of conviction, courage, and determination harnessed the national vision set forth in the National Academy of Sciences, National Research Council "White Paper", ***Accidental Death and Disability: The Neglected Disease of Modern Society*** and announced to the world, "We can do better."

Legendary leaders in Illinois, such as Doctors David Boyd, Bruce Flashner, Stan Zydlo and countless others worked tirelessly with elected officials headed by Gov. Ogilvie, community activists, hospital administrators, physicians, nurses, fire departments, fire protection districts, private industry, rescue workers, health departments, healthcare organizations, and ordinary people whose passion for service was ignited as they saw the opportunity to create an extraordinary good for our citizens.

This was clearly not easy. They faced significant challenges and had to break through barriers, overcome opposition, create resources where they had not previously existed, collaborate on many levels to inform, communicate, educate, legislate, cooperate, and compromise when necessary to birth the Illinois Trauma and EMS Systems.

The planners had to consider our geographic, political, economic, and human diversity and find the common ground that would enable all to participate as they were able. Infrastructure had to be built and resourced that would sustain such a monumental undertaking. Educators were recruited and educational programs had to be created to support the practice needs of the workers. And yet despite these formidable odds, Trauma Systems and EMS in Illinois not only evolved, but were seen as best practice models for the nation.

A brief review of our history may be helpful to inform the debate and help us all understand where we are now and how we've evolved to our present state.

Year	Event
1966	<p>The National Academy of Sciences, National Research Council published <i>Accidental Death and Disability: The Neglected Disease of Modern Society</i> (White Paper), which decried the lack of standards for ambulances with respect to design, equipment, or driver training:</p> <ol style="list-style-type: none">1. There was a lack of uniform and adequate Federal, State and Local laws and standards concerning EMS (only six states had written standards).2. Both the ambulance and equipment carried on board (if any at all) were of poor quality and design. The vehicle offered little room for patient, attendant or equipment.3. Radio communications between emergency services and hospital was seriously lacking. Only 5% of the nation's ambulances had radio contact with a hospital.4. Personnel were sadly lacking in training for emergency care of patients. Only about 50% of the nation's EMS personnel had even American Red Cross certificates and many had no training at all.5. Hospitals were staffing emergency rooms with part-time physicians, who may or may not have training or experience in emergency care or trauma. <p>The "White Paper" defined 29 recommendations to improve trauma care; 11 were directly related to EMS. Prior to this time, a soldier wounded in Viet Nam had a better chance of surviving than anyone who suffered multiple injuries in the U.S. The arrival of a critically injured patient to a comprehensive treatment facility was more by accident than by planning.</p>
	<p><i>National Highway Safety Act</i> (Public Law 89-563) of 1966 submitted by President Johnson created the US Dept. of Transportation (DOT) as a cabinet-level department and established the EMS Program in the DOT under the National Highway Traffic Safety Administration (NHTSA) with the authority to promulgate minimum standards for improving deficiencies in EMS systems and trauma care</p> <ul style="list-style-type: none">- Set forth 18 guidelines (#11 is EMS standard)- Provided legislative authority, money & standards for ambulances, curriculum development, & personnel training: more than \$142 million between 1968 and 1979- Early advanced life support pilot programs- States could be penalized up to 10% of their Federal Highway funds if they did not comply with this law.

Year	Event
March 1966	First US civilian Trauma Unit (TU) created at Cook County Hospital (CCH) in Chicago by Drs. Robert Freeark and Robert J. Baker. Served as a model and catalyst for the nation.
1967	The American Academy of Orthopedic Surgeons (AAOS) conducted courses for ambulance service personnel culminating with the first "Orange Textbook," <i>Emergency Care and Transportation of the Sick and Injured</i> , edited by Doctor Walter Hoyt. This document, and the text, <i>Training of Ambulance Personnel and Others Responsible for Emergency Care of the Sick and Injured at the Scene and During Transport</i> , developed by the National Academy of Sciences and National Research Council (NAS/NRC), were the first national attempt to standardize EMS training (Becknell, 1997).
May 1969	<p>Airlie House conference sponsored by the American College of Surgeons Committee on Trauma and the Committee on Injuries under the American Association of Orthopedic Surgeon (AAOS). This conference produced "Recommendations for an Approach to an Urgent National Problem". This report indicated that immediate attention and control were needed in the areas of transportation and communication. Developing standards for ambulance design and equipment was recognized as "painfully slow."</p> <p>In San Francisco, New York, New Orleans, and other American cities, interns were assigned to ambulances to provide care for the victims of trauma and other conditions outside of the hospital. Most hospitals did not have a place to manage emergencies. Some hospitals had set up an unstaffed "emergency room" at the back of the hospital. The "ambulance driver" had to ring the doorbell beside the emergency room door so that the nurse could come down from the ward to unlock the door. The nurse then checked the patient and called a physician from home if she thought that the patient was really sick. (Did you ever wonder why modern emergency departments are in the rear of the hospital and not out front? Tradition.) All the physicians on staff had to take turns "covering the emergency room." A patient involved in a major wreck with multiple fractures, and perhaps a ruptured spleen or a head injury, might be seen by an ophthalmologist or a dermatologist. Many physicians knew that they were ill prepared to handle trauma or a major myocardial infarction, but there was no alternative.</p> <p>This paper challenged the approach that had emphasized individual agency and the role of fortuitous chance as the prime movers of EMS development. Instead, they argued that planning should stem from the National Academy of Sciences EMS report. Using the examples of paramedic training and ambulance design, this paper asserted that members of the committee used a complex mix of local experimentation and professional networking to suggest directions for the federal government's efforts to create national standards and guidelines for EMS. The NAS-NRC Committee retained a prominent role in EMS development until the passage of the Emergency Medical Services Systems Act of 1973, when federal interest in EMS largely shifted from prehospital transport to an emphasis on in hospital care and regional trauma systems planning.</p>
1969	The Highway Safety Bureau, later to become the National Highway Traffic Safety Administration (NHTSA), came into existence, and the development of a curriculum to standardize ambulance attendant training (EMT-Ambulance) was begun by Dunlap and Associates under contract to NHTSA.
Dec. 1970	<p>Professional EMS systems in Illinois came into being largely because of two epidemics, coronary artery disease (CAD) and trauma. Extensive studies confirmed that sudden death was the first symptom in up to 25% of those with CAD and found that a majority died from potentially reversible dysrhythmias before they could get to a hospital.</p> <p>People did not understand that the closest appropriate facility may not have been the nearest hospital. Trauma was described as having preventable morbidity and mortality if critical interventions could begin within minutes at the scene of the emergency and the patient was rapidly transported to a specialized center.</p> <p>Dr. David Boyd, CCH TU Chief resident, saw the need to progress from a "unit" to a Trauma Center concept and began speaking about his vision at meetings. The trauma problem originally included the following assumptions:</p> <ul style="list-style-type: none"> ➤ A critically injured patient was defined as one who had sustained a life-endangering injury or a critical injury that would or could result in permanent disability or death. ➤ Illinois had a severe maldistribution of personnel and facilities. Trauma patients had multiple systems injuries that necessitated complex care, numerous specialists, and extensive rehabilitation that the local hospital was often incapable of providing. <p>Two goals were identified to mitigate trauma morbidity and mortality:</p> <ul style="list-style-type: none"> ▪ Deliver an organized plan of care to trauma victims ▪ Implement and upgrade a critically injured patient's access to specialized care <p>To achieve these goals, a plan was developed in December 1970 by the Office of Comprehensive State Health Planning with direction given by doctors David Boyd and Bruce Flashner.</p> <p>Dr. Deke Farrington & Dr. Sam Banks developed trauma school for CFD that served as a prototype for what later became the first EMT-A training program.</p> <p>The first Board of Directors meeting of the National Registry of Emergency Medical Technicians (NREMT) took place. The purpose of the NREMT was to provide uniform standards for the credentialing of ambulance attendants.</p>
	The first Paramedic systems were created in Columbus, Ohio; Seattle, Washington; Los Angeles, California; and Miami, Florida.

Year	Event
Jan 1971	Through executive order, Governor Ogilvie formed a committee to guide and assist in the development and implementation of an emergency medical care program. The committee was composed of directors of municipal and state governmental agencies, voluntary and private organizations and members of professional groups. Drs. Boyd & Bruce Flashner asked by Gov. Richard Ogilvie to create a Statewide trauma plan based on practices of the TU at CCH.
March 1971	Boyd and Flashner published their plan for the organization of a statewide system of trauma facilities in the Illinois State Medical Journal This plan was built on surgical principles, regionalizing care, adding new professional roles, education, specialty designations, emergency categorization of hospitals, EMS, data collection, and research
1971	White House funded demonstration of model EMS System development Task force involved in the design of the first EMT-Ambulance NSC (Deke Farrington, Rocco Morando, Oscar Hampton, Walter Hoyt, Walter Hunt, Robert Oswald, Peter Safar, and Joseph Territo under Dunlap and Associates) delivered their work to NHTSA. This NSC provided information on course planning and structure, objectives, detailed lesson plans, specific content material, and suggested hours of instruction. In response to model legislation recommended by NHTSA, many states adopted the NSC in either law or rules; the curriculum and the scope of practice became intertwined.
July 1, 1971	By executive order, the Illinois Department of Public Health (IDPH) created the Division of Emergency Medical Services and Highway Safety to oversee the new EMS/Trauma program. During 1971, plans were made to regionalize all EMS services and to institute an integrated (accident to ultimate care) delivery system. Most significant to these developments was a trauma center concept. The original proposal called for the designation of 50 trauma centers throughout the state using a tiered approach: regional, areawide and local . The first Regional Trauma Centers were Cook County Hospital (Chicago), Loyola Hospital (Maywood), St. John's Hospital (Springfield), and Doctors Memorial Hospital (Carbondale). The initial trauma program was based on a functional categorization. Their plan incorporated both a prehospital (the development of EMT training) and a hospital component (physician education and the Trauma Nurse Specialist Course). Local planning was done by Areawide Hospital Emergency Services (AHES) committees
1972	White House funded model EMS System development. Department of Health, Education, and Welfare (HEW) allocated 16 million dollars to EMS demonstration programs in five states (Illinois was one). <i>Emergency</i> debuted on television
Dec. 1, 1972	Nine communities trained EMTs and paramedics to inaugurate the 1st multi-community Mobile Intensive Care Unit (MICU) Program in the country and first System in Illinois went live at Northwest Community Hospital in Arlington Heights, created by Dr. Stanley M. Zydlo.
Jan 1973	Drs. Boyd, Lowe, Baker, and Nybus published an article in the Journal of the American Medical Association (JAMA) titled: New Computer Method for Multifactorial Evaluation of a Major Health Problem advocating for the development of trauma registries.
1973	The Robert Wood Johnson Foundation appropriated \$15 million to fund 44 EMS projects in 32 states and Puerto Rico. Illinois received 4.1 million of that funding. In addition, Illinois received funding through the Federal DOT to improve communications and transportation services. Ill. was able to implement 70/30 funding for ambulance services. IDOT supplied 70% of the cost of an ambulance and the community supplied 30%. The program allowed numerous volunteer ambulance services to develop, thereby creating the backbone of the entire Ill. EMS System. Congress appropriated 170 million to initiate a coordinated system of total EMS nationwide through the Emergency Medical Services Systems Act of 1973 [P.L. 93-154]. States were required to have a lead agency to regulate EMS Systems (following the Illinois model). Provisions included: 15 fundamental elements required in an EMS Plan - Manpower - Training of personnel - Communication system - Transportation - Emergency facilities - Critical care units - Public safety agency involvement - Consumer participation - Access to care - Transfer of patients - Standardized medical record keeping - Consumer information & education - System review & evaluation - Disaster management - Mutual aid (Omitted financing and medical direction) Plan was to implement 300 EMS regions throughout the country with a trauma focus. Legislation omitted ongoing system financing and medical control. With passage, the world of EMS changed overnight, and the search for funding began. Federal monies became available (\$300 million) and EMS systems developed rapidly from 1974-1981.

Year	Event
1974	In Illinois, the Trauma Program changed to a comprehensive EMS Program. Specialty centers (burn, neonatal, spinal cord) were designated.
1975	The American Medical Association (AMA) recognized the EMT-Paramedic as an allied health occupation. The Essentials for EMT-Paramedic Program Accreditation were developed in 1976 and adopted in 1978 by the AMA Council of Medical Education. The Joint Review Committee on Education Programs for the EMT-Paramedic (JRCEMT-P) made the "Essentials" the standard for evaluating programs seeking accreditation (JRCEMT-P, 1995). Although EMS education and allied health education developed at approximately the same time, they frequently took divergent paths.
1976	Congress extended the EMS legislation for three more years and allocated 200 million dollars for system development, 15 million for research, 30 million for training, and 22.5 million for burn treatment.
1977	<p>The first EMT-Paramedic NSC was developed by NHTSA and included 15 modules to be offered over ~390 hours. Subsequently, the National Council of State EMS Training Coordinators, Inc. (NCSEMSTC), and the NREMT developed an additional EMS level between the EMT-A and the EMT-P levels of practice. This grew out of the perceived need to have certain emergency capabilities available to victims even though they could not support a paramedic level service. Modules I, II, & III of the EMT-P: NSC (Roles & Responsibilities, Human Systems: Patient Assessment, and Shock and Fluid Therapy) plus the esophageal obturator airway and anti-shock trouser lessons were designated as the EMT-Intermediate: NSC.</p> <p>Increasingly, the NHTSA curricula became national standards for EMS education and continued to be referenced in many state laws and administrative rules as the basis for scope of practice.</p>
1980	In the late 1970's, health care professionals and Illinois legislators all saw the need to update the original State EMS legislation. The first EMS Act, known as the Reilly Bill, passed in 1980 and authorized IDPH to certify EMTs, EMT-Ps and license ambulances.
1981	The Consolidated Omnibus Reconciliation Act (COBRA) consolidated national EMS funding into state preventive health and health services block grants administered by the DOT through Health and Human Services, and basically eliminated funding for EMS
1984	<p>The NCSEMSTC, under contract to NHTSA, revised the EMT-A NSC and increased the number of hours from 81 to 110. The EMT-P NSC revision was completed by NCSEMSTC and was reorganized into a 6 division/27 subdivision format. A stand-alone EMT-I NSC was also developed by the NCSEMSTC. Common to most of these curricula were detailed instructor lesson plans, course guides, and refresher courses.</p> <p>The EMS for Children (EMSC) program, under the Public Health Act, provided funds for enhancing EMS systems to better serve pediatric patients.</p>
1985	National Research Council published Injury in America: A Continuing Public Health Problem describing deficiencies in addressing the problem of accidental death and disability. Renewed focus on regional trauma care systems. EMT-A renamed to EMT-B; EMT-I created
Sept. 1986	Illinois P.A. 84-1404, known as the Trauma Center Act, amended the Emergency Medical Services Act to empower IDPH to designate new tiers of trauma centers loosely based on American College of Surgeons (ACS) guidelines (Level I, Level II or affiliate Trauma Hospitals) if they met the criteria established by the Department through rulemaking. Replaced the original plan from the 1970s. Great debate over open vs. closed enrollment of centers.
1988	<p>The National Highway Traffic Safety Administration (NHTSA) initiated the Statewide EMS Technical Assessment program defining 10 key components of EMS systems</p> <ul style="list-style-type: none"> - Regulation & policy - Resources management - Human resources & training - Transportation - Communications - Trauma systems - Public information & education - Medical direction - Facilities - Evaluation <p>NHTSA developed guidelines to implement the elements; left latitude to the states resulting in inconsistencies in licensure levels & scopes of practice Standard equipment for ALS services recommended by American College of Emergency Physicians (ACEP)</p>
1990	<p>Recognizing the need to look more comprehensively at the future of EMS education, NHTSA convened the Consensus Workshop on Emergency Medical Services Training Programs. For the first time, representatives of the EMS community discussed the national curricula needs of EMS providers and identified the priority needs for EMS training. The priorities established at this consensus meeting determined the national priorities for EMS education for the 1990s.</p> <p>The national Trauma Care Systems and Development Act encouraged development of inclusive trauma systems and provided funding to states for trauma system planning, implementation, and evaluation.</p>
1993	A formal national, multi disciplinary consensus process was used to develop the <i>National EMS Education and Practice Blueprint</i> . This was the first attempt to determine prospectively and systematically the levels of EMS providers. The purpose of the <i>Blueprint</i> was to establish: 1) nationally recognized levels of EMS providers;

Year	Event														
	<p>2) nationally recognized scopes of practice; 3) a framework for future curriculum development projects; and 4) a standardized pathway for states to deal with legal recognition and reciprocity.</p> <p>This consensus process, involving initial peer review and subsequently a formal national consensus meeting moderated by an independent facilitator, set the stage for future EMS consensus activities .Identified 4 levels of EMS personnel: First Responder; EMT-B, EMT-I, and EMT-P.</p> <p>The Institute of Medicine (IOM) published Emergency Medical Services for Children which pointed out deficiencies in our health care system's ability to address the emergency medical needs of pediatric patients</p>														
1994	<p>Samaritan Health Services completed the EMT-Basic NSC (renamed from EMT-Ambulance) under contract to NHTSA. The curriculum, which remained at 110 hours, changed the emphasis of EMT-B education from diagnosis-based to assessment-based. "Nice to know" information was treated with less emphasis and "need to know" information was stressed. Despite an expert panel approach, the changes in the EMT-B curriculum generated considerable national attention, discussion, and concern. Increasingly, there was recognition that the <i>method</i> of changing the curriculum was as important as the <i>content</i>. The 1994 EMT-B NSC again provided detailed declarative material for each section without formal instructor lesson plans.</p>														
1995	<p>Congress does not reauthorize funding under the Trauma Care Systems and Development Act.</p> <p>The Illinois Emergency Medical Services (EMS) Systems Act, 210 ILCS 50 and The Illinois EMS and Trauma Center Code 77 Ill. Adm. Code 515 were totally revised and updated. Rules were adopted on 4/15/97. We continue to use this Act and the rules in their original or amended form today. Revisions are now in process based on a new State EMS Strategic Plan approved in 2010.</p>														
Aug. 1996	<p>The National Highway Traffic Safety Administration (NHTSA) and the Health Resources and Services Administration (HRSA) published the highly regarded consensus document titled the <i>EMS Agenda for the Future</i>, commonly referred to as the <i>Agenda</i>. This was a federally funded position paper completed by the National Association of EMS Physicians (NAEMSP) in conjunction with the National Association of State EMS Directors (NASEMSD).</p> <p>It examined the past three decades of EMS, capsulated the state of EMS in 1996, and looked ahead to create a common vision for the future. The authors designed it to be used by government and private organizations at the national, state, and local levels to guide planning, decision making, and policy development regarding EMS.</p> <p>Planners envisioned EMS systems of the future as being community-based and fully integrated with the over-all health system. They believed that EMS personnel should have the ability to identify and modify illness and injury risks, provide acute illness and injury care and follow-up, and contribute to treatment of chronic conditions and community health monitoring. These new entities should be developed from redistribution of existing health care resources and integrated with other health care providers and public health and public safety agencies. This design would improve community health and result in a more appropriate use of acute health care resources. EMS would remain the public's emergency medical safety net. The "Agenda" proposed continued development of 14 attributes of an effective EMS system. For a full text of the "Agenda" access the NHTSA web site at www.ems.gov.</p> <table border="0" data-bbox="272 1241 917 1434"> <tr> <td>Integration of health services</td> <td>Public education</td> </tr> <tr> <td>EMS research</td> <td>Prevention</td> </tr> <tr> <td>Legislation & regulation</td> <td>Public access</td> </tr> <tr> <td>System finance</td> <td>Communication systems</td> </tr> <tr> <td>Human resources</td> <td>Clinical care</td> </tr> <tr> <td>Medical Direction</td> <td>Information systems</td> </tr> <tr> <td>Education systems</td> <td>Evaluation.</td> </tr> </table> <p>The following vision of EMS education is paraphrased from the Agenda:</p> <p>EMS education in the year 2010 develops competence in the areas necessary for EMS providers to serve the health care needs of the population. Educational outcomes for EMS providers are congruent with the expectations of the health and public safety services that provide them. EMS education emphasizes the integration of EMS within the overall health care system. In addition to acute emergency care, all EMS educational programs teach illness and injury prevention, risk modification, the treatment of chronic conditions, as well as community and public health.</p> <p>EMS education is of high quality and represents the intersection of the EMS professional and the formal educational system. The content of the education is based on National EMS Education Standards. There is significant flexibility to adapt to local needs and develop creative instructional programs. Programs are encouraged to excel beyond minimum educational quality standards. EMS education is based on sound educational principles and is broadly recognized as an achievement worthy of formal academic credit.</p> <p>Basic level EMS education is available in a variety of traditional and non-traditional settings. Advanced level EMS education is sponsored by institutions of higher education, and most are available for college credit. Multiple entry options exist for advanced level education, including bridging from other occupations and from basic EMS levels for individuals with no previous medical or EMS experience. All levels of EMS education are available through a variety of distance learning and creative, alternative delivery formats.</p> <p>Educational quality is ensured through a system of accreditation. This system evaluates programs relative to standards and guidelines developed by the national communities of interest. Entry level competence is ensured by a</p>	Integration of health services	Public education	EMS research	Prevention	Legislation & regulation	Public access	System finance	Communication systems	Human resources	Clinical care	Medical Direction	Information systems	Education systems	Evaluation.
Integration of health services	Public education														
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Year	Event
	<p>combination of curricula standards, national accreditation, and national standard testing.</p> <p>Licensure is based upon the completion of an approved/accredited program and successful completion of the national exam. This enables career mobility and advancement and facilitates reciprocity and recognition for all levels. Interdisciplinary and bridging programs provide avenues for EMS providers to enhance their credentials or transition to other health career roles and for other health care professionals to acquire EMS field provider credentials. They facilitate adaption of the workforce as community health care needs, and the role of EMS, evolves.</p>
Dec 1996	<p>NHTSA convened an EMS Education Conference with representatives of more than 30 EMS-related organizations to identify the next logical <i>Agenda</i> implementation steps for the EMS community. The outcome of this meeting is broadly summarized by the following recommendations:</p> <ul style="list-style-type: none"> • The National EMS Education and Practice Blueprint (the Blueprint) is a valuable component of the EMS education system. It should be revised by a multi disciplinary panel, led by NHTSA, to more explicitly identify core educational content for each provider level. • National EMS Education Standards are necessary, but need not include specific declarative material or lesson plans. NHTSA should support and facilitate the development of National EMS Education Standards. • The <i>Blueprint</i> and National EMS Education Standards should be revised periodically (major revision every 5 to 7 years, minor updates every 2 to 3 years).
1997	NHTSA published "A leadership guide to quality improvement for EMS Systems"
1998	<p>The EMT-I and EMT-P NSC were revised by the Center for Emergency Medicine of Western Pennsylvania under contract to NHTSA. This revision used an expert panel and modified the national consensus approach. Although the NSC were reasonably consistent with the <i>Blueprint</i>, the emphasis on expanded skills and a more diagnosis-based approach to EMT-P education contrasted with the recently revised EMT-B NSC. These issues generated considerable national controversy. Most discussion centered around the scope of practice and the degree of declarative information rather than on educational methodology. The close relationship between curriculum and scope of practice issues made the resolution of challenges more difficult. Detailed content outlines were still included. Time expanded to a minimum of 950 hours.</p>
	<p>How did we compare to other allied health programs?</p> <p>In 1966, Congress passed The Allied Health Professions Training Act. This legislation provided a formal system of physician-directed practice and gave the American Medical Association (AMA) the authority to grant authorization to institutions that sponsor and provide instruction to allied health professionals.</p> <p>Through the Commission on Allied Health Education Accreditation (CAHEA), the AMA developed a system that accredited educational institutions to conduct allied health educational programs. The CAHEA model of accreditation (now administered by the Commission on Accreditation of Allied Health Education Programs or CAAHEP) was similar to the process used by nursing and medical schools.</p> <p>Each recognized allied health occupation developed a Joint Review Committee (JRC), consisting of membership from physician and professional associations. With broad community input, each JRC was charged with developing essentials or standards which would be used as the basis of evaluating and accrediting programs. Most allied health fields instituted more and better training and have adopted educational requirements that include formal academic degrees (Farber and McTernan, 1989). By 1998 there were 16 accrediting agencies and 47 recognized allied health occupations (AMA, 1998).</p>
1999	EMT-I Curriculum update adopted
2000	<p>In January 1998, NHTSA formed a Blueprint Modeling Group to develop procedures for revising the <i>Blueprint</i>. During their initial deliberations, the group determined that the <i>Blueprint</i> should be only one component of a more comprehensive EMS education system of the future. Consequently, they changed their name to the EMS Education Task Force. They expanded their goal to include defining both the elements of the education system and the interrelationships necessary to achieve the vision of the <i>Agenda</i>.</p> <p>The EMS Education Agenda for the Future: A Systems Approach (Education Agenda), is the result of their deliberations. The <i>Education Agenda</i> is a vision for the future of EMS education and a proposal for an improved structured system to educate the next generation of EMS professionals. The <i>Education Agenda</i> builds on broad concepts from the 1996 <i>Agenda</i> for an education system that will result in improved efficiency for the national EMS education process. This system will enhance consistency in education quality and ultimately lead to greater entry level graduate competence.</p> <p>The Education Agenda was developed by a task force representing the full range of professions involved in EMS education, including EMS administrators, physicians, regulators, education, and providers. This document proposed an education system with five integrated primary components: National EMS Core Content; National EMS Scope of Practice Model; National EMS Education Standards; National EMS Education Program Accreditation and National EMS Certification (by 2010)</p> <p>The proposed model maximizes efficiency, consistency of instruction quality, and student competence by prescribing a high degree of structure, coordination, and interdependence among the five components.</p>

Year	Event
	At the time of creation, NHTSA still identified at least 44 levels of EMS personnel across the country that created an impractical and unnecessary variation in preparation and practice. Goal was to align certification/licensure with scope of practice.
2002	Center for Medicare and Medicaid Services (CMMS) rolled out new ambulance fee schedule for bundled reimbursement
2005	National EMS Education and Practice Blueprint; National EMS Core Content document published by NHTSA that defines a universal EMS body of knowledge, skills and abilities (medical function). At the time of publication, 39 different levels of licensure still existed. Federal Interagency Committee on Emergency Medical Services (FICEMS) Established by the US DOT Reauthorization, PL 109-59 (Section 10202), to ensure coordination among Federal agencies involved with State, local, tribal, and regional emergency medical services and 9-1-1 systems.
2006	Emergency Medical Services at the Crossroads ; Committee on the Future of Emergency Care in the United States Health System Board on Health Care Services, Institute of Medicine of the National Academies. Examined scope of emergency and trauma care from dispatch to hospital – and found that there were still many areas of opportunity. Vision: All communities are served by highly coordinated emergency services accountable for their performance EMS & public safety fully inter-connected so each pt receives appropriate care, at optimal location, with minimum delay
2007	National EMS Scope of Practice Model Created by NASEMSO & National Council of State EMS Training Coordinators and published by NHTSA: Delineates provider practice & licensing levels (administrative function) intended to ensure consistency between states and promote reciprocity . Currently in the process of adoption across the country. Ill goal for EMT, AEMTs, and paramedics: Jan. 1, 2013. EMT-Is will be recognized until 2017.
Sept. 2007	IDPH convened a multidisciplinary and multiregional strategic planning committee for Illinois Trauma and EMS with the purpose of improving the quality of care and coordination of medical services. Workgroups were assisted in the development of their plans by Southern Illinois University (SIU) School of Medicine, the SIU Paul Simon Policy Institute, the University of Illinois School of Public Health, the Illinois College of Emergency Physicians, and the Critical Illness and Trauma Foundation.
2009	EMS Education Standards: NHTSA & HRSA (EMS-C) contracted with the National Association of EMS Educators to create the new standards that will replace the old national standard curricula (NSC). Approved by NHTSA 1/30/2009. The document provides minimal terminal objectives for each provider level and is a guide for program personnel in making appropriate decisions about what material to cover in class. This encourages educator creativity and flexibility and facilitates alternative delivery methods. They are used by publishers to develop instructional materials. A gap analysis published in July 2009 by the National Association of State EMS Officials (NASEMSO) identified the difference between the old NSC and the new Education Standards at each level for programs to use in planning their transitions. – Ill. Compliance date: 1/1/13.
Sept 2010	Final version of Illinois 5 year Strategic Plan approved and distributed.

Challenges of using the old models of National Standard Curricula vs. the solutions proposed in the EMS Agenda for the Future

Limitations	Proposed solutions
The overall domain of EMS knowledge and skills is not defined. Each time curricula are developed, this issue is revisited, causing extensive discussion and considerable frustration.	Develop a National EMS Core Content describing the entire domain of out-of-hospital EMS care. Establish a schedule and method for updating the National EMS Core Content. A National EMS Core Content obviates the need to revisit the medical appropriateness of each procedure or cognitive domain when standards are revised. With this essential framework, the architects of the other system components can focus on their specific area of responsibility, rather than on defining and redefining the overall domain of practice.
There is not an established national EMS education system or master plan.	The <i>Education Agenda</i> proposes a system consisting of the following five components: <ul style="list-style-type: none"> • National EMS Core Content • National EMS Scope of Practice Model • National EMS Education Standards • National EMS Education Program Accreditation • National EMS Certification The role of each component is clearly delineated, the participants identified, the process for participation established, the decision-making process defined, and the relationship among components specified.

Limitations	Proposed solutions
<p>NSC drives the scope of practice for EMS providers.</p>	<p>Scope of practice should drive national education standards. The National EMS Scope of Practice Model will define, by name and by function, the levels of EMS providers based upon the National EMS Core Content.</p> <p>The National EMS Scope of Practice Model, rather than the curricula, will drive the scope of practice and national provider level nomenclature and establish the entry level competencies. With the scope of practice no longer determined by the curricula or the National EMS Education Standards, there will be considerable flexibility in designing EMS education programs.</p> <p>With an established schedule and method for updating the National EMS Scope of Practice Model, state-established scopes of practice can be regularly and consistently updated and will keep pace with EMS practice analysis and EMS research. Medical directors, EMS providers, state officials, and others will know precisely how and when they can provide input to the <i>Blueprint</i>.</p>
<p>The EMS NSC, with their detailed declarative material, limit instructor flexibility and the ability to adapt to local needs and resources. Because of reliance on highly prescriptive national standard curricula, many programs and instructors have never developed their own curricula or instructional materials. In general, EMS faculty have little experience in evaluating and using the vast array of instructional materials that are available from educational publishers.</p>	<p>The National EMS Education Standards will define terminal learning objectives for each level of EMS provider. They will be regularly updated. These standards will serve as the basis for detailed declarative instructional materials and instructor lesson plans to be developed by instructors, educational institutions, publishers, and others.</p> <p>Rather than having NSC which define one national method of instruction, a greater variety of lesson plans will be available from vendors of educational materials and from educational institutions. The National EMS Education Standards will encourage enhanced flexibility for the instructor, allowing multiple instructional methods while maintaining consistency of learning objectives.</p>
<p>The quality of EMS education varies throughout the nation. Adherence to the NSC in and by itself does not ensure quality.</p>	<p>Develop National EMS Education Standards along with a program of accreditation and national certification. Consistent National EMS Education Standards, combined with national accreditation of EMS programs and national certification, will provide greater assurance of the quality and consistency of both the <i>process</i> and <i>outcome</i> of EMS education.</p>
<p>The appropriate disciplines do not have the appropriate responsibilities in the current EMS education process. Physicians and regulators make educational decisions, educators and regulators make medical decisions, and physicians and educators make regulatory decisions.</p>	<p>The proposed system will align the primary responsibilities appropriately with the content experts while recognizing that the entire system is a fully cooperative effort.</p> <p>National EMS Core Content is developed by physicians with input from regulators, educators, and providers. National EMS Scope of Practice Model is developed by regulators with input from physicians, educators, and providers. National EMS Education Standards are developed by educators with input from physicians, regulators, administrators, and providers.</p>
<p>It is not clear who ultimately makes decisions about the education components, or how one has input or participates in the decision-making process.</p>	<p>The <i>EMS Education Agenda for the Future</i> clearly delineates who is responsible for each component, how input is provided, how decisions are made, and when the components are updated.</p>
<p>The names of EMS provider levels vary considerably from state to state.</p>	<p>Providing regulators with the primary responsibility for establishing the National EMS Scope of Practice Model and clearly defining the levels should facilitate greater consistency of provider levels across political jurisdictions. When this is combined with national certification and program accreditation, there will be considerable incentive for standardization of provider levels.</p>
<p>EMS provider licensure standards vary considerably from state to state.</p>	<p>Establishing uniform National EMS Education Program Accreditation combined with National EMS Certification will reduce variability in licensure standards.</p>
<p>EMS educational program standards and the processes for obtaining state approval to conduct EMS education vary considerably.</p>	<p>Consistent program accreditation standards, including realistic methods for full-service accreditation, will significantly reduce this variability.</p>
<p>EMS education is based on perceived needs rather than practice analysis and research.</p>	<p>A regular feedback loop connecting the core content, practice analysis, and research efforts will gradually improve the empirical basis of EMS education.</p>

Limitations	Proposed solutions
The locus of control for EMS education is placed within government, not the educational facility, program, and faculty.	The EMS education system of the future will facilitate appropriate roles for government and educational facilities. This will provide significantly greater flexibility for educational institutions and programs while still ensuring reasonable national standards.
The content of NSC is perceived to be determined by the federal contractor.	Establishing an EMS education <i>system</i> will provide for a balanced approach to EMS education and reduce the perception of a disproportionate influence by any single participant. The establishment of specific responsibilities, combined with the interrelationship of system components, will provide reasonable checks and balances.
The NSC are in various formats and frequently are not consistent with each other. This reduces the ability to “bridge” from one level to another.	Replacing the national standard curricula with National EMS Education Standards will eliminate this problem. Guided by the National EMS Core Content and consistent with the National EMS Scope of Practice Model, the National EMS Education Standards will ensure reasonable uniformity while providing flexibility in approach and educational format.
The NSC are frequently out of date.	Because of the time and expense involved in writing NSC, it is difficult to perform frequent revisions. In the EMS education system of the future, the National EMS Core Content and National EMS Scope of Practice Model will be periodically updated based upon new information and research. The National EMS Education Standards can then be revised more frequently. Publishers can update their books and their instructor lesson plans as frequently as the market demands. Instructors will have current information available to them.
The NSC development process is very expensive and frequently fragments the community.	Revising the National EMS Scope of Practice Model and the National EMS Education Standards will be less expensive and time-consuming. Because there will be a standardized method of updating them and the decision-making process will be less contentious, there will be greater cooperation in the EMS community. Instructors will be free to choose instructional support materials and there will be competition among publishers to produce high quality products.
Most state-authored EMS licensure examinations do not follow the accepted methodology for verifying entry level competency.	National EMS Certification will be based upon an up-to-date practice analysis and will follow accepted psychometric methodology for identifying entry level competency.
The EMS educational process has developed separately from the formal post secondary education system. This has frequently precluded EMS personnel desiring to obtain academic credit from doing so. This impedes EMS personnel from pursuing higher education, which would ultimately further the EMS profession.	The EMS education system of the future is compatible with an academically based approach to EMS education and more closely parallels the developments in other allied health education. The system will also support alternative methods of educating EMS providers and promote innovative relationships between academic and non academic programs.

So based on this, where should we be going?

IDPH strategic plan elements/provisions that impact education:

- Work with the EMS Advisory Council’s Education Subcommittee to promulgate rules to implement the new education standards and scopes of practice for pre-hospital providers.
- Develop minimum statewide EMS protocols at all levels of providers to ensure consistent delivery of optimal care across the EMS system, and to facilitate mobility of EMS providers between Illinois EMS Systems and agencies. \
- Encourage all agencies regulated by the Division of EMS to have compliance plans in place and include benchmarks and an analysis of current issues of non-compliance and a process to develop strategies for performance improvement.

Testing

- Conduct a needs and cost benefit analysis, and provide a recommendation to EMS Advisory Council as to whether Illinois should continue to administer validated state EMT examinations or utilize the National Registry of EMT examination service.

- If the result of the above analysis reflects that the best method for initial licensure is the National Registry of EMT examination: Initiate discussion with NREMT regarding the possibility of waiving the practical examination requirements unless an individual wishes to obtain the NREMT designation.
- Conduct a cost benefit analysis to determine the feasibility of offering computerized testing.

Education

- **S** Require each educational program to develop lesson plans that meet or exceed the national core content and the minimum recommendations for hours and patient care experiences for providers at all levels.
- **S** Identify and promote acceptable emergency driving courses and identify equivalency requirements for all EMS responders.
- **S** Publish a listing of approved education programs on the Division of EMS webpage.
- **S** Require EMS System plans to have an education improvement plan that intersects with a clinical performance improvement plan.
 - EMS will base annual education on needs identified during the clinical performance improvement.
- **S** In order to promote professionalism, advocate for EMS coursework to be changed from a vocational program to an academic program with the ability to earn an Associate's degree.
- **S** Implementation of Public Act 96-0540 (Military Education)
 - Develop criteria for the comparison of military education provided through the various divisions of the armed services in comparison to the Department of Transportation national curriculum and the new education standards that will be adopted in January of 2013.
 - Standardize a process in which a veteran can have his/her military training evaluated to determine at what level he/she would qualify to test within the State of Illinois for an Emergency Medical Technician license.
- **I** Work with the EMS Advisory Council's Education Subcommittee to review current literature for best practices across the emergency health care spectrum and replicate and evaluate these practices.
- **I** Adopt the National EMS Scope of Practice Models for all levels of EMS to serve as the minimum foundation for educational programs.
- **I** Require each program to measure competency in cognitive, psychomotor, and affective domains utilizing written examinations, site-specific practical examinations, and evaluating the behaviors specified in the National Education Standards.
- **I** Work with the EMS Advisory Council's Education Subcommittee to develop an EMS Educator mentoring and an auditing program for current educators.
- **I** Require that at a minimum, all primary instructors acquire and maintain lead instructor certification.
- **I** Work with the EMS Advisory Council's Education Subcommittee to ensure Lead Instructor and affiliate/secondary instructor training programs are offered in each region at a frequency that meets the regional needs utilizing state-approved core curriculum that will meet or exceed NAEMSE criteria.
 - The costs of these training courses will be off-set through course tuition.
 - These training programs will be conducted by EMS Systems and approved by the Division of EMS.
- **I** Develop a training/education evaluation instrument based on the National EMS Education Agenda For The Future that will allow Lead Instructors to be evaluated at the end of each course.
 - Establish minimum performance criteria.
 - Provide review and remediation as indicated.
- **I** Require paramedic training programs to be recognized by a national accreditation program.

A two-day accreditation workshop was conducted in Elmhurst on May 11 & 12, 2010 by the Committee on Accreditation of EMS Programs Director.

- I Work with the EMS Advisory Council's Education Subcommittee to encourage Emergency Medical Technician – Basic (EMT-B) and Advance EMT training programs to obtain national accreditation.
 - EMS Systems may charge fees to cover the costs of the EMS education and credentialing process. (*Systems already have this ability as there is nothing in the EMS and Trauma Center Code that prevents this.*)
- I In conjunction with the EMS System site surveys, review their education and performance improvement programs using statewide standardized criteria.
- I Work with the Illinois Rural Health Association to develop innovative and non-traditional EMS education programs to achieve increased rural participation.
- I Work with the EMS Advisory Council's Education Subcommittee to evaluate a model of continuing education requirements for each level of EMS provider that allows the EMS System Medical Director to determine continued competency.
- L Work with the EMS Advisory Council's Education Subcommittee to determine specific competencies required for specialty care and require such specific competencies as part of continuing education programs for all appropriate levels of providers.
- L Work with the EMS Advisory Council's Education Subcommittee to develop minimum requirements for all continuing education programs.
- L Analyze the costs, benefits and risks of transitioning EMS continuing education requirements from an hours-based to a competency-based approach.
- L Recognize Critical Care EMS training programs or equivalent programs that meet minimum criteria.
- L Evaluate the feasibility of creating a Critical Care Paramedic level of licensure.
- L Work with the EMS Advisory Council's Education Subcommittee to implement the new education standards and scopes of practice for prehospital providers. The target date is 1/1/2013.

EMS Education Committee activities

The Committee is working to address each of the above components of the approved strategic plan.

The Committee has discussed and presented information on the national developments at every meeting since the late 1990s. Reports on Committee discussions and process have been given at the Gov. EMS Advisory Council meetings quarterly.

National documents and/or electronic links or websites to access those documents have been forwarded to the EMS Education e-mail distribution list as they become available or distributed as meeting handouts. See references at the end of this written statement.

First draft Project Plan for Implementing the Education Standards discussed at Education Committee meeting April 9, 2009. Updates made at each meeting since that date. Latest edition: July 2011.

June 8, 2011 – Letter issued by Jack Fleeharty at IDPH to EMS MDs, EMS System Coordinators, and all Lead Instructors affirming the state plan to transition to the new EMS Education Standards and Scope of Practice Model by January 1, 2013. Also affirmed that existing EMT-Is would be recognized until Dec. 31, 2017 to give time for input and an organized transition to a different scope based on community need and resources. The Education Committee had requested this letter and supported its contents.

As specified in "Emergency Medical Services: Agenda for the Future", "Before creating an EMS System or implementing any EMS system design changes, a community should conduct a comprehensive community analysis that considers a available resources, customers, geography, demographics, political conditions, and other unique and special needs of the system. This analysis should focus on these areas, identifying their potential impact on the effectiveness of EMS System components including human resources, medical direction, legislation and regulation, education systems, public education, training, communications, transportation, prevention, public access, communication systems, clinical care,

information systems (data collection), and evaluation.” (NHTSA, 1996). We are doing just that through these meetings.

I agree with NFPA standard 5.2.3.2 that states, “The roles and responsibilities for each participant should be organized in a manner that ensures that every component of the system contributes to the effectiveness of the system as a whole, without conflicts in roles and responsibilities.”

Conclusion

After decades of service, we find ourselves again at a crossroads. The times and environment in which we operate have changed. Needs are even greater for EMS to be the public safety net for early detection and care while scarce resources are shrinking. The public has come to count on skilled professionals who are capable of higher order thinking and critical reasoning responding when they call for help. Experience has taught us that we can't be all things to all people, all the time and that we must realistically look at what is possible based on our situation – while meeting or exceeding the bar of excellence set forth at the national and state level and by our customers.

The national vision has been recast to reduce the huge variation in practice as currently exists around the country. Isolationism has given way to an appreciation that times may require mutual aid across jurisdictions and states – and there must be a way to define the minimum education and scope of practice of those EMS workers that would respond similar to our colleagues in the medical and nursing professions.

We've discovered that deviations, substitutions, omissions or expansions of the old Department of Transportation Curricula at all levels contributed to an inexplicable patchwork of practice that in the long run made it very difficult to define EMS and prepare the providers to take their place in the EMS community.

EMS-specific research has now provided evidence that some of the ways we provided education and care in the past were great and others were not helpful and in some cases potentially harmful. Our ways of doing things need to keep pace with the evolving body of professional knowledge. We've been implored to follow the data and craft our education and practice standards based on that evidence and national best practice models as is done by all other healthcare professions. If we follow our own data we find that there are inconsistent outcomes from the various education programs and again we say, “We can do better.”

After years of public discourse, it seems that the key to a successful Illinois EMS/Trauma System lies in intra & inter-EMS/Trauma Region collaboration that enables coordination of education and care between regions, Systems & hospitals. Sharing trumps proprietary competition any day. We're standing on the shoulders of giants; why not reach out a mentoring hand to pull up the next generation of educators and practitioners so their learning curve is accelerated?

Our deliberations must reflect a balance of effectiveness, efficiency and equity. We must plan based on community and customer needs, regulatory requirements, national standards, and technological advances while being ever considerate of scarce human and economic resources that must be applied in a manner that optimizes the preparation and competency of EMS personnel and promotes the safety, health and welfare of all patients. It's time to roll up our sleeves. Our mutual goal hasn't changed. We still want to provide the best evidence-based emergency care to the citizens of Illinois. Working together, anything is possible.

“Wise men make more opportunities than they find.” Sir Francis Bacon

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NHTSA. (1996). *EMS Agenda for the Future*. DOT HS 808-441, NTS-42.

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Recommended websites:

National Highway Traffic Safety Administration EMS: Contains background and updates on Federal EMS initiatives and programs: www.EMS.gov

National Association of State EMS Officials: www.nasemso.org

National Registry of Emergency Medical Technicians: www.NREMT.org

Committee on Accreditation of Educational Programs for the EMS Professions: www.coaemsp.org

Continuing Education Coordinating Board for EMS: www.cecbems.org

National Association of EMS Educators: www.NAEMSE.org

American College of Surgeons: www.facs.org/trauma/optimalcare