EMS

IN THE UNITED STATES

Fragmented Past, Future of Opportunity

A DESK REFERENCE FOR EMS LEADERS & STATE OFFICIALS

DONNIE WOODYARD, JR

FOREWORD BY DOUGLAS M. WOLFBERG

EMS in the United States: Fragmented Past, Future of Opportunity
by Donnie Woodyard, Jr

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For more information and to view many of the historic records referenced in this book, visit www.EMS-History.com

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For all the EMS leaders and today's visionaries
working together to advance our profession.

#WeAreEMS

CONTENTS

Please note that each chapter of this book is designed to serve as an independent reference and resource. As a result of this intentional design, you may observe some topics being revisited across multiple chapters, though the depth of detail may vary. This recurrent mention is designed to enrich your understanding and provide comprehensive perspectives on critical subjects.

FOREWORD

By Douglas M. Wolfberg

President John Quincy Adams said that a leader is anyone who inspires others to do more, dream more and become more. EMS is highly regimented and often focused on levels of licensure, supervisory vs. field provider status and other indicia of rank and title. But leadership need not be constrained by such classifications. Any EMS professional can be an EMS leader under the formula handed down to us by President Adams.

Anyone who is a leader or aspires to leadership in this profession must read this important work. EMS owes Donnie Woodyard a debt of gratitude for documenting our history and illuminating the future course for the profession. *EMS in the United States: Fragmented Past, Future of Opportunity* is a magnificent and monumental work.

Those who have been involved in EMS for a long time often refer to themselves (and are often referred to by others) as "EMS dinosaurs." Though EMS dinosaur status does not have a precise unit of measurement, as someone who has been involved in EMS for 45 years as of this writing, I suppose I qualify. I've also had the privilege of close associations with the generation of EMS dinosaurs that came before me, some of whom were acknowledged "founding fathers" of the EMS profession. So, I have had a front row seat, either as a direct participant, or as a recipient of firsthand accounts, of EMS throughout almost its entire modern history. I've come to terms with my EMS dinosaur status, largely because it allows for an unparalleled vantage point from which to assess the state of affairs of a profession to which I have dedicated my entire working life.

I answered my first ambulance call in 1978. For the first 30 years, I can say with the benefit of hindsight that the pace of progress in EMS was glacial at best. Nothing, it seemed, was *revolutionary* – it was barely *evolutionary* – and painfully so. Many practices – both operationally and clinically – were done simply because "we've always done it this way" (which Admiral Grace Hopper correctly said was "the most dangerous phrase in the language"). While EMS still clings to some of these anachronisms (red lights and sirens, anyone?), we've entered, and are firmly entrenched in, the era of evidence-based practices. The implications have been profound.

In comparison to the snail's pace of progress in EMS I witnessed in my first 30 years, I believe that the past 15 years have been a time of breathless and exciting change. How energizing it has been to see the unflinching gaze of data and evidence topple so many sacred cows. Everything we do deserves fresh scrutiny. Why does everyone who calls 911 require a full EMS response? Why do we run "hot"? Why does every response require transport to an acute care hospital? Can some conditions be effectively managed outside the hospital? Can some patients be transported to destinations other than acute care hospitals to effectively manage their conditions? Can telehealth play a role in more appropriately providing out of hospital care?

EMS outwardly looks like public safety. Our vehicles have markings, lights and sirens – and our people wear uniforms - that connect us by appearance to our fire and police counterparts. But make no mistake: EMS is healthcare. Some EMS systems over the past 15 years have reengineered themselves as participants in the broader community healthcare system. And herein is the exciting future that lies ahead. For a profession that started modestly as a "ride to the hospital" with minimally trained first-aid attendants, EMS is becoming community-based healthcare. "EMS providers" are becoming *practitioners*. "Crew members" are becoming *clinicians*.

These are truly momentous times in EMS. To use a golf metaphor (strange, since I'm not a golfer), I often wish I wasn't already on the "back nine" of my career. I'd like to help shape the next 45 years of our profession. I've always thrived on change, and what's in store for EMS is exciting. Being an EMS leader in such times of change can be enthralling and satisfying.

Though I hope I have a bit more to contribute, the future belongs to the next generation of EMS leaders, and the ones after that. But past is prologue. To build a future we must understand the past. We must learn from our failures as well as from our successes. The future of EMS will be what you – our future leaders - make it. This book is your roadmap. Study our history and then go out and make EMS history anew.

Mechanicsburg, Pennsylvania
July 2023

ACKNOWLEDGEMENTS

I would like to convey my deepest gratitude for the steadfast support and invaluable guidance I have received from countless mentors, friends, supervisors, and EMS leaders throughout my life. The myriad opportunities for learning and leadership, generously provided by various managers, have played a pivotal role in my development. For this, I remain profoundly thankful.

Looking back, I recognize that I often didn't fully appreciate the significance of the opportunities given to me. The privilege of engaging in meaningful dialogues, receiving mentorship, attending conference sessions, or simply sharing a cup of coffee with many visionaries who were instrumental in shaping my career and the modern EMS system, has been an inspiring journey. These luminaries, mentors, friends, and guides include numerous individuals, but I want to specifically acknowledge and appreciate Jeanne-Marie Bakehouse, Jeff Beckman, Gary Brown, Drew Dawson, Wayne Denny, Tim Dienst, Dia Gainor, Jon Krohmer, Debra McDonald, Scott Hayes, Susan McHenry, Norman McSwain, Rocco Morando, Jim Page, Rick Patrick, Peter Safar, Joe Schmider, Keith Wages, and Gam Wijetunge. I will forever be thankful for their willingness to generously share their time, historical insights, advice, and profound wisdom.

I am particularly grateful to the volunteers at Giles Rescue Squad who devoted their time to teach my first EMT class and initiate my journey into EMS. I'm also thankful to Cedarville University for entrusting me as the EMS Chief, which marked my first EMS leadership position. I extend my gratitude to numerous additional EMS agencies that provided me experience, opportunities, and guidance along the way: Cedarville University EMS, Cedarville Township Fire Department, Hamilton County EMS System, Riverview Hospital, Ivy Tech Community College, Westfield Fire Department, Med1, Falck, and the statewide system stakeholders in Louisiana and Colorado for their ongoing support and collaboration.

My appreciation also extends to the National Registry of EMTs for the opportunity to serve as the Chief Operating Officer and gain insights into national EMS leadership, the nuances of examinations and certification, and the chance to develop a national perspective on EMS. To the EMS Compact Commissioners, I extend my respect and gratitude for their pioneering efforts in setting a modern example of unity, professionalism, and standards in our field and the opportunity to learn and collaborate to make a difference.

I also wish to convey my heartfelt thanks to stakeholders and colleagues who have demonstrated remarkable understanding and grace during my moments of error. Your steadfast support and the learning opportunities offered have played a vital role in both my personal and professional development. I am extremely thankful to the many leaders who placed their trust in me, offering a novice like me an opportunity to contribute.

This book would not have been possible without the relentless efforts of those working tirelessly behind the scenes, providing invaluable fact-checking, guidance, and unwavering encouragement. To everyone who played a key role in this transformative journey, I extend my deepest gratitude. Your steadfast support has fostered my evolution in unimaginable ways.

While recognizing everyone's contribution is an impossible task, I want to express my heartfelt thanks to the following individuals who shared their invaluable feedback on this manuscript: Shawn Baird, Jeff Beckman, MD, David Bump, Sean Caffrey, Dia Gainor, John Moon, and Don Stanton. I would like to express special appreciation to Marc Pagan, Bill Seifarth, Joseph Schmider, and Douglas Wolfberg for their significant time devoted to feedback, edits, and critiques on the full manuscript.

I owe a profound debt of gratitude to my family as well. The sacrifices my parents made to ensure my access to education and the opportunity to chase my dreams have been nothing short of monumental.

Lastly, I must acknowledge my first employer, Burgess. His decision to hire a teenager evolved into an invaluable life lesson on problem-solving and overcoming preconceived limitations. His investment in me helped me understand the critical importance of investing in others. He taught me that by creating an environment conducive to success, minimizing the repercussions from failures, and prioritizing learning, one can indeed turn the impossible into the possible. This empowering approach enables individuals to reach previously unattainable heights. I am forever grateful for these lessons, which have profoundly influenced my outlook and actions.

Thank you, everyone, for being an integral part of this extraordinary journey and for contributing to my personal and professional growth.

PREFACE

Today's Emergency Medical Services system operates as a critical cornerstone of the United States' healthcare infrastructure. It serves communities around the clock, demonstrating extraordinary dedication, resilience, and adaptability, particularly during the recent COVID-19 pandemic. Each day, the EMS system proves instrumental in saving countless lives and providing a healthcare safety net for millions of Americans, notably those without consistent access to primary care.

However, the current EMS system is traversing challenging terrain. Many see the system teetering on the brink of crisis, with states nationwide rigorously questioning its sustainability and seeking for new solutions to ensure its long-term viability. These challenges are not sudden anomalies but are rather the repercussions of a series of decisions and events deeply rooted in its multifaceted history.

This history includes significant contributions from visionaries like Dr. J.D. 'Deke' Farrington, a leading orthopedic surgeon, and Dr. Pete Safar, the father of critical care medicine and modern resuscitation science. It also highlights the ironic circumstance where ambulance services, once predominantly provided by funeral homes, underwent a significant transition. In the 1960s and 1970s, many funeral homes ceased these services, not predominately due to regulatory changes, but due to a failing financial model.

Pivotal moments included the attempts by the federal government to establish two parallel, yet unfortunately uncoordinated, nationalized EMS systems in the 1970s. These initiatives, backed by over $2 Billion (valued in 2023 dollars), led to federal agencies providing conflicting requirements to state officials. This lack of coordination, along with the military's considerable influence on EMS design and progression, has left enduring impressions on today's EMS landscape.

EMS pioneers strove to align the system's development with the conventional growth paths of other allied health professions. Yet, this aspiration was not consistently achieved nationwide. National standard curriculums and certification bodies established as early as the 1970s often found their influence overshadowed by local champions, who developed EMS agencies at the community level, fostering an aversion to national standards.

The abrupt changes and significant reduction in federal funding in 1981 forced communities to pursue alternative resources for their local ambulance services. This transition heightened skepticism towards any federal or national program. In "EMS in the United States: Fragmented Past, Future of Opportunity," these historical trends and their implications on the current state of EMS are thoroughly examined.

Despite these challenges, EMS remains a critical element of the healthcare system today. The future holds opportunities to further unify the profession, leveraging tools such as the EMS Compact. With new technological advancements and the emergence of telehealth, there exists a new frontier for EMS to enhance health provision and perhaps create a sustainable financial model.

This book aims to serve as a comprehensive resource for aspiring EMS leaders and managers. It offers a detailed understanding of EMS's roots, the challenges it has faced, and the opportunities that lay ahead. The book explores historical developments, the roles of visionaries, the influence of Hollywood, and the significance of the emblematic Star of Life. It also scrutinizes systemic issues such as financial structures and disparities in access that underscore EMS operations.

Moreover, the book elucidates the certification, licensure, and credentialing processes, state sovereignty implications, and the promising prospects of telehealth and health equity in EMS. By tracing EMS's complex trajectory from its fragmented past to its opportunity-rich future, it invites readers to participate in informed discussions about the future of EMS.

"EMS in the United States: Fragmented Past, Future of Opportunity" provides an essential roadmap for aspiring EMS leaders and managers. It fosters a comprehension of the past to better manage the present and envision the future. This historical overview serves as a blueprint for understanding the present challenges and shaping the future of EMS. It advocates for a system that is efficient, equitable, and sustainable, thereby continuing its vital service to the American people.

Through this exploration, readers will gain insight into how the EMS system has evolved in the face of adversity and change. This knowledge equips future EMS leaders and managers with a historical perspective, vital for making informed decisions as they navigate the challenges and opportunities ahead.

In the age of technology and telehealth, EMS stands on the cusp of a new era. With the opportunity to further unify the profession through mechanisms such as the EMS Compact, there is potential for substantial growth and improvement. This book aims to highlight these opportunities and stimulate meaningful conversations about how to seize them effectively.

As we venture forward, it is important to remember that the history of our EMS holds the blueprint for its revival. Its future lies in the lessons learned from its past, the ingenuity of its present leaders, and the promise held by innovations yet to come. The EMS system's ongoing commitment to the well-being of the American people is a testament to its resilience and importance.

In the face of current challenges, we should be emboldened by the fact that the EMS system has always risen to meet every trial it has faced. Its fragmented past, marked by struggle and triumph, has forged a resilient system that continues to serve as a bedrock of our healthcare infrastructure.

The opportunity-rich future of EMS beckons, and this book invites all aspiring EMS leaders and managers to play a part in shaping it. It is a call to understand the past, manage the present, and envision a future where the EMS system continues to serve everyone with increased efficiency, equity, and sustainability.

A Letter to Today's EMS Visionaries and Leaders,

Throughout my more than thirty-year EMS career, I have come to appreciate the significance of having experienced mentors and dependable resources to navigate the intricacies of our complex EMS system. When I initially assumed leadership roles at both the state and national levels, I was struck by the scarcity of resources that could bridge the knowledge gap between local EMS leadership and the broader state or national leadership--understanding the history, grasping an overview of the organization, and possessing a guide to traverse the layers of influence. I was fortunate enough to have exceptional mentors, yet I witnessed many ambitious emerging leaders falter, in part, due to gaps in their knowledge and resources.

To help address this gap, I authored this book as a resource to provide a historical context for pivotal decisions that have shaped contemporary EMS systems. It is conceived as a desk reference, with each chapter functioning independently. You may notice some repeated information across different chapters, but this is intentional, serving to provide additional context in relation to the specific issue or historical event being discussed. Furthermore, I impart some insights drawn from my personal experience in leadership and management.

From the birth of EMS in the United States to current challenges such as health equity and COVID-19, my objective is to offer you an overview of key historical decisions and demonstrate how they persistently influence the design and operations of EMS in our country.

It is my hope that this book will not only act as a resource for budding EMS leaders, but also enable you to comprehend the historical underpinnings as the EMS system continues to modernize and evolve. By illuminating key facets of our history that are often neglected, we can delve deeper into understanding how EMS has developed, recognizing that our current state is inherently linked to past decisions. Each historical decision was made with purpose, and understanding this context will help guide us in shaping the future.

I am eager for you to embark on this journey with me, exploring the rich history, complex present, and opportunity-laden future of EMS in the United States. The work you undertake is critical for the health and safety of our communities. I am optimistic that this guide will prove to be an asset to you as you work tirelessly to enhance emergency medical care in the United States.

Sincerely,

Section 1

FOUNDATIONS

"History is the witness that testifies to the passing of time;
it illumines reality, vitalizes memory, provides guidance in daily life
and brings us tidings of antiquity."
-Marcus Tullius Cicero

1

THE ORIGINS OF EMS IN THE UNITED STATES

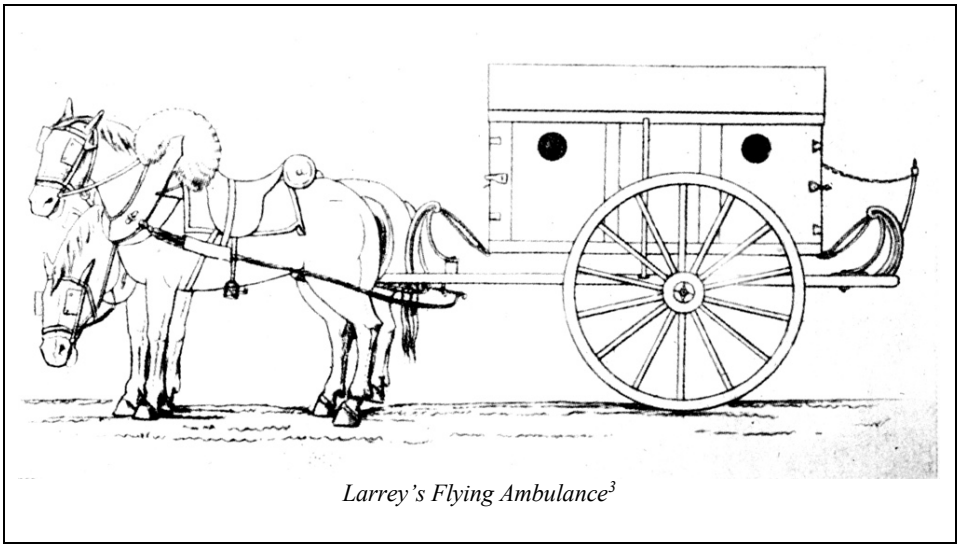
"The army which goes forth to battle, equipped with ambulance wagons, will have its material strength increased by one-third. "
- General William Tecumseh Sherman[a]

THE IDEA OF TRANSPORTING THE SICK AND INJURED TO PLACES OF healing has been a part of human society since its inception. The Biblical parable of the Good Samaritan (Luke 10:25-37), in which care and transportation are provided for an injured individual, is the inspiration and foundation for modern "Good Samaritan" laws nationwide. It was during the Napoleonic wars when a French Surgeon, Baron Dominique-Jean Larrey, established a formalized system complete with specialized equipment to aid the sick and injured.[1] Often credited with the creation of the first ambulances, Larrey's horse-drawn "Flying Ambulances" included bandages to treat wounds and transport wounded soldiers to field hospitals. Following stabilization, patients would then be moved to convents or monasteries for further care.

This system was later adopted in the United States during the American Civil War. In 1865, the first hospital-based ambulance service was introduced at the Commercial Hospital in Cincinnati, Ohio, which is presently known as the University of Cincinnati Medical Center.[2] Substantial enhancements in ambulance-related transportation technology were observed from the initial part of the 20th century to the mid-century. The horse-drawn ambulances were superseded by

[a] In a letter General William Tecumseh Sherman wrote on October 23, 1863, to the Surgeon General's Office, as published in "The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies," Series I, Volume 29, Part II, p. 825.

motorized vehicles, aircraft were used for patient transport during the two World Wars, and the Dodge Ambulance was established as the standard for the U.S. military.



Larrey's Flying Ambulance[3]

Nevertheless, up until the 1960s, transportation of the sick and injured was the primary purpose of ambulance services. As a transportation service, ambulances had minimal regulation, and this resulted in significant disparities in their availability and quality. Ambulances, mainly owned and managed by local hospitals and funeral homes, were equipped with a stretcher, basic first aid supplies, and a driver who typically lacked medical training. Hearses, despite being ill-equipped for patient comfort, safety, or in-transit medical care, were often used as ambulances. As a result, patients frequently did not receive necessary medical attention during transport, leading to considerable variations in the quality of care provided.

[redacted]

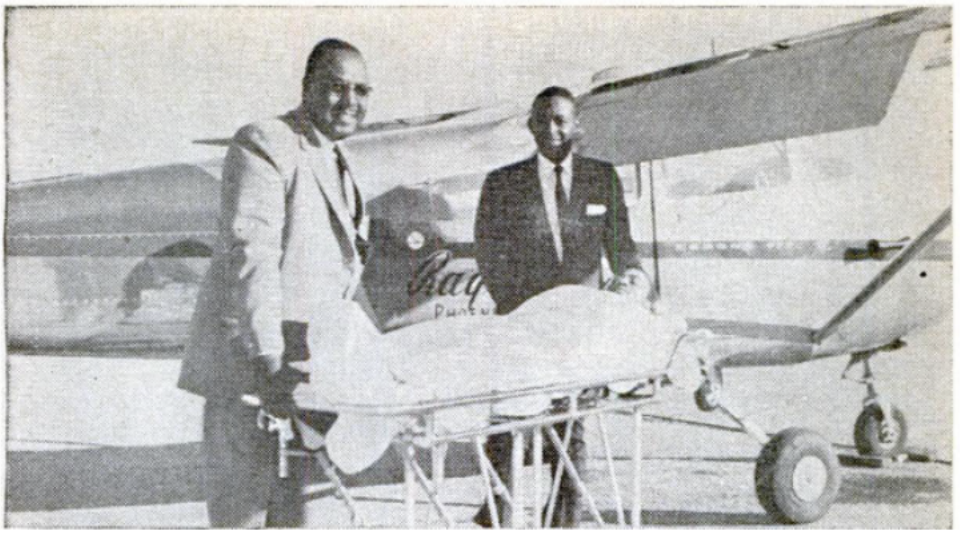
MILITARY INNOVATIONS THAT SHAPED CIVILIAN EMS

Historically, military conflicts have served as crucibles for medical innovation, propelling advancements in Emergency Medical Services through necessity and urgency. The U.S. military's role in these advancements began with World War I's trench warfare, where nonphysicians were deployed to treat casualties at the front lines. This early application of first aid by nonphysicians became the bedrock upon which the roles of the modern corpsmen and combat medics were built. It was also during World War I that airplanes were specifically designed for the evacuation of the wounded. French medical officer Eugene Chassaing pioneered this concept by transforming military airplanes into air ambulances. In April 1918 at Flanders, Belgium, a modified Dorand II was flown, carrying two patients in the fuselage. Similarly, U.S. Army Major Nelson Driver and Captain William Ocker converted a Curtiss JN-4 Jenny into a flying ambulance by the war's end.

Curtiss JN-4D Jenny aircraft configured as an air ambulance.[4]

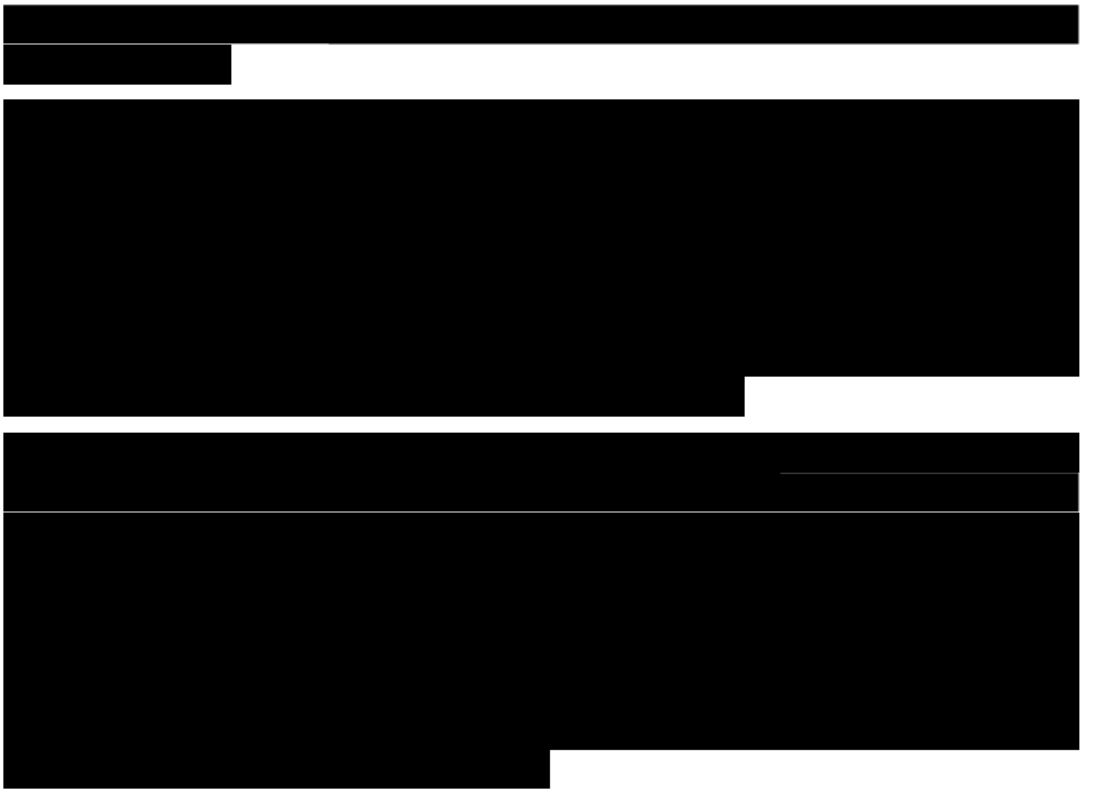
[redacted]

The Schaefer Air Service was the first FAA-certified air ambulance service in the United States.



In 1960, Mr. and Mrs. Lincoln J Ragsdale added an airplane ambulance to their funeral home-based ambulance service.

[redacted]



"In this century, more than 1,500,000 of our fellow citizens have died on our streets and highways: nearly three times as many Americans as we have lost in all our wars."
– President Johnson

President Johnson signing the Highway Safety Act of 1966.

By the time Dr. Farrington wrote "*Death in a Ditch*", he already had nearly a decade of experience in training Chicago fire fighters in a prototype medical care course. That course would later evolve into the first nationally recognized EMT-Ambulance course.

CASE STUDY: FREEDOM HOUSE AMBULANCE[b]

Established in Pittsburgh, Pennsylvania, in 1967, the Freedom House Ambulance Service not only dismantled racial, ethnic, nationality, and gender barriers but also served as an official incubator for testing innovative ideas related to ambulance services before they were formally proposed to President Johnson's Committee on Emergency Medical Services[19] and later was the model Paramedic service used when the Department of Transportation created the first national standard curriculum for EMT-Paramedic. This transformative initiative, largely overlooked in history until recently, not only formed the groundwork for the "systems approach" to Emergency Medical Services but also the foundations of modern paramedic practice.

This project resulted from a shared vision of numerous individuals from Freedom House Enterprises combined with EMS system visionaries including Jerry Esposito,[c] Dr. Donald Benson, Dr. Peter Safar, and Dr. Nancy Caroline. Although its primary objective was to deliver professional prehospital care to underprivileged African American communities, it also served as the conceptual foundation for a new medical profession.

The influence of the Freedom House Ambulance Service is still difficult to comprehend. For example, in a 1971 letter to F. J. Lewis, the Acting Chief of the Emergency Medical Programs Division at the National Highway Traffic Safety Administration (NHTSA), the chair of the National Academy of Science's Committee on EMS highlighted the necessity for the DOT to develop a more comprehensive EMT curriculum. This new national curriculum would *mimic* the

[b] A special appreciation to Mr. John Moon, one of the Freedom House Ambulance Service members and one of American's first paramedics for reviewing this section. Also, readers are strongly encouraged to read the full history of Freedom House Ambulance as captured in a book by Kevin Hazzard: "American Sirens: The Incredible Story of the Black Men Who Became America's First Paramedics"

[c] Jerry (Gerald) Esposito later co-authored with Dr. Peter Safar the first outline describing the purpose, structure, and organization of the National Registry of EMTs.

The *EMS Act* identified and defined fifteen components of an EMS system and established a federal lead agency for EMS in the Division of EMS of the Department of Health, Education and Welfare (DHEW, later reorganized as the Department of Health and Human Services). This office was directed to establish coordinated local, regional, and state EMS systems. DHEW planned a network of 303 regional EMS systems to ensure equitable access to EMS nationwide.[27]

DHEW region and State	Regional EMS system: HSA	Regional EMS system: Other	Number of systems [1]
Region I:			
Connecticut	X		5
Maine		(2)	5
Massachusetts	X		8
New Hampshire		(3)	3
Rhode Island	•		1
Vermont	•		5
Region II:			
New Jersey	X		5
New York	X		8–1
Puerto Rico		(3)	1
Virgin Islands			
Region III:			
Delaware	•		1
District of Columbia	•	(4)	1–1
Maryland		(4)	4–1
Pennsylvania	†	†	
Virginia		(4)	6–2
West Virginia	†	†	
Region IV:			
Alabama		(5)	6
Florida	X		9
Georgia		(6)	11–1
Kentucky	X		9
Mississippi		(3)	4
North Carolina	X		6
South Carolina		(1)	4
Tennessee		(8)	5–2
Region V:			
Illinois		(9)	8
Indiana	X		3
Michigan	X		8
Minnesota		(10)	7–3
Ohio		(11)	10
Wisconsin	X		7–1
Region VI: [12]			
Arkansas		X	8
Louisiana		X	8
New Mexico		X	7
Oklahoma		X	11
Texas		X	25
Region VII:			
Iowa		X	5–2
Kansas		X	7–3
Missouri		X	8–3
Nebraska		(13)	7–2
Region VIII:			
Colorado		X	4
Montana		(3)	3
North Dakota		(14)	4–2
South Dakota		(3)	2
Utah		(15)	1
Wyoming	X		1
Region IX:			
American Samoa			
Arizona		X	4
California		(5)	12
Guam			
Hawaii	•		1
Nevada		X	3
Trust Territory			
Region X:			
Alaska		(17)	3
Idaho		(3)	2
Oregon	X		3
Washington		X	8

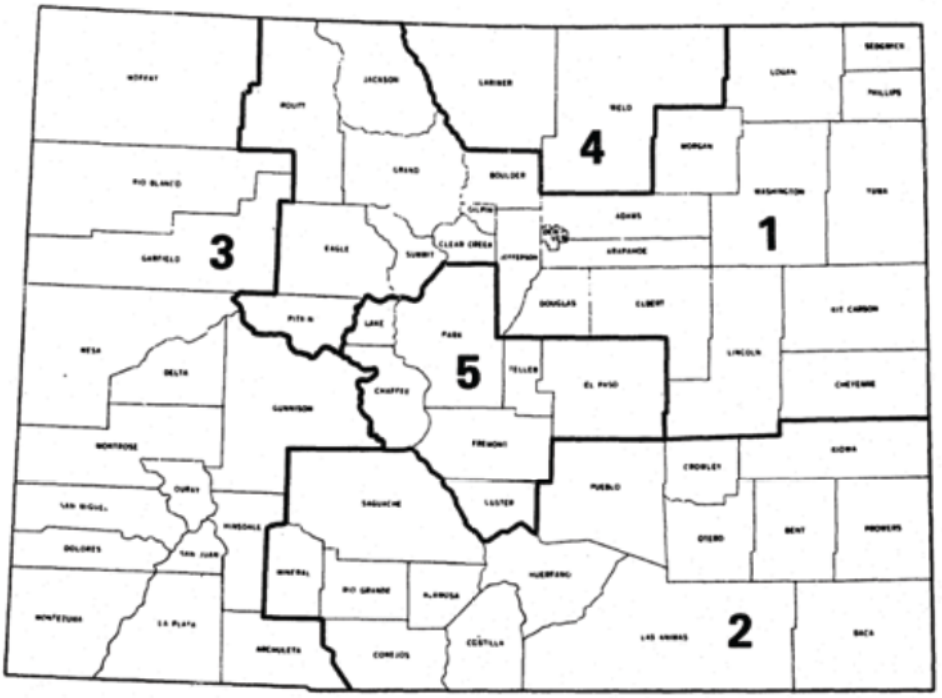
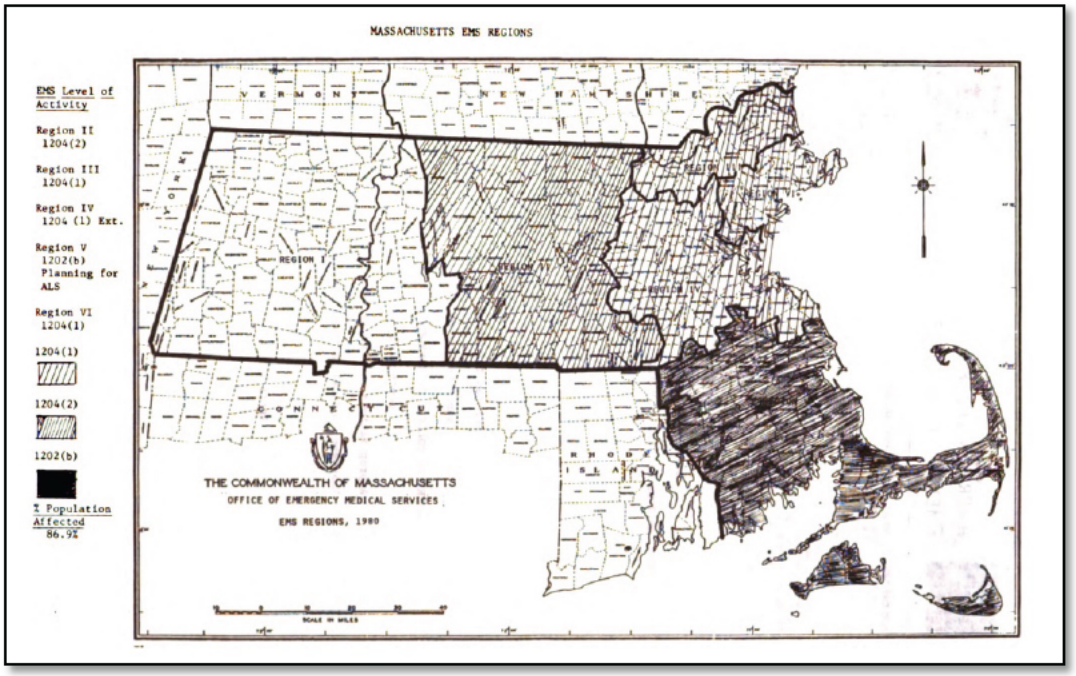


Figure 5. Project regions within the state of Colorado. 6/30/76



The Department of Health, Education and Welfare identified over 300 Regional EMS Systems, identified in the table above.[28] Maps above demonstrate Colorado's proposed regions (1976)[29] and Massachusetts regions(1980).

EMS DEVELOPMENT TIMELINE[f]

Year	Milestone Event
1928	Julian Stanley Wise forms the Roanoke (VA) Life Saving and First Aid Crew. The first independent, all-**volunteer rescue squad** in the United States.
1958	Drs. J.D. Farrington and Sam W. Banks started training Chicago fire fighters in a prototype emergency medical care course, the precursor of the **EMT-Ambulance** course.[36] Dr. Peter Safar, who had just introduced the concept of **CPR**, established the first intensive care unit (ICU).
1959	At the request of the White House, Office of Civil Defense Mobilization, the American Medical Association publishes a "Summary Report on National Emergency Medical Care".[37] This changes the approach to emergency medicine and established the AMA's **Taskforce on Emergency Medical Care**.
1960	The Department of Health, Education and Welfare (DHEW) established an **Emergency Medical Services Program** in the Division of Accident Prevention.
1963	The American Medical Association (AMA) designed and publicized the **Universal Medical Identification Symbol**[38], which later became known as the Star of Life.
1965	On July 30, 1965, **President Lyndon B. Johnson** signed the *Medicare and Medicaid Act*, which includes a benefit for ambulance transportation and gives rise to a reimbursement structure that funds much of modern EMS.
1966	Release of the **white paper**, "*Accidental Death and Disability: The Neglected Disease of Modern Society*", raising awareness about the importance of emergency medical care. September 9, 1966 — President Lyndon B. Johnson signed the *Motor Vehicle Safety Act*[39] and the ***Highway Safety Act***[40] creating the Department of Transportation and the initial requirements for national guidelines and standards for EMS systems.
1967	The American Medical Association hosts the **National Conference on Emergency Medical Services**, which produces recommendations for training ambulance personnel. Dr. Peter Safar and colleagues establish the **Freedom House Ambulance Service** in Pittsburgh, PA. J.D. Farrington, MD, FACS, writes "***Death in a Ditch***", the article published by American College of Surgeons presents Dr. Farrington's vision related to the safe extrication, on scene care, and the need to maintain care during the transportation of injured patients.

[f] The development of EMS included many pilot projects and sentential events. This is not an exhaustive list.

2

EMS VISIONARIES

"If I have seen further, it is by standing on the shoulders of Giants."
- Sir Isaac Newton, 1675

THE MODERN EMS SYSTEM IS THE RESULT OF THE TIRELESS EFFORTS of courageous and passionate visionaries who devoted their lives to improving pre-hospital care. EMS pioneers such as James O. Page, John Moon, Dr. J.D. Farrington, Dr. Peter Safar, Dr. Nancy Caroline and Rocco Morando, revolutionized emergency medical care with their contributions. Their unwavering dedication and groundbreaking work have laid the foundation for the modern EMS system, saving countless lives, and delivering critical care to those in need.

The profound impact of these visionaries is comparable to Sir Isaac Newton's quote, and it serves as a metaphor for the development of EMS. The current and future leaders in EMS bear the responsibility of building upon the knowledge and experience passed down by these trailblazers. By standing on the shoulders of these giants, they gain a broader perspective and envision an improved future for emergency medical care.

The enduring contributions of these visionaries continue to shape and influence the field of emergency medical care today. Their legacy serves as an enduring inspiration for upcoming generations of EMS leaders and visionaries. It is through their enduring contributions and visionary leadership that the EMS field can continually advance and provide optimal care to those in need.

BIOGRAPHIES OF EMS VISIONARIES

RODDY A. BRANDES (1920-2001)

Roddy Arthur Brandes, an often under-recognized yet pivotal figure in the evolution of the modern Emergency Medical Services system, originated from Charlotte, North Carolina. Mr. Brandes rendered his services as a Captain in the United States Army Air Corps during World War II (1939-1946). After his military service, he owned and operated a truck leasing company until the City of Charlotte and Mecklenburg County sought his expertise in establishing an ambulance service for the area. In response, he instituted Mecklenburg Emergency Services in 1960.

"A major problem is that the public usually is unaware of the need for adequate ambulance services. That probably is why most local governments have failed to establish uniform standards of service…"
- Roddy A. Brandes

Considering his groundbreaking endeavors in the advancement of emergency medical services, Mr. Brandes held consultancy roles for the United States Department of Health, Education and Welfare, the National Academy of Sciences, and the American Medical Association. In 1970, while serving as President of the Ambulance Association of America,[a] he received the appointment as the first Chairman of the National Registry of Emergency Medical Technicians.

Mr. Brandes presented testimony before congressional committees on numerous occasions, advocating for the standardization and enhancement of emergency medical services throughout the United States. One particularly significant example of his contributions to modern EMS was his 1966 testimony to Congress:[44]

> "I am here as a voluntary witness respectfully asking Congress to support improvement of the quality of emergency medical services to more than 2 million victims of accidental injuries or sudden illnesses who are transported by ambulance every year to the hospital…this is one of the most sensitive public or quasi-public services in the country. Millions of Americans sooner or later will be transported in an ambulance. Their very lives sometimes will depend on the care they receive in that short period of time. Unfortunately…the chances of obtaining good care on the way to a hospital are often poor. Most of the ambulance crews in this country are untrained or ill-trained; most of the ambulances are unequipped or poorly equipped. President Johnson has called attention to the national disgrace of death and destruction on our highways. The

[a] The historic records for the Ambulance Association of America end in the late 1970s. It is unclear if the Ambulance Association of America was reorganized as the American Ambulance Association.

> question that bothers me every day is this: how many of the nearly 50,000 fatalities from automobile accidents every year - and more than 50,000 deaths from other accidents- could have been prevented by having an adequately trained ambulance crew? An injured soldier in Vietnam on the average has a better chance of surviving or having his injuries properly tended than a person hurt in an automobile accident in this country… A major problem is that the general public usually is unaware of the need for adequate ambulance services. That probably is why most local governments have failed to establish uniform standards of service…This situation is compounded by the fact that many local governmental officials accept this and are thus relieved from the responsibility of seeing that adequate service is provided… We, the concerned members of this industry, respectfully recommend that Congress support the appropriations under discussion to better enable this agency to gather information, establish guidelines, and assist local governments in setting up adequate services across this nation…"

Soon after Mr. Brandes' address to Congress, President Lyndon B. Johnson signed the *Motor Vehicle Safety Act*[45] and the *Highway Safety Act.*[46] These Acts culminated in the formation of the government agency later rebranded as the National Highway Traffic Safety Administration (NHTSA) and mandated the creation of guidelines and standards for a national EMS system. In 1970, as President Johnson's Committee on EMS and the American Medical Association pondered the mechanisms for standardizing EMS education and ensuring all EMS personnel met a single national standard, Roddy Brandes emerged as a central figure in these efforts.

In June 1970, Mr. Brandes was appointed as the inaugural Chairman of the board for the newly established national EMS certification body, the Registry of EMT-Ambulance. The following year, in anticipation of the rapidly expanding scope of EMS personnel beyond ambulance technicians, Mr. Brandes contributed to the rebranding of the organization as the National Registry of EMTs. The board subsequently hired its first full-time executive director, Rocco Morando, and established a permanent presence in Columbus, Ohio.

3

HOLLYWOOD'S ROLE IN DESIGNING THE UNITED STATES EMS SYSTEM

"Movies can and do have a tremendous influence in shaping young lives in the realm of entertainment towards the ideals and objectives of normal adulthood."
- Walt Disney

THE POWER OF HOLLYWOOD IS INESCAPABLE. IT SHAPES OUR perceptions, influences our beliefs, and can ignite social change. Movies and television shows have played a crucial role in shaping the development of modern Emergency Medical Services. Popular media, including Hollywood and television shows like "Emergency!", established public perception of EMS and contributed to the need for standardized training and certification of EMS practitioners. The depiction of EMS as a heroic and essential part of the healthcare system in these shows helped generate public support for EMS and led to the creation of national standards for EMS training and certification. TV shows and movies have also played a vital role in public education, policy development, and system development. These shows raised awareness about the importance of emergency services, highlighted the challenges and dangers faced by EMS practitioners, and provided education on how to respond to emergencies and call 911 for help. Recently, shows like "Nightwatch" provided viewers with a glimpse into the personal stories, struggles, and triumphs of the EMS practitioners, helping to bridge the gap between EMS practitioners and the communities they serve. Overall, the impact of TV shows and movies on public perception of EMS and the critical role of EMS practitioners in saving lives and providing care during emergencies has been significant, leading to increased support for EMS agencies and improved outcomes for patients.

4

A GUIDING STAR (OF LIFE)

"The key to realizing a dream is to focus not on success but significance, and then even the small steps and little victories along your path will take on greater meaning."
- Oprah Winfrey

THE STAR OF LIFE IS A POWERFUL VISUAL REMINDER OF THE CRITICAL role that EMS practitioners play in saving lives and promoting public health. By serving as a unifying symbol for EMS professionals since the late 1960s, the Star of Life highlights the essential nature of the work and the significant impact EMS practitioners have on the well-being of individuals and communities they serve. The symbol has six blue, interlocking bars with a white "serpent" coiled around a staff in the center, symbolizing the rod of Asclepius, the Greek god of medicine and healing. The six points of the star correspond to the six essential components of the EMS system: detection, reporting, response, on-scene care, care in transit, and transfer to definitive care. Each point of the star represents a specific function in the EMS system, underscoring the importance of a coordinated approach to emergency medical care. The Star of Life is prominently displayed on almost every ambulance in the United States, incorporated into EMS patches and uniforms, and often seen on road signs to indicate the presence of emergency medical care nearby.

Editorials

Universal Medical Identification Symbol

This is the universal Emergency medical symbol devised by the American Medical Association.

The person who displays it carries information which should be known to anyone helping him during an accident or sudden illness.

First announced in June, 1963, this symbol is already in such general use that it is essential that it be recognized by all emergency personnel who care for the ill or injured. It means, "Look for medical information that can protect life." Failure to recognize this symbol and to heed its vital message could be disastrous.

This symbol has been freely offered by the AMA to manufacturers and distributors of emergency medical signal devices and the publishers of medical identification cards. Thirty corporations and associations have adopted the universal symbol for use on their identifications and the number is increasing continuously. The AMA neither manufactures nor distributes signal devices.

Many signal devices of metal or plastic will bear this symbol on one side with a few words of vital information on the other. Other devices will have a pocket within which more detailed information can be found. Still others may consist of the symbol alone—a suggestion to look elsewhere in purse or pocket for important information or identification.

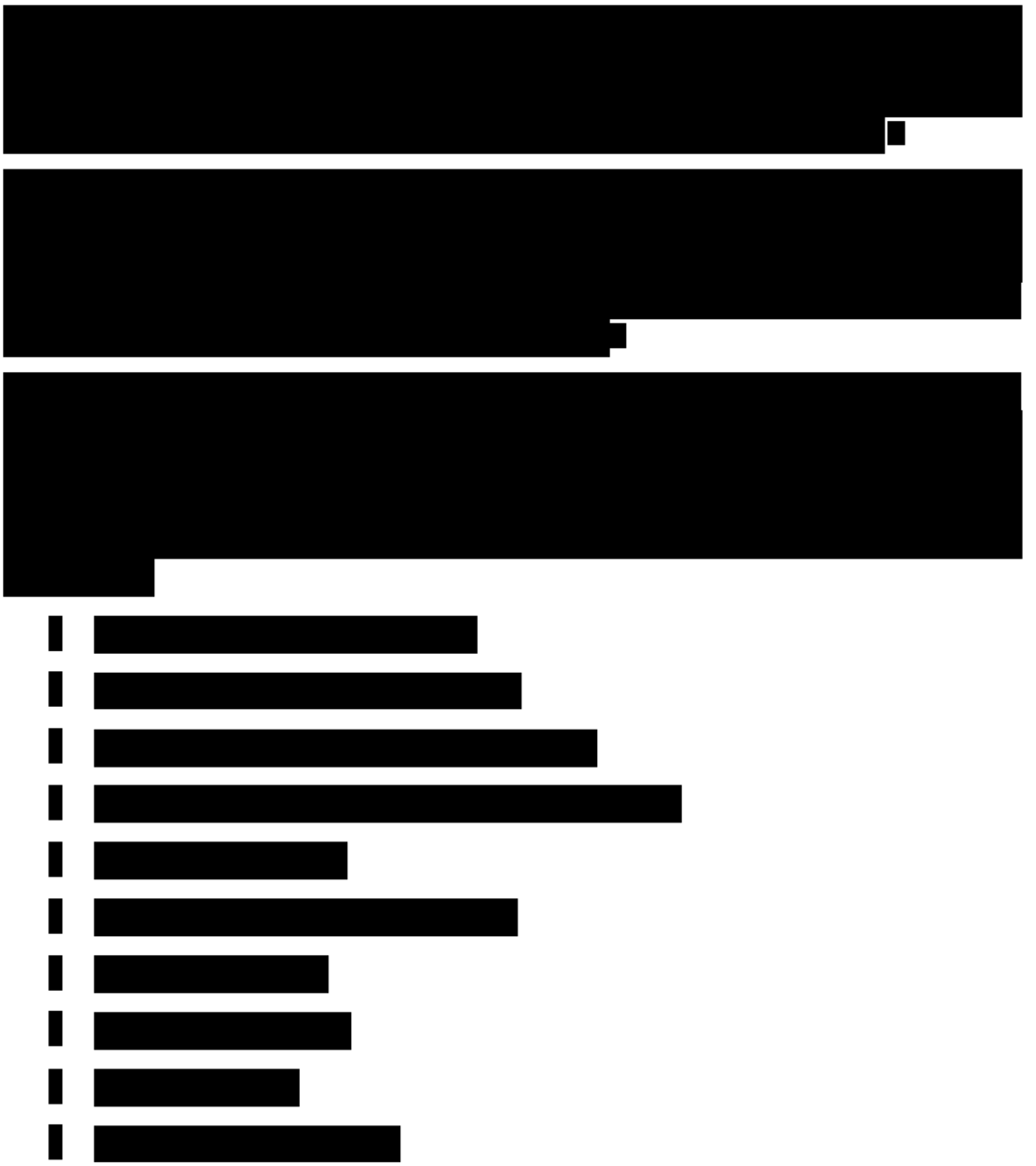
Fix this symbol in your memory—the star of life (or the asterisk of reference), bearing the snake entwined staff of Aesculapius, the mythical Roman god of medicine—taken from the seal of the American Medical Association, and all contained in a hexagon. This symbol may appear in any size or color. It is most likely to be found on the wrist or about the neck, though it may identify the presence of information in other locations.

Recognizing it as the universal symbol of emergency medical identification will help you to locate information that may protect life in an emergency.

A page from the 1964 Journal of the American Medical Association.

UNTANGLING THE HISTORY

The Star of Life has a rich, yet often misrepresented history. The original Star of Life was designed by the American Medical Association (AMA) in the early 1960s as the "Universal Medical Identification Symbol"[56] (also known as the "Universal Emergency Medical Identification Symbol"). The original intent was for this symbol to be freely available and printed on cards carried by persons with any medical conditions such as diabetes or epilepsy. This universal symbol would be easily recognized by the public and medical professionals during an emergency. The AMA did not trademark or copyright the symbol, but freely provided it to manufacturers and the public for use. The AMA widely promoted the use of this "Universal Medical Identification Symbol" in its journal (as seen in the image on the previous page) and in governmental publications.[57]



The original trademark of the Registry of Emergency Medical Technicians, incorporating the Star of Life.[61]

On April 12, 1973, the Registry of EMTs trademarked the Registered Emergency Medical Technician symbol that clearly incorporated the Star of Life. Honoring the work of the visionary physicians of the American Medical Association - that fought for a new medical profession and gifted the profession a unique symbol – the Star of Life has been incorporated into every National EMS Certification card and patch earned for over fifty years.

[redacted]

5

FRACTURES & FRAGMENTATION

"Despite the obvious fact that a major portion of critically ill or injured patients enter the health care system through the hospital emergency department…no facet of medicine has been so widely ignored as Emergency Medical Services. For years EMS fell under the old canard, 'Everybody talks about it, but few do anything.' And even when they did, most approaches were both too little and poorly coordinated."[64]

- Robert E. Streicher, MD
Assistant Surgeon General & Director, Federal Health Programs
Health Services Administration 1974

THROUGHOUT THE 1960S AND 1970S, EMERGENCY MEDICAL SERVICES underwent a period of accelerated growth, garnering substantial public support and developmental advancements. However, the 1980s marked a significant transformation in the landscape of EMS due primarily to changes in federal funding, priorities, economics, and politics. The fragile and emerging EMS system survived, but the result was fragmentation. This chapter, titled "Fractured & Fragmentation," aims to explore the challenges that arose during this period, focusing on the impact of funding changes, the fragmentation of EMS systems, and the resulting inconsistencies in state requirements. An exploration of these issues will provide a more comprehensive understanding of the obstacles that hindered the progression of EMS, as well as the measures taken by various stakeholders to overcome these hurdles and enhance the quality of emergency medical services in the United States.

A Paradigm Shift: The Block Grants of 1980

The 1980s constituted a pivotal decade for Emergency Medical Services in the United States, characterized by substantial modifications in federal funding mechanisms, primarily through the introduction of block grants. This transformation elicited profound effects across EMS systems nationwide, influencing resource allocation, standardization, and ultimately, the efficacy of these systems.

Prior to 1980, the *Emergency Medical Services Systems Act* (EMS Act) of 1973[65] ensured dedicated federal funding for EMS systems. Notably, the EMS Act recognized the need and initial funding for the establishment of 300 defined and coordinated regional EMS systems across the United States. Nevertheless, by 1979, despite strong public favor and the infusion of substantial funds, the systematic implementation plan was faltering. On July 11, 1977, the Committee on Appropriations of the U.S. House of Representatives mandated an investigation.

6

VOLUNTEERISM: THE ULTIMATE EMS SUBSIDY

"Volunteers do not necessarily have the time; they just have the heart."
- Elizabeth Andrew [a]

VOLUNTEERISM PLAYED A CRUCIAL ROLE IN THE DEVELOPMENT OF emergency medical services across the United States. The reliance on volunteers in EMS is a unique aspect that sets it apart from other healthcare professions and most public safety fields. As EMS began to take shape in the mid-20th century, many communities turned to volunteers to provide emergency medical care due to limited financial resources and the absence of a well-established infrastructure for pre-hospital emergency care.

The volunteer model in EMS emerged out of necessity, with communities lacking sufficient funds and personnel to support a full-time, paid EMS workforce. Volunteers often came from diverse backgrounds, including veterans, local business owners, funeral home employees, and community members. For decades, these individuals stepped up to fill the gap in emergency medical services, providing essential care to their communities during emergencies.

[redacted]

[redacted]

7

EMS DATA: THE MOST POWERFUL HEALTHCARE DATASET

"Information is the oil of the 21st century, and analytics is the combustion engine."
- Peter Sondergaard

51,379,493

Structured Patient Care Records

13,946 EMS Agencies

54 States & Territories

2022 Data Submitted to the National EMS Information System

THE YEAR WAS 1969, A TIME OF SIGNIFICANT INNOVATION AND CHANGE in the United States. The National Aeronautics and Space Administration (NASA) was making final preparations for the Apollo 11 mission, while the Beatles had just played their last public performance in London, and Richard Nixon had been sworn in as the nation's 37th president. Amidst these events, the concept of computers was still new, with these machines being large, expensive, and reliant on punch cards for data input. Nevertheless, the Defense

Table 2

PATIENT CARE REPORT

Pt. Name _____ LONG FORM _____ FHE Log # _____

A.A. Completing Form: AMBULANCE CREW

_____

1. Were extrication methods needed?

☐ YES ☐ NO ☐ DON'T KNOW

A. Which type needed?

☐ light (hand tools or hands alone)
☐ medium (hand carried power tools)
☐ heavy (power driven tools or power shovel)

B. Was patient trapped?

☐ in motor vehicle ☐ building wreckage
☐ other_____

2. Status of Nervous System

A. The patient was ☐ alert ☐ stuperous ☐ comatose ☐ don't know

B. The pupils were:

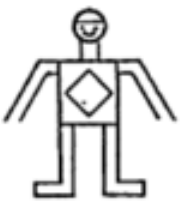
☐ small ☐ mid-dilated ☐ widely dilated ☐ don't know
☐ equal ☐ right>left ☐ left>right ☐ don't know
☐ reacting to light ☐ not reacting to light

C. Did the patient move all extremities?

☐ YES ☐ NO ☐ DON'T KNOW

If not, which did he not move?

☐ right arm ☐ left arm



☐ right leg ☐ left leg

D. Did the patient have sensation in all areas?

☐ YES ☐ NO ☐ DON'T KNOW

If not, where did he have no feeling?

☐ right arm ☐ left arm

☐ right leg ☐ left leg

8

NATIONAL EMS INFLUENCERS

"Alone we can do so little, together we can do so much."
-Helen Keller

THE EVOLUTION OF THE NATIONAL EMERGENCY MEDICAL SERVICES system has largely been an organic process, leading to the establishment of a multifaceted array of national organizations and federal offices, each possessing distinctive roles, specializations, and stakeholders. Despite such diversity, a common thread unites these entities: the shared commitment to ensuring EMS practitioners render high-quality care to patients.

Over the years, through both formal and informal collaborations, numerous organizations have left an indelible mark on the EMS profession. Their combined efforts have significantly contributed to EMS progression, enhanced patient outcomes, and ensured that EMS practitioners are equipped with the requisite skills and knowledge to deliver quality care in emergency situations.

By fostering a cooperative environment, these groups have been able to streamline efforts and encourage the development of best practices and standardized procedures. Such sustained collaboration enhances the efficiency, effectiveness, and reliability of the EMS system, with far-reaching benefits for patients and the communities they serve. A brief overview of select national organizations are provided in this section.

LIST OF SELECTED ORGANIZATIONS

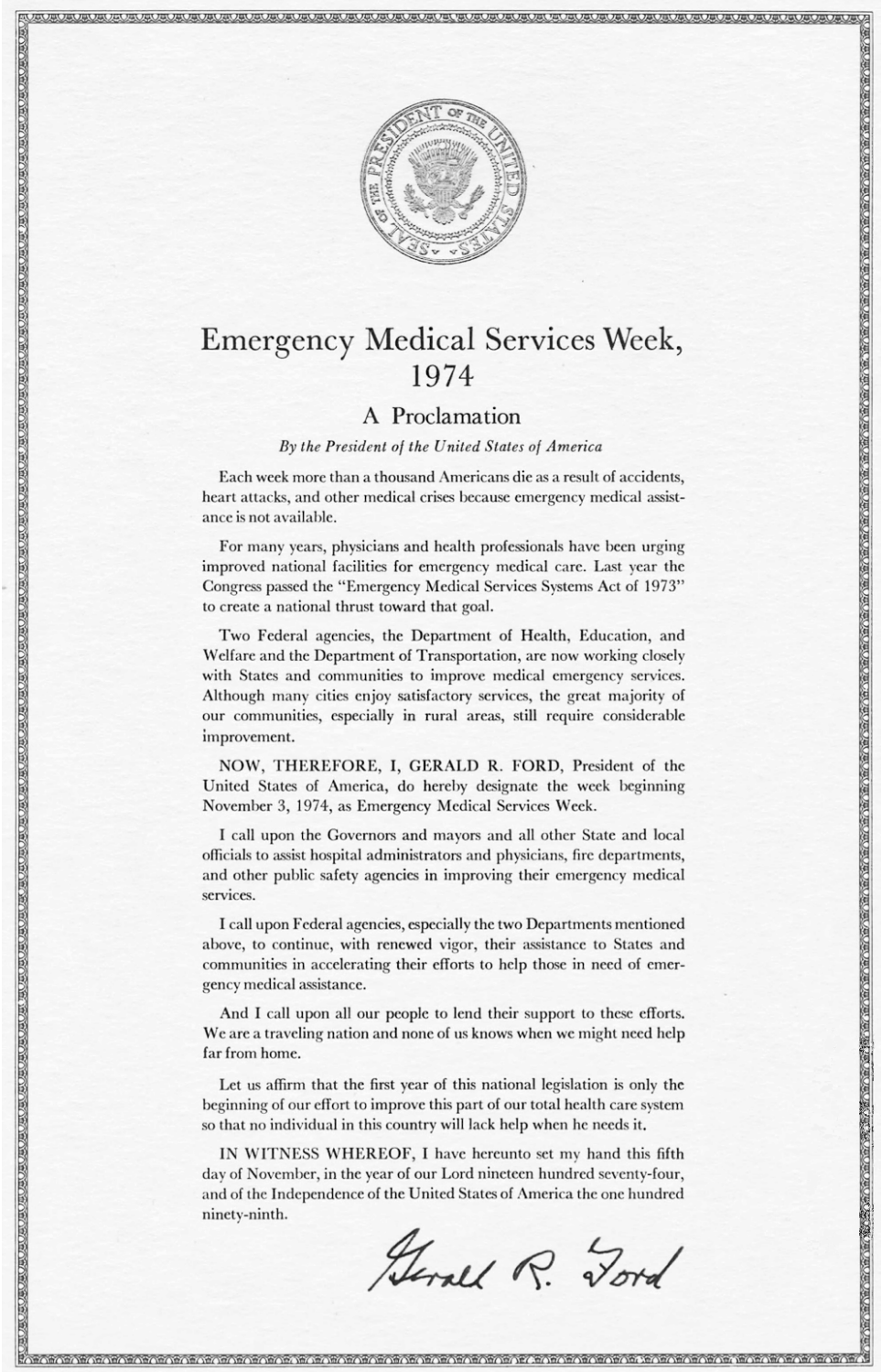
9

EMS WEEK

"In times of crisis, communities pull together to protect their own. Our emergency services personnel are the first line of defense, putting their own lives on the line to protect the lives and property of others. They are true heroes, and we owe them a debt of gratitude for their service to our communities and our country."
– President Gerald Ford

SINCE ITS INCEPTION IN 1974, EMS WEEK HAS STOOD AS AN ANNUAL tribute to the tireless efforts and unwavering dedication of Emergency Medical Services practitioners. Celebrated during the third week of May, this week underlines the pivotal role these professionals play in saving lives, preserving public health and safety, and supporting their communities.

The origins of EMS Week date back to 1974 when President Gerald Ford established the first "National Emergency Medical Services Week".[93] [redacted]



Emergency Medical Services Week, 1974

A Proclamation

By the President of the United States of America

Each week more than a thousand Americans die as a result of accidents, heart attacks, and other medical crises because emergency medical assistance is not available.

For many years, physicians and health professionals have been urging improved national facilities for emergency medical care. Last year the Congress passed the "Emergency Medical Services Systems Act of 1973" to create a national thrust toward that goal.

Two Federal agencies, the Department of Health, Education, and Welfare and the Department of Transportation, are now working closely with States and communities to improve medical emergency services. Although many cities enjoy satisfactory services, the great majority of our communities, especially in rural areas, still require considerable improvement.

NOW, THEREFORE, I, GERALD R. FORD, President of the United States of America, do hereby designate the week beginning November 3, 1974, as Emergency Medical Services Week.

I call upon the Governors and mayors and all other State and local officials to assist hospital administrators and physicians, fire departments, and other public safety agencies in improving their emergency medical services.

I call upon Federal agencies, especially the two Departments mentioned above, to continue, with renewed vigor, their assistance to States and communities in accelerating their efforts to help those in need of emergency medical assistance.

And I call upon all our people to lend their support to these efforts. We are a traveling nation and none of us knows when we might need help far from home.

Let us affirm that the first year of this national legislation is only the beginning of our effort to improve this part of our total health care system so that no individual in this country will lack help when he needs it.

IN WITNESS WHEREOF, I have hereunto set my hand this fifth day of November, in the year of our Lord nineteen hundred seventy-four, and of the Independence of the United States of America the one hundred ninety-ninth.

Gerald R. Ford

The first presidential proclamation for EMS Week. (Digitized from Box 34 of the William J. Baroody Files at the Gerald R. Ford Presidential Library).

Section 2

EMS SYSTEMS & OPERATIONS

"All improvement happens project by project
and in no other way."
-Joseph Juran

10

EMS SERVICE DELIVERY MODELS

"If you've seen one EMS system, you've seen one EMS system."
- James O. Page

EMERGENCY MEDICAL SERVICE DELIVERY MODELS EXHIBIT A substantial degree of variation throughout the United States, with a diverse range of organizations and agencies undertaking the provision of these critical services. Each model possesses its unique set of characteristics, organizational structures, funding mechanisms, and operational frameworks, as well as a range of inherent advantages and challenges.

A comprehensive understanding of these [redacted]

11

DISPARITIES IN ACCESS TO EMS

"Of all the forms of inequality, injustice in health care is the most shocking and inhumane."
– Dr. Martin Luther King, Jr.

IN A 1966 ADDRESS TO THE MEDICAL COMMITTEE FOR HUMAN RIGHTS, Dr. Martin Luther King Jr. asserted, "Of all the forms of inequality, injustice in health care is the most shocking and inhumane." Regrettably, over half a century later, significant disparities and inequalities remain prevalent in access, quality, and provision of emergency medical services. These disparities are multifaceted and are influenced by various determinants such as geography, socioeconomic status, race/ethnicity, and insurance status.

12

PHYSICIAN MEDICAL DIRECTION

"While the art of medicine is long, and life is short,
it's the direction of the physician that should always be trusted."
- Hippocrates

PHYSICIAN MEDICAL DIRECTION IN EMERGENCY MEDICAL SERVICES IS a vital element in improving prehospital care for critically ill and injured patients. In the 1960s, the concept of physician medical direction took shape, primarily driven by the need for enhanced care in the prehospital setting. Prior to this period, ambulances were primarily used for transportation purposes, with minimal medical interventions beyond basic first aid. However, with the recognition that early intervention and advanced medical techniques could significantly impact patient outcomes, innovative programs were established to train ambulance attendants in more advanced life support (ALS) techniques. These programs, spearheaded by physicians, paved the way for the development of physician medical direction and the integration of advanced care practices in the field of EMS.

PHYSICIAN DRIVEN FOUNDATIONS

In the late 1950s and early 1960s, a series of groundbreaking programs emerged to address the limitations of prehospital care at the time. For example, Dr. J.D. Farrington started training the Chicago Fire Department on the management of traumatic injuries in 1959. These programs sought to equip ambulance attendants with the necessary skills and knowledge to provide more advanced care to patients in need. Led by physicians who recognized the necessity of early interventions, these initiatives focused on training ambulance attendants in basic life support (BLS) techniques such as cardiopulmonary resuscitation, the use of oxygen, splinting and bandaging.

13

EMS SYSTEM FINANCE

"If providing ambulance services does not prove to be economically feasible, not only will there be poor service, but there may be none at all." (November 1975)[98]
- Howard Mitchell, MD, MPH[a]

ADDRESSING THE FINANCIAL ASPECTS OF EMERGENCY MEDICAL SERVICES systems in the United States is a multifaceted endeavor, engaging a variety of stakeholders and demanding astute decision-making. This issue, notably complex, has remained unresolved since the establishment of modern EMS in the United States. Sustainable and adequate funding for EMS agencies is a cornerstone to ensuring the continuity and quality of EMS agencies.

These agencies, however, face an uphill financial battle due to the escalating costs of equipment, education, training, and personnel, compounded by limitations on reimbursement from insurance providers. Rural EMS agencies confront a unique set of financial constraints, given their lower call volumes, extended response times, and elevated operational costs.

[a] Dr. Mitchell was the Chief of the Bureau of Occupational Health, State of Public Health, Berkley, California.

[redacted]

HISTORICAL ROOTS: A SYSTEM WITHOUT SUSTAINABLE FUNDING

The current financial struggles persisting within EMS agencies have significant historical underpinnings. Even as far back as 1975, publications highlighting the economics of rural ambulance services recognized "rising labor and equipment costs"[99] as a concern. Tracing back to the early evolution of EMS agencies, these financial difficulties have endured, becoming entangled with the nation's shifting healthcare financing terrain.

As covered in more detail in previous chapters, the genesis of modern EMS was a direct answer to the escalating number of automobile accidents. This rise necessitated immediate pre-hospital care, particularly in rural America. Initially, ambulance services were largely provided by funeral homes, volunteers, and fire departments, all of which generally lacked structured training, established physician oversight, or standards for equipment. However, the purpose of EMS quickly transitioned from focusing mainly on providing trauma care for rural automobile crash victims, to also addressing urban medical emergencies. Over time, the EMS system grew to include trained paramedics, specialized vehicles, and advanced life-support equipment. Yet, the financial infrastructure intended to underpin these expanding services struggled to align with the escalating demand and growing complexity of the care provided, perpetuating a struggle for financial stability.

[redacted]

The 1976 DHEW report, *Progress, But Problems In Developing EMS Systems,* highlights the concern to Congress, but no solutions are offered:

> "Regional (EMS agencies) are having difficulty finding permanent financing for the administrative and operating costs…consequently, **when Federal funding stops, continuation of regional systems providing services will not be assured.**"[100]

[redacted]

14

ECONOMICS OF PROVIDING EMS

" The economic problems can be summarized briefly by noting that rural ambulance finances are hampered by there being too few patients or population at risk to support even one ambulance, and that urban ambulance finances are a problem frequently because there may be too many companies in competition to provide any single one with an adequate economic base of operation. Add to this the additional burden and economic waste inherent in excessively frequent turnover of personnel which is due primarily to very low wages, but which then leads to further costs for constant rehiring and retraining of ambulance personnel."

- Howard W. Mitchell, MD, as written in 1966 in the American Journal of Public Health [104]

THE ECONOMICS OF PROVIDING EMERGENCY MEDICAL SERVICES IN the United States is a long-standing, intricate problem that has perplexed EMS stakeholders since the dawn of the modern EMS model in the 1970s. Historically, funding and economic issues have often challenged EMS agencies, with the lack of comprehensive solutions persisting across decades. This predicament is acutely evident in seminal reports from the era, like the 1975 National Highway Traffic Safety Administration (NHTSA) commissioned report on the Economics of Rural EMS, which shockingly recounts that EMS was financially insolvent even when funeral homes were offering the services:

> "In 1969, 221 funeral home businesses provided ambulance service in Oklahoma; by 1973, the number had declined to 124, a 44 percent decrease. Faced with rising labor and equipment costs, funeral home operators chose to discontinue the service." [105]

[redacted]

Readiness Costs

Readiness costs are the expenses incurred by EMS organizations to ensure that they are prepared and equipped to respond to emergency calls and provide timely and effective care. These costs can include personnel salaries, training, equipment maintenance, vehicle depreciation, and other operational expenses.

[redacted]

Formula: Readiness Cost = Personnel Salaries + Training + Equipment Maintenance + Vehicle Depreciation + Other Operational Expenses

---

[redacted]

First Dollar Insurance Coverage and Payer Mix

First dollar insurance coverage is [redacted]

[redacted]

National EMS Payer Mix [redacted]

Formula: Payer Mix =
(Revenue from each Payer Source / Total Revenue) x 100%

[redacted]

15

FUNDAMENTALS OF INSURANCE & BILLING

Healthcare is an essential safeguard of human life and dignity,
and there is a social and moral obligation to ensure its available and accessible to all.

THE EFFICIENT AND ACCURATE MANAGEMENT OF INSURANCE AND billing processes is essential for the financial sustainability of emergency medical services organizations. EMS leaders and managers must navigate a complex landscape of reimbursement policies, payer requirements, and regulatory changes to ensure their organizations receive appropriate compensation for the services they provide.

16

ESSENTIAL SERVICE STATUS

"The purpose of government is to enable the people of a nation to live in safety and happiness. Government exists for the interests of the governed, not for the governors."
- President Thomas Jefferson

EMERGENCY MEDICAL SERVICES PLAY A CRUCIAL ROLE IN THE NATION'S healthcare system, providing life-saving care and transport to patients in need. Despite its importance, EMS is not universally designated, recognized, and funded as an essential service by governments, which has significant implications for its funding, organization, and public perception.

[redacted]

The designation of a service as essential carries an implication that governments have an obligation to guarantee its provision and availability to the public. [redacted]

In 1975, recognizing that local governments were not recognizing EMS as an essential service, Dr. J.D. Farrington wrote,

> "Nationwide, emergency medical service remains one of the weakest links in the delivery of health care…local governments must accept responsibility for providing emergency medical services as they do fire and police services. The greatest threat to the average citizen in his own community today is not a fire in the home or a criminal in the street. The greatest threat is the inability to obtain adequate emergency medical care at the time of need-when knowledge, skill, and minutes can save lives." [112]

[redacted]

Section 3

EMS PERSONNEL

Emergency Medical Services personnel form the unacknowledged foundation, bearing the weight of our nation's healthcare system delicately. In challenging and unimaginable situations, these medical professionals straddle the line between life and death, delivering specialized emergency medical care. Serving as the first line of defense, their steadfast dedication to emergency care fortifies our healthcare structure. Additionally, EMS clinicals play a crucial role in supporting and shoring up fragile healthcare systems, offering pivotal assistance to public health, underserved high-dependency patients, and those without access to primary or preventive healthcare. As a society, we owe EMS clinicians our utmost respect and boundless gratitude.

- Donnie Woodyard, Jr

17

CERTIFICATION, LICENSURE & CREDENTIALING

"An individual may only perform a skill or role for which that person is:
***EDUCATED**, and*
***CERTIFIED**, and*
***LICENSED**, and*
***CREDENTIALED**."*

- National EMS Scope of Practice Model (2019)[114]

THE COMPETENCE OF PERSONNEL IS A CRUCIAL FACTOR IN ENSURING the delivery of safe and effective patient care. To maintain and enhance the proficiency of EMS practitioners, a systematic and structured approach has been developed. In addition to education, the approach encompasses three key pillars: National Certification, State Licensure, and Credentialing. These pillars serve as the foundation for the professional practice of EMS personnel, providing a framework that supports their ability to deliver high-quality patient care.

18

NATIONAL EMS CERTIFICATION

"The growing importance of emergency medical services justifies a professional status comparable to that of other existing technical medical services. Individuals who qualify for this vocation through standard certification should be known as Emergency Medical Technicians. This term should be reserved for those who have received adequate education, passed an examination based on the educational program, and achieved certification."[118]

-Walter A. Hoyt, Jr., MD (1969)[a]

THE 1960s SAW THE IMPLEMENTATION OF EMERGENCY MEDICAL SERVICES pilot projects across the United States, and with this came the demand for a national authority to ensure EMS certification. This need became more pressing with the 1966 publication of "*Accidental Death and Disability: The Neglected Disease of Modern Society*". As a response, the National Academy of Sciences (NAS) and the National Research Council (NRC) initiated a "Task Force on Guidelines for Training of Ambulance Personnel". The duty of this task force was to develop nationwide guidelines for advanced training for ambulance attendants providing emergency care, and to suggest a course of action to establish a nationally recognized training course.[119]

[a] Dr. Hoyt was later elected as the president of the AAOS and in 1973 he helped develop the first edition of *Emergency Care and Transportation of the Sick and Injured*—the "Orange Book," which was the standard textbook for EMTs for decades.

In March 1968, the NAS-NRC Committee on Emergency Medical Services released its inaugural Guidelines and Recommendations report[120]. The committee and task force included prominent future contributors to the National Registry, such as Peter Safar, MD, Joseph D. Farrington, MD, Walter A. Hoyt, Jr., MD, and Rocco Morando.

1968 NRC/NAS Committee & Task Force

TRAINING

of ambulance personnel and others responsible for emergency care of the sick and injured at the scene and during transport

Guidelines and Recommendations of the
Committee on Emergency Medical Services
Division of Medical Sciences
National Academy of Sciences
National Research Council

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Public Health Service
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TASK FORCE ON GUIDELINES FOR TRAINING OF AMBULANCE PERSONNEL

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NATIONAL REGISTRY PATCHES OVER THE YEARS

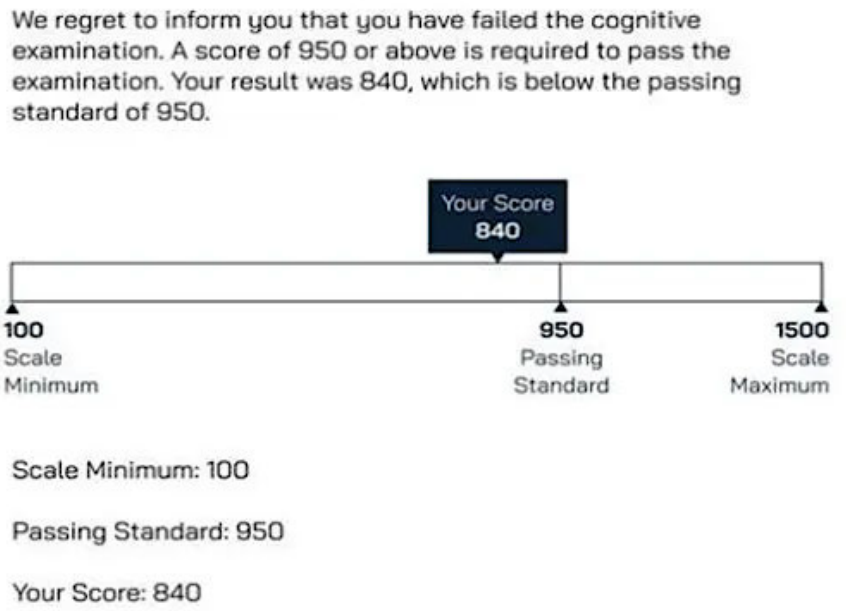
CANDIDATE FEEDBACK: SCALED SCORE REPORTS

In 2023, the National Registry of Emergency Medical Technicians implemented Scaled Score Reports to provide unsuccessful candidates additional feedback on their overall examination performance. This innovation aims to enhance the feedback provided on examination attempts, thus better equipping candidates for future testing experiences.

The Scaled Score Report adopts a holistic approach, encapsulating all domains tested and thereby offering a comprehensive portrayal of a candidate's overall performance. This methodology synthesizes performances across the entire spectrum of the exam into one overall score, presenting a complete picture of a candidate's proficiency.

An essential facet of scaled scores is the standardization of performance. Scaled Score Reports introduce a uniform measure that facilitates a straightforward comparison of individual performances. These reports present a standardized scale, thereby enabling candidates to assess their scores in comparison to the passing standard. Such a method ensures a transparent feedback mechanism that supports candidates in identifying their strengths and areas needing improvement.

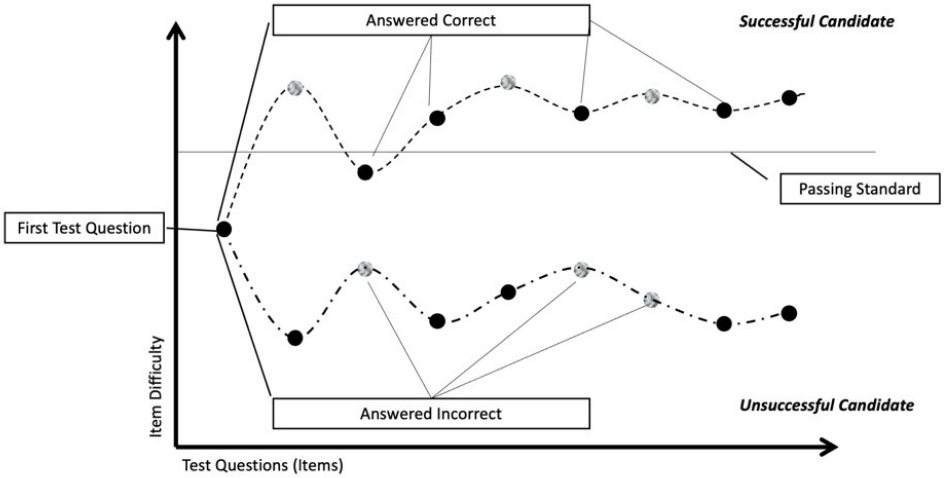
The adoption of scaled scoring aligns with best practices in the standardized examination industry, providing unsuccessful candidates with accurate, interpretable feedback on their performance. This method enables candidates, including aspiring EMS managers and leaders, to approach future tests with an enhanced understanding of their abilities. It also assures governmental officials of a fair, transparent, and comprehensive evaluation method for the EMS profession.



THE CAT EXAMINATION PROCESS

1. **Initial question**: The test begins with a question of moderate difficulty, which serves as a baseline to gauge the examinee's proficiency.
2. **Adaptive algorithm**: Based on the examinee's response, the algorithm selects the next question, increasing the difficulty if the initial question was answered correctly or decreasing it if the response was incorrect.
3. **Continuous adjustment**: The CAT examination maintains an adaptive approach by continuously adjusting the difficulty level of questions according to the test-taker's performance. This adaptive process allows the exam to accurately gauge the individual's true ability by presenting questions that challenge their knowledge and skills appropriately.
4. **Termination criteria**: The examination ends when either a pre-determined number of questions have been answered, the allotted time has expired, or the candidate has demonstrated (or not demonstrated) competency with at least a 95% statistical confidence interval.

Chart Demonstrating a Successful and Unsuccessful Candidate.



- The examination starts with a calibrated item (question), if the candidate answers the question correctly, the next question will be more difficult.
- When candidates answer questions incorrectly, they will be presented easier questions.
- As the examination progresses, the computer identifies the candidate's ability.

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PARAMEDIC ACCREDITATION

"Without standardization, there can be no improvement."
- Taiichi Ohno

ACCREDITATION IS A METHOD FOR CONDUCTING NON-GOVERNMENTAL, peer evaluations of educational institutions and programs. It serves as a cornerstone of quality assurance in higher education, including health education. Despite the states having different levels of control over education, higher education institutions generally operate with substantial independence and autonomy, resulting in a wide range of characteristics and quality in their programs.

[redacted]

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EMS PRACTITIONER MENTAL HEALTH: PROTECTING OUR OWN

"First responders are not superhuman. They are human."
- Karen Solomon

EMS PROVIDERS IN THE UNITED STATES, LIKE IN MANY OTHER PARTS OF the world, face significant mental health challenges due to the nature of their work. The high-stress, fast-paced, and emotionally demanding environment of EMS can take a toll on the mental health and well-being of EMS practitioners, and these challenges are often underreported, under-recognized, and under-diagnosed. [redacted]

- **Compassion fatigue**: [redacted].
- **Post-traumatic stress disorder** (PTSD): [redacted]

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A PROFESSIONAL CODE OF CONDUCT

"Accountability breeds response-ability."
-Stephen Covey

MEDICAL PROFESSIONS GENERALLY HAVE A CODE OF CONDUCT TO establish and maintain professional standards of behavior and ethical conduct among their members. These codes serve as guidelines that outline the expected conduct, responsibilities, and ethical principles that healthcare professionals should adhere to in their practice. The Hippocratic Oath, which is one of the oldest and most well-known codes of conduct in healthcare, has been a guiding principle for physicians for centuries. Its emphasis on ethical principles such as confidentiality, honesty, and respect for patients has influenced the development of modern codes of conduct for healthcare professionals.

As EMS continues its professional development, there is an urgent need for a unified code of conduct that is adopted and implemented by all states and jurisdictions licensing EMS personnel.

Section 4

STATE REGULATION & ADMINISTRATION OF EMS

"The nine most terrifying words in the English language are:
'I'm from the government, and I'm here to help.'"
– President Ronald Reagan

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AN INTRODUCTION TO INTERSTATE COMPACTS

"Interstate compacts are the most powerful, durable, and adaptive tools for ensuring cooperative action among the states... [providing] a state-developed structure for collaborative and dynamic action, while building consensus among the states."
- Council of State Governments

INTERSTATE COMPACTS ARE LEGAL AGREEMENTS, GROUNDED IN THE colonial era, that states employ to address issues of common concern. The original thirteen colonies devised agreements, precursors to today's compacts, to manage disputes, particularly those related to boundaries. To resolve such disputes, the colonies and the British Crown developed a process of negotiation and presentation of these disagreements to the Crown through the Privy Council for final judgment.[a] This method set the precedent for resolving state disputes through negotiation and submitting the proposed resolution to a central authority for approval.

The contemporary "Compact Process" was formalized under the *Articles of Confederation.*[143] Specifically, Article VI prevented any two or more states from establishing any alliance or treaty without the explicit approval of the United States Congress. This provision arose out of

[a] The Privy Council served as an advisory body to the British monarchy and played a significant role in governing and overseeing the affairs of the 13 colonies during the colonial period.

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THE EMS COMPACT

"Interstate compacts are the most powerful, durable, and adaptive tools for ensuring cooperative action among the states... [providing] a state-developed structure for collaborative and dynamic action, while building consensus among the states."
- Council of State Governments

THE EMS COMPACT, OFFICIALLY TITLED THE *RECOGNITION OF Emergency Medical Services Personnel Licensure Interstate Compact* (REPLICA), is a groundbreaking initiative in the annals of emergency medical services in the United States. First launched as a conceptual project of the National Association of State EMS Officials and funded by the Department of Homeland Security in 2012, the initiative [redacted]

THE COMPONENTS OF THE EMS COMPACT

The Emergency Medical Services Compact is composed of several distinct components, each possessing a unique designation or acronym and serving a specific function.

THE EMS COMPACT	**EMS Compact** – The phrase "EMS Compact" is the commonly used designation for the "Recognition of EMS Personnel Licensure Interstate Compact".
REPLICA* Recognition of EMS Personnel Licensure Interstate CompAct	**Recognition of EMS Personnel Licensure Interstate CompAct (REPLICA)** - REPLICA is the official model legislation ratified by the states. It signifies the mutual acceptance of EMS licensure across state lines.
INTERSTATE COMMISSION FOR EMS PERSONNEL PRACTICE	**Interstate Commission for EMS Personnel Practice (ICEMSPP)** - The ICEMSPP is a governing body formed pursuant to the REPLICA legislation. It oversees the administration and governance of the Compact. Like most interstate compacts, the ICEMSPP is constituted by one Commissioner from each of the member states.
NEMSCD NATIONAL EMS COORDINATED DATABASE	**National EMS Coordinated Database (NEMSCD)** - The Compact mandates member states to share licensure information. The NEMSCD was consequently established to enable this requirement, serving as a centralized repository of such data.

[redacted]

The three honorary Chairpersons: Debra Cason, Rick Patrick, and Dia Gainor.

[a] Debra Cason was the Chair of the Board of the National Registry of EMTs
[b] Rick Patrick, Senior Advisor, Department of Homeland Security, Office of Health Affairs
[c] Dia Gainor was the Executive Director of the National Association of EMS Officials

NATIONAL ADVISORY PANEL (2013)

- American Ambulance Association
- American College of Emergency Physicians
- Association of Air Medical Services
- Association of Critical Care Transport
- Bureau of Land Management
- EMS Labor Alliance
- Federal Bureau of Investigation
- Federation of State Medical Boards
- International Association of EMS Chiefs
- International Association of Fire Chiefs
- International Association of Fire Fighters
- International Association of Flight & Critical Care Paramedics
- International Paramedic
- National Association of EMS Educators
- National Association of EMS Physicians
- National Association of EMTs
- National Association of State EMS Officials
- National EMS Management Association
- National Governors Association
- National Registry of EMTs
- National Volunteer Fire Council

Model Legislation Drafting Team- Guided by technical and legal advice from the Vedder Price Law Firm, the drafting team included:

- National Association of State EMS Officials
- Council of State Governments
- Association of Air Medical Services
- International Association of Flight and Critical Care Paramedics
- International Association of Fire Fighters
- National EMS Management Association
- National Association of EMTs

INAUGURAL COMMISSIONERS FOR THE EMS COMPACT (2017)

Back: Wayne Denny (Idaho), Guy Dansie (Utah), Diane McGinnis Hainsworth (Delaware), Stephen Wilson (Alabama), Andy Gienapp (Wyoming), Joseph House (Kansas), Gary Brown (Virginia). Front: Jeanne-Marie Bakehouse (Colorado), Donna G. Tidwell (Tennessee), Alisa Williams (Mississippi), Joseph Schmider (Texas). Not pictured: Keith Wages (Georgia).

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STATE SOVEREIGNTY

"The powers delegated by the proposed Constitution to the federal government, are few and defined. Those which are to remain in the State governments are numerous and indefinite."
- President James Madison

THE REGULATION OF EMERGENCY MEDICAL SERVICES IN THE UNITED States is primarily the responsibility of individual states under the U.S. Constitution. This is due to the principle of state sovereignty, which is enshrined in the Tenth Amendment to the Constitution. This amendment explicitly states that "the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." This means that the federal government has only those powers that are specifically granted to it by the Constitution, while the states retain all other powers.

The concept of state sovereignty is a core element of federalism, [redacted]

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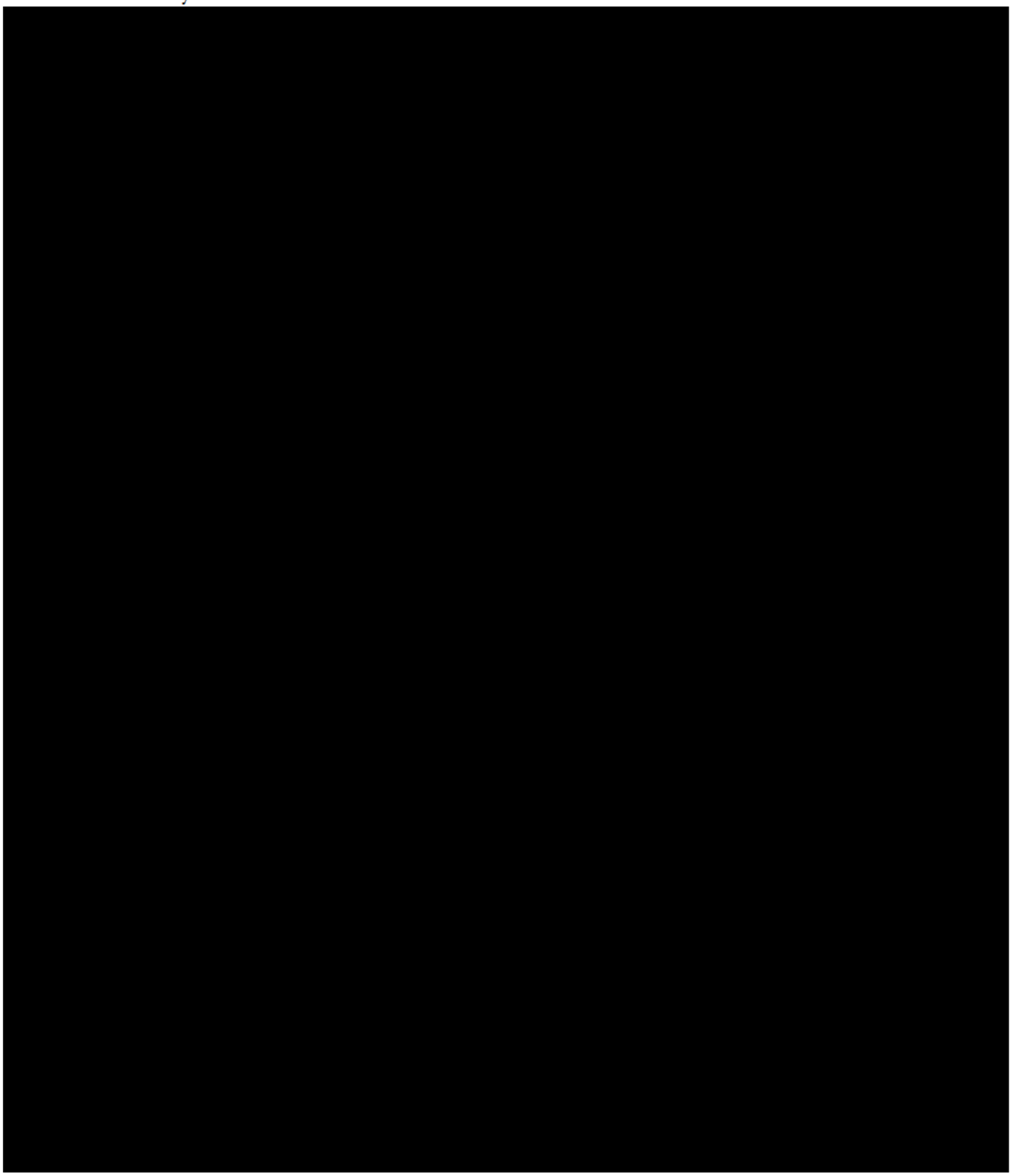
STATE EMS OFFICES

"EMS is not a job; it is a calling."
-Unknown

STATE EMS OFFICES ARE ESSENTIAL IN IN LEADING AND COORDINATING Emergency Medical Services within their jurisdictions. Every state and territory within the United States possesses a designated lead EMS agency, operating as part of the executive branch of government. In numerous instances, this office is situated within the state health department, public safety department, or functions as an independent state agency. These state EMS offices carry the responsibility for planning, coordinating, regulating the state EMS system, and licensing EMS personnel and agencies, which encompass air and ground ambulances.

- **Technical Assistance**: This role involves providing comprehensive support and guidance to EMS agencies and personnel. This may include offering advice on policy and operational matters, facilitating training and education, and assisting with the implementation of new protocols or technologies. Essentially, the aim is to improve the performance and effectiveness of EMS services within the state.

- **Regulatory Functions**: These relate to the enforcement of laws, rules, and standards within the EMS system. Regulatory tasks include granting licenses to EMS personnel and agencies, ensuring compliance with professional standards and protocols, and conducting investigations into alleged breaches of these standards. The overarching goal is to maintain a high standard of EMS practice and service delivery to ensure public safety and trust.



EMS Week designation and proclamation issued by the White House and state governors.

- **Interagency Collaboration**: State EMS offices play a significant role in collaborating and coordinating with other state and local agencies.

- **Legislation**: State EMS offices are critical in reviewing and molding the legislative framework that influences the operation of EMS systems. This includes a broad array of aspects including licensure and certification of EMS professionals and agencies. Working alongside legislative bodies, the EMS offices help create, review, and amend laws to align with evolving medical practices, technological advancements, and societal needs. They often serve as expert consultants, providing valuable insights on the practical implications of proposed laws, helping legislators understand the unique needs and challenges of EMS operations. Furthermore, State EMS offices also play a pivotal role in implementing new legislation by translating legal mandates into practical regulations and guidelines, facilitating compliance among EMS agencies and personnel, and updating the state administrative code accordingly.

- **Administrative Code & Regulations**: State EMS Offices are responsible for developing and updating the administrative code, a comprehensive set of rules and regulations that govern EMS operations within the state. These rules span areas such as personnel licensing, patient care standards, EMS agency protocols, vehicle and equipment requirements, and data reporting. These codes are kept current with evolving national standards, local needs, and advancements in technology and medical science. The process involves collaboration with various stakeholders for feedback and finalization, effective communication of these rules to relevant parties, enforcement of compliance, and integration of legislative changes impacting EMS operations into the administrative code.

- **Quality Improvement**: State EMS offices drive continuous quality improvement initiatives for EMS. These programs often involve systematically collecting and analyzing data on various aspects of EMS performance, identifying areas of potential improvement, and implementing changes aimed at enhancing service delivery. State EMS offices also facilitate training programs for EMS personnel focused on quality improvement methods, encouraging a culture of continuous learning and improvement within the EMS community.

- **Bridging Rural and Urban Differences**: Acknowledging the unique challenges and needs posed by both urban and rural settings, State EMS offices play a critical role in ensuring that EMS services are equitably distributed and effectively delivered across diverse geographic landscapes. In urban areas, they address issues such as high call volumes, traffic congestion, and a diverse patient population, while in rural areas, they tackle challenges such as longer response times, fewer resources, and limited access to advanced healthcare facilities. State EMS offices work collaboratively with local agencies, hospitals, and healthcare providers to design and implement strategies that account for these differences. They may advocate for legislation and funding to support

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INVESTIGATIONS & ENFORCEMENT

"The measure of a society is found in how they treat their weakest and most helpless citizens."
– President Jimmy Carter

STATE EMERGENCY MEDICAL SERVICES OFFICES ARE ESSENTIAL regulatory entities that govern the operation of EMS agencies and personnel within their respective jurisdictions. Their mandate is to enforce the norms of professionalism, quality of care, and regulatory compliance expected of EMS practitioners. While disciplinary actions are within their purview, the primary focus for all State EMS Officials should be system improvement by offering technical assistance to EMS personnel, agencies, and education

MEDICARE EXCLUSION DATABASE

The Medicare Exclusion Database, maintained by the Department of Health and Human Services (HHS), is a comprehensive record of individuals and entities barred from partaking in federally funded healthcare programs like Medicare, Medicaid, and other HHS programs. These entities primarily comprise healthcare providers convicted of offenses related to these federal programs.

Exclusion from participation in Medicare can be either mandatory or permissive. Mandatory exclusions are enforced by law for individuals and entities convicted of crimes including Medicare or Medicaid fraud, patient abuse or neglect, felony convictions for health care-related theft or financial misconduct, and felony convictions relating to the unlawful manufacture or distribution of controlled substances.

Permissive exclusions give the Office of the Inspector General (OIG) the discretion to exclude individuals and entities on several grounds. These grounds may include misdemeanor convictions related to healthcare fraud outside Medicare or a state health program, fraud in a program funded by any Federal, State, or local government agency, misdemeanor convictions related to the illegal manufacture or distribution of controlled substances, and other issues impacting professional competence or financial integrity.

The OIG maintains the List of Excluded Individuals/Entities (LEIE) — a current record of all excluded entities. Importantly, anyone who employs an individual or entity listed on the LEIE could face civil monetary penalties (CMP). As such, all healthcare entities – including Emergency Medical Service providers - are encouraged to check the list routinely to ensure their employees, both current and prospective, are not listed.

As vital components of the healthcare system, EMS agencies are also subject to these exclusion rules. These exclusions could have a severe impact on their financial viability due to the high proportion patients that are insured by these federal programs.

Moreover, the Medicare Exclusion Database offers an essential reference for EMS leaders and government officials to ensure regulatory compliance within their operations. Regular cross-checking against this database can prevent EMS agencies from employing or collaborating with excluded individuals or entities, thereby avoiding substantial legal and financial penalties. By using this database, EMS leaders can also maintain public trust by demonstrating their commitment to high standards of care and ethical conduct.

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PUBLIC PROTECTION & BACKGROUND CHECKS

"The legitimate object of government is to do for a community of people whatever they need to have done but cannot do at all or cannot so well do for themselves in their separate and individual capacities."
- President Abraham Lincoln

THE LANDMARK DECISION SET FORTH BY THE U.S. SUPREME COURT in the 19th century case of *Hawker v. New York*[160] established the essential role of character in obtaining a medical license. This key verdict underscored the fact that state licensing processes are obligated to evaluate not only an applicant's medical knowledge but also their moral character and integrity. The court asserted that public trust in medical practitioners relies as much on their ethical conduct as it does their professional competence.

[redacted]

Section 5

LEADERSHIP & MANAGEMENT

"Leadership is the capacity to translate vision into reality."
-Warren Bennis

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VISIONARY LEADERSHIP

"A leader has the vision and conviction that a dream can be achieved.
He inspires the power and energy to get it done."
- Ralph Lauren

EMS LEADERS AND MANAGERS ARE CRUCIAL TO THE DELIVERY OF high-quality emergency medical services, providing oversight, guidance, and support to providers and staff in often challenging and rapidly changing environments. To be effective in their roles, EMS leaders must possess a unique combination of skills, knowledge, and vision that allows them to navigate the complexities of the industry and deliver optimal patient care. These skills and knowledge include a deep understanding of medical protocols and best practices, effective communication and collaboration skills, strategic planning and decision-making abilities, and a commitment to ongoing learning and improvement.

At the heart of effective EMS leadership is visionary leadership, which involves the ability to see beyond the present challenges and constraints and envision a better future for an organization or industry. In the context of EMS, visionary leadership has been essential in

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STAKEHOLDER ENGAGEMENT

"Engage your stakeholders in the dialogue that matters most to them. When you focus on what your stakeholders care about, they will talk back to you, and that's where the magic happens."
- John Mackey, CEO Whole Foods

PROGRESSIVE EMS LEADERS ACKNOWLEDGE THE POWER OF ENGAGING with a wide spectrum of stakeholders. Defined as individuals or groups affected by or interested in the operations and outcomes of an organization, stakeholders may comprise patients, healthcare providers, EMS personnel, government bodies, and community members, among others. Effective stakeholder engagement is pivotal for EMS organizations across all

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LEADING CHANGE MANAGEMENT

"Change is the law of life. And those who look only to the past or present are certain to miss the future."
- President John F. Kennedy

AS THE EMS INDUSTRY CONTINUES TO EVOLVE AND GROW, CHANGE is inevitable. With new regulations, guidelines, technological advancements, and techniques emerging, EMS leaders must possess the ability to navigate their organizations through transformative periods effectively. Change is crucial to maintain relevance and deliver the highest standard of patient care. However, leading change in any industry, particularly in EMS, can present complex and formidable challenges. The EMS field often experiences resistance to change, as local pride and ownership frequently clash with national standards and

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LEADERSHIP LESSONS

"Good leaders are pragmatists. They want to make things work. They want to do the decent thing for others. When it comes to choosing leaders, we should value authenticity as much as ideology… I am still convinced that truth is the glue that holds not only our government together, but also civilization. "
- President Gerald R Ford

ACROSS THE UNITED STATES, EMERGENCY MEDICAL SERVICES GRAPPLE with significant recruitment and retention issues. This intricate issue has roots in various factors, one of the most cited in research and surveys being deficiencies in appropriate leadership and management. As such, the role of effective leadership has never been more critical. Leaders in EMS are tasked with not only managing daily operations and navigating crisis situations, but also creating a working environment that encourages growth, fosters resilience,

Section 6

EMERGING ISSUES

"The future rewards those who press on. I don't have time to feel sorry for myself. I don't have time to complain. I'm going to press on."
- President Barack Obama

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HEALTH EQUITY AND SOCIAL DETERMINANTS OF HEALTH

"Health equity means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and healthcare."
- Robert Wood Johnson Foundation

IN THE REALM OF PUBLIC HEALTH, THE CONCEPTS OF HEALTH EQUITY and social determinants of health have gained increasing recognition for the significant roles they play in shaping health outcomes. They are also pivotal in the operational landscape of Emergency Medical Services. Understanding their influence on access to EMS, service utilization, and health outcomes is crucial in informing policy decisions and formulating strategies for enhancing the quality of EMS delivery and overall population health.

Health equity is the principle underlying a commitment to reduce—and ultimately eliminate—

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AGING POPULATIONS & EMS SYSTEMS

"Growing old is not an option. It is a fact of life.
And while some may try to fight it, to deny it, or to ignore it, we should all embrace it."
- Clint Eastwood

WITH THE AGING AMERICAN POPULATION, THE NATION'S EMS SYSTEM is facing a growing set of challenges. Older adults tend to have more chronic health conditions and are at higher risk for injuries, falls, and other medical emergencies, requiring increased demand for EMS agencies. Providing appropriate care for older adults may require additional skills, training, and specialized equipment for EMS practitioners to effectively manage their complex medical needs. Additionally, managing care transitions and allocating resources effectively to meet the growing demand for EMS agencies from the aging population can be challenging for the national EMS system. In this context, it is essential to understand and address the impacts of the aging population on the national EMS system to ensure that individuals receive timely and high-quality emergency medical care, regardless of their age or health status.

The impacts of the aging population are impacting multiple aspects of the national EMS system:

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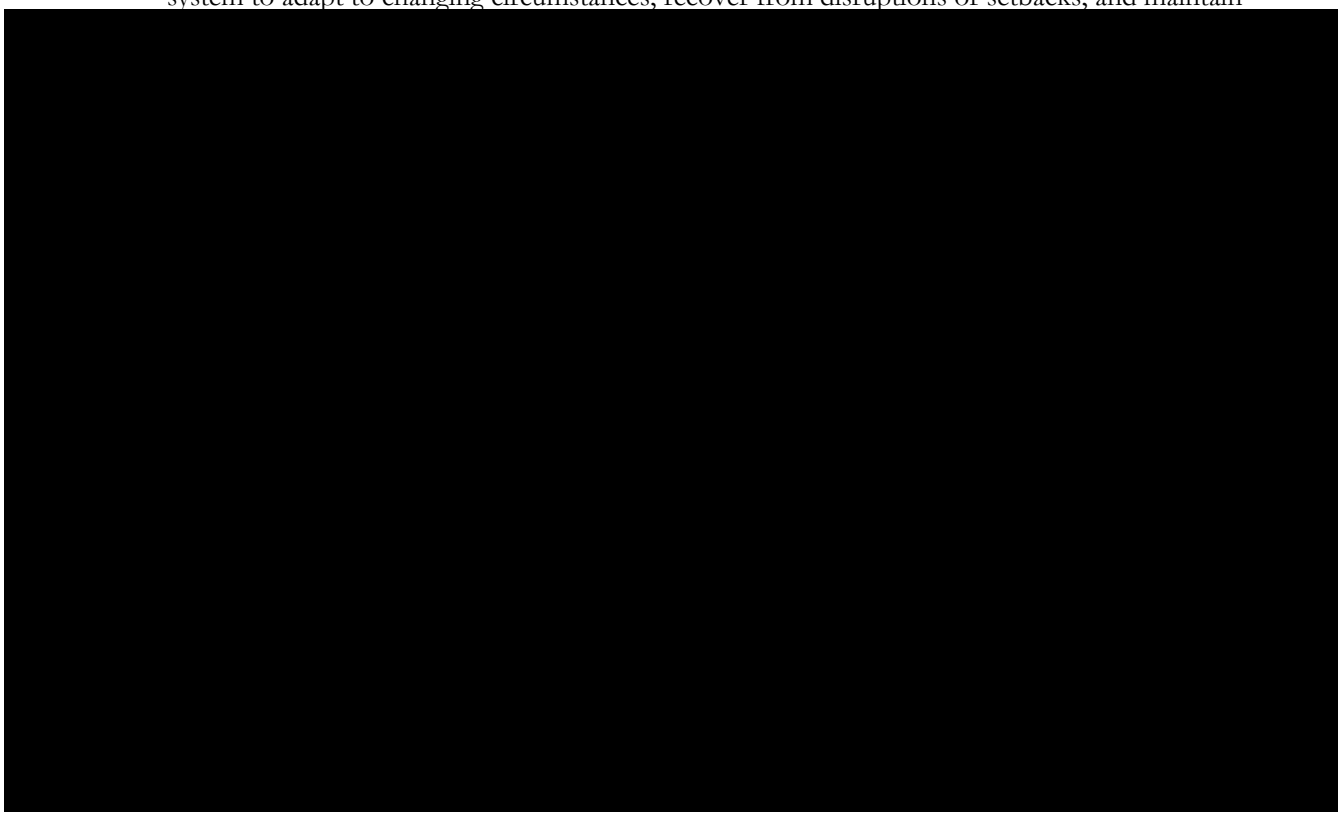
RESILIENCE, RELIABILITY, AND SUSTAINABILITY

"This is no time for ease and comfort. It is time to dare and endure."
– Winston Churchill

RESILIENCE, RELIABILITY, AND SUSTAINABILITY ARE THREE ESSENTIAL qualities that define a successful EMS system. Resilience refers to the ability of an EMS system to adapt to changing circumstances, recover from disruptions or setbacks, and maintain



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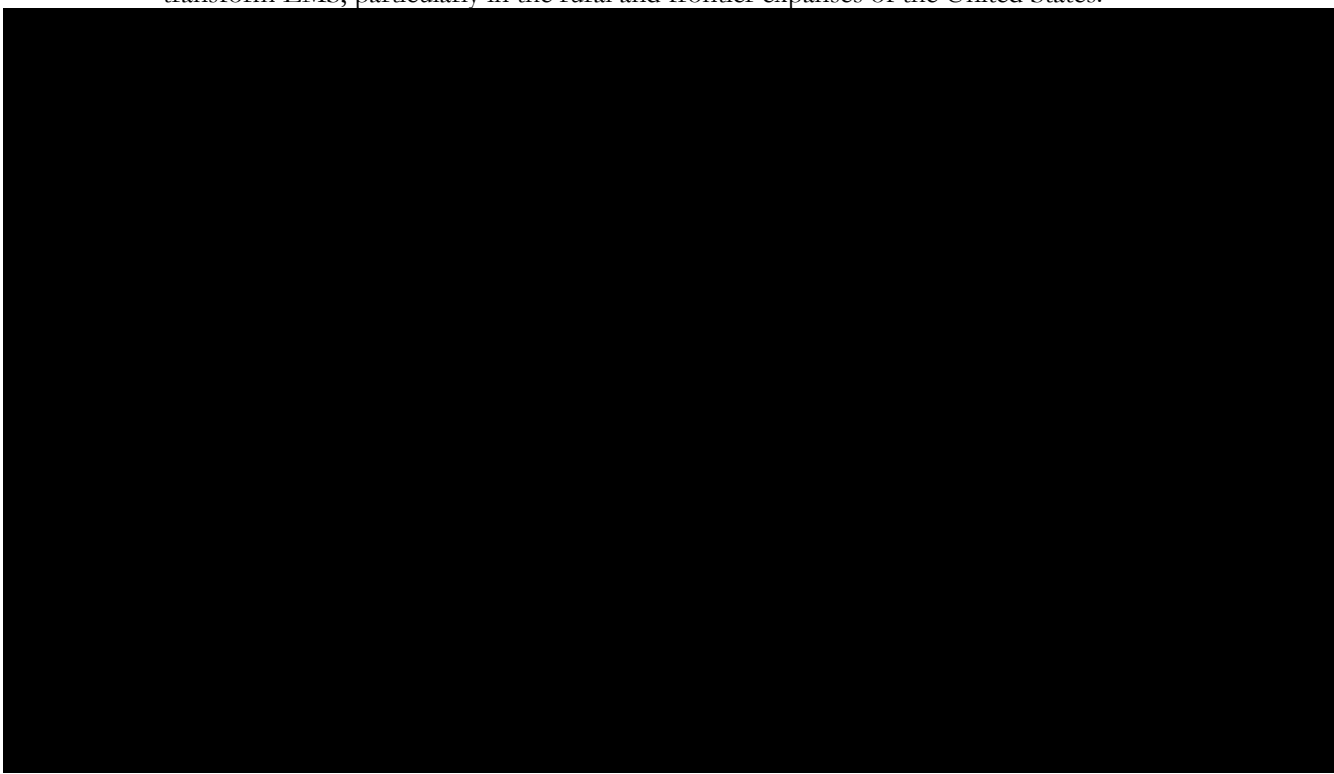
TELEHEALTH: A NEW FRONTIER

"Prediction is very difficult, especially about the future." - Niels Bohr

IN THE NOT-TOO-DISTANT FUTURE, A NEW DAWN FOR EMERGENCY Medical Services is imminent, one where the power of technology combined with telehealth fundamentally redefines emergency care. Envision a new kind of EMS practitioner: a Tele-Medic, not just skilled in conventional emergency medical services, but also credentialed in the advanced delivery of telehealth. This future is quickly taking shape and holds the potential to transform EMS, particularly in the rural and frontier expanses of the United States.



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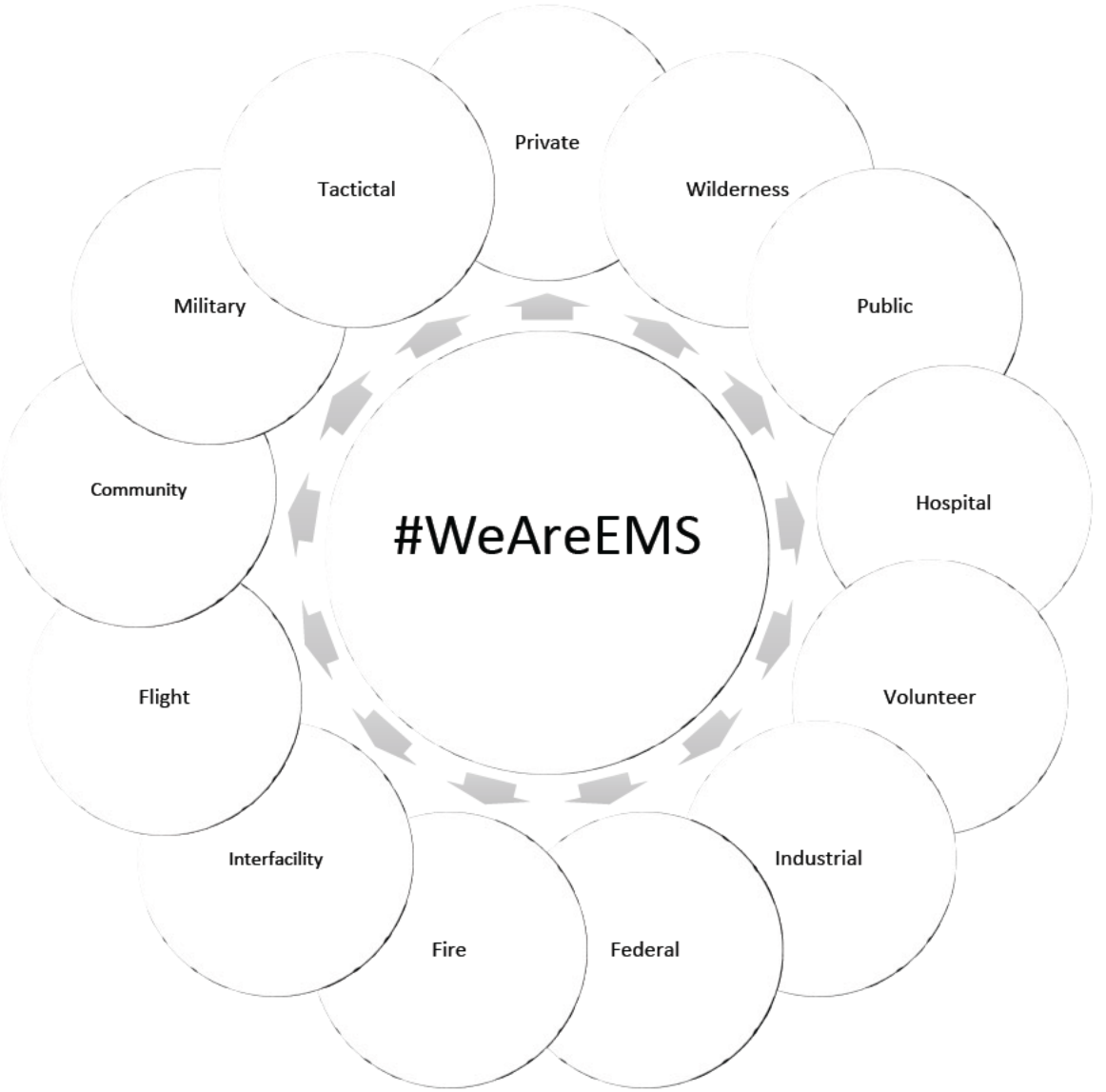
WE ARE EMS

"Unity is strength... when there is teamwork and collaboration, wonderful things can be achieved."
- Mattie Stepanek

WITHIN THE EMERGENCY MEDICAL SERVICES COMMUNITY, THERE are many challenges that must be acknowledged and addressed, but prominent among these is the fragmented professional identity. EMS professionals often grapple with associating themselves with the larger EMS profession, choosing instead to identify with specialized roles within the industry or their employer's profile: Private EMS practitioners, firefighter-EMT or firefighter-medic, flight-medic, community paramedic, etc. Charting the path towards the future necessitates all EMS professionals also unify at a macro level as EMS professionals. Perhaps the simple phrase "We Are EMS" balances the varied employers and work environments with a shared commitment, resilience, and passion that binds all EMS professionals, regardless of their specialized roles.

The EMS Agenda 2050[161], published in 2019, offers a compelling vision for the future of EMS. This ambitious blueprint necessitates collaboration among every EMS practitioner, leader, manager, and policymaker to overcome the distinctive challenges that the profession faces. By pledging allegiance to and embodying the foundational principles of the EMS Agenda 2050, the future of EMS as a vital element of public health and safety can be assured.


#WeAreEMS
Private
Wilderness
Public
Hospital
Volunteer
Industrial
Federal
Fire
Interfacility
Flight
Community
Military
Tactictal

APPENDIX

RESOURCES

PETER'S LAWS FOR THE NAVIGATION OF LIFE

In 2002, Dr. Peter Safar's colleagues compiled a collection of his frequently used quotes and idioms, titling it "Peter's Laws for the Navigation of Life," and subtitling it "The Creed of the Sociopathic Obsessive Compulsive."[163] This collection has since been widely disseminated, with

1976 Abstracts[164]

The following abstracts were compiled by the Department of Health, Education and Welfare following a 1976 conference on Emergency Medical Services.

By Norman McSwain, MD: Paramedic Training

PARAMEDIC TRAINING IN JUNIOR COLLEGES

The University of Kansas Medical Center has been training paramedics since 1973 utilizing facilities of the School of Medicine and equipment of the Emergency Medical Training Program. In addition to conducting its own paramedic training classes, the University acts as the authorizing agency for all training programs within the state of Kansas. This authority to review and approve or disapprove all training program proposals was given to the University by the Kansas Legislature.

1976 Abstract By Nancy Caroline, MD:

[redacted]

Pers.

Nancy L. Caroline, M.D.
Assistant Professor of Clinical/
Anesthesiology Critical Care Medicine
University of Pittsburgh

1978 DOT Model EMS Legislation

By 1978, the DOT had over a decade of experience in working towards EMS system develop under the Highway Safety Act, however according to the EMS Act, the DHEW was the designated lead federal agency for EMS system development in the United States. Each federal agency had unique EMS system requirements, ultimately contributing to confusion, duplication, and fragmentation of efforts. [165]

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
WASHINGTON, D.C. 20590

JAN 31 1978 IN REPLY REFER TO:

NTS-13-01

TO: State and Local Officials

This document contains Model State Legislation for a comprehensive Emergency Medical Service (EMS) program. This Model is a revision of EMS Model Legislation developed in 1972 and published as Appendix I of Highway Safety Program Manual #11. This Model contains additional material which has been found to be necessary for a State to have an effective EMS program. As such, it contains reference to both basic and advanced life support procedures along with Federal criteria for uniform care, service identity and system development.

The major purpose of the Model Law is to provide a reference for preparing legislation establishing a statewide EMS program. To accomplish this, the Model provides for a State agency to manage the program and, further, provides this agency with the power to promulate regulations or standards on EMS activities. The agency's management function includes statewide coordination for the planning and implementation of EMS activities at the local/regional levels. The agency's regulatory authority includes EMS personnel training, equipment specifications and placement, necessary communications for rapid response, and standards for the care of injured persons. The agency is provided this regulatory authority to assure that quality life support systems are provided throughout the State.

This model, if adopted and supported by every State, will help continue the advancement toward a nationwide uniform practice of administering EMS activities which would result in bringing uniform emergency medical services to all of the Nation's citizens

Sincerely,

Joan Claybrook

Joan Claybrook
Administrator

Model Legislation for Emergency Medical Services

March 1978

Traffic Safety Programs

Office of Driver and Pedestrian Programs

Enforcement and Emergency Services Division

CONGRESSIONAL INQUIRY SUMMARY (1977)[a]

Due to the long-term impacts on the development of the EMS system, the summary from the Committee on Appropriations inquiry[166] is printed here.

A REPORT TO

THE COMMITTEE ON APPROPRIATIONS

U.S. HOUSE OF REPRESENTATIVES

on

EMERGENCY MEDICAL SERVICES SYSTEMS

in the

UNITED STATES

Surveys and Investigations Staff

February 1978

[a] Inquiry initiated in 1977, written in 1978, and part of 1979 congressional record.

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GLOSSARY

AAA: American Ambulance Association

AAMS: Association of Air Medical Services

AAOS: American Academy of Orthopedic Surgeons

ACEP: American College of Emergency Physicians

ACLS: Advanced Cardiac Life Support

ACPE: American College of Paramedic Executives

ACS: American College of Surgeons

AHA: American Heart Association

ALS: Advanced Life Support

AMA: American Medical Association

AMRF: African Medical & Research Foundation

ARC: American Red Cross

ATS: American Trauma Society

BCCTPC: Board for Critical Care Transport Paramedic Certification

BLM: Bureau of Land Management

CAAHEP: Commission on Accreditation of Allied Health Education Programs

CAT: Computer Adaptive Testing

CCP: Critical Care Paramedic

CDPHE: Colorado Department of Public Health & Environment

CoAEMSP: Committee on Accreditation of Emergency Medical Services Professionals

CQI: Continuous Quality Improvement

CSG: Council of State Governments

DARPA: Defense Advanced Research Project Agency

DHEW: Department of Health, Education & Welfare

DHHS: Department of Health & Human Services (Also, HHS)

DHS: Department of Homeland Security

DLC: Driver License Compact

DOT: Department of Transportation

EDI: Equity, Diversity & Inclusion

EMAC: Emergency Management Assistance Compact

EMS: Emergency Medical Services

EMSC: Emergency Medical Services for Children

EMT: Emergency Medical Technician

EMTLA: Emergency Medical Treatment and Labor Act

ENA: Emergency Nurse Association

FBI: Federal Bureau of Investigation

FEMA: Federal Emergency Management Agency

FICEMS: Federal Interagency Committee of EMS

FSMB: Federation of State Medical Boards

FTO: Field Training Officer

HIPAA: Health Insurance Portability & Accountability Act

HRSA: Health Resources & Services Administration

IACP: International Association of Chiefs of Police

IAED: International Academies of Emergency Dispatch

IAEMSC: International Association of EMS Chiefs

IAFC: International Association of Fire Chiefs

IAFF: International Association of Fire Fighters

IBSC: International Board of Specialty Certifications

ICEMSPP: Interstate Commission for EMS Personnel Practice

IMLC: Interstate Medical Licensure Compact

JEMS: Journal of Emergency Medical Services

JRCEP: Joint Review Committee on Education Programs

LEIE: List of Excluded Individuals, Entities

MASH: Mobile Army Surgical Hospital

NAEMSE: National Association of EMS Educators

NAEMSP: National Association of EMS Physicians

NAEMT: National Association of EMTs

NAS: National Academy of Sciences

NASA: National Aeronautics and Space Administration

NASEMSD: National Association of State EMS Directors

NASEMSO: National Association of State EMS Officials

NCIC: National Center for Interstate Compacts

NCLEX: National Council Licensure Examination

NCSBN: National Council of State Boards of Nursing

NEMSCD: National EMS Coordinated Database

NEMSID: National EMS Identification Number

NEMSIS: National EMS Information System

NEMSMA: National EMS Management Association

NFIRS: National Fire Incident Reporting System

NFPA: National Fire Protection Association

NFS: National Forest Service

NHTSA: National Highway Traffic Safety Administration

NLC: Nurse Licensure Compact

NPDB: National Practitioner Data Bank

NRC: National Research Council

NREMT: National Registry of EMTs

NSC: National Standard Curriculum

PANCE: Physician Assistant National Certifying Examination

PHTLS: Pre-Hospital Trauma Life Support

PTSD: Post-Traumatic Stress Disorder

REPLICA: Recognition of EMS Personnel Licensure Interstate Compact

TCCC: Tactical Combat Casualty Care

UASI: Urban Areas Security Initiative

UMIS: Universal Medical Identification Symbol

USFA: United States Fire Administration

COMPANION WEBSITE

www.ems-history.com

Readers are warmly invited to delve further into the rich array of resources available this book's companion website, found at **www.ems-history.com.** This platform not only provides direct access to most documents referenced within this book but also serves as an expansive resource hub for EMS Managers, Leaders, and State EMS Officials. It hosts an impressive collection of insightful videos, offers direct connections to national EMS organizations, presents accessible congressional records, and much more. To enrich their understanding and extend their knowledge, readers are encouraged to visit this comprehensive companion website.

ABOUT THE AUTHOR

Donnie Woodyard Jr., MAML, NRP, has an extensive three-decade-long career in the field of Emergency Medical Services. His journey started in high school when he volunteered as an EMT in Pearisburg, Virginia. This initial experience sparked his interest in EMS, leading him to become a Paramedic at the age of 19 upon graduating from Sinclair Community College in Dayton, Ohio. Pursuing higher education, Donnie acquired another undergraduate degree from Indiana University and a Master's Degree in Management and Leadership from Liberty University. He is currently working on his Doctorate degree in Public Administration.

In 1999, Donnie achieved certification as a Critical Care Paramedic through a combined program by the University of Maryland Baltimore County and Loyola University. This achievement was attained during his pre-med studies at Cedarville University. He also holds an IBSC Board Certification as a Wilderness Paramedic. Over his lengthy career, Donnie has taken on multiple EMS leadership roles, serving as an EMS Chief in volunteer and salaried positions, an EMS instructor, and the Paramedic Program Director for a Community College and a hospital-based Paramedic program.

Previously, Donnie served on the Board of Directors for the National Association of State EMS Officials and was an ex-officio member of the Colorado Emergency Medical Practice Advisory Council. He also served in critical state leadership roles, including the State EMS Director for Louisiana and Chief of the Emergency Medical & Trauma Services Branch for the State of Colorado. As the Chief Operating Officer for the National Registry of EMTs, Donnie initiated several technological advancements including the National EMS ID Number, the NREMT mobile app, and the National EMS Coordinated Database.

Donnie's contributions have been integral to implementing the EMS Compact as Colorado's Commissioner. He was elected to serve as the Chair of the Executive Committee for the Interstate Commission for EMS Personnel Practice after serving as Vice Chair. In 2023, he was appointed as the full-time Executive Director for the EMS Compact.

Donnie's influence extends beyond national boundaries. He is recognized for establishing the modern EMS System in Sri Lanka and advising on EMS and trauma system designs in several South Asian countries. He has authored, edited, or consulted on EMS textbooks published in Sinhala, Tamil, Khmer, and Bengali languages.

Beyond his work in EMS, Donnie is a skilled Scuba Dive Master, with over 800 dives to his credit. He is also an airplane pilot and currently serves as a Squadron Commander with the United States Air Force Auxiliary – Civil Air Patrol. His commitment to public service is further exemplified by his humanitarian work, having participated in disaster, war, and medical response aid missions in many countries including Haiti, Sri Lanka, Ethiopia, and Bangladesh.