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Title: Change the scope of practice of paramedics? An EMS/public health policy perspective.

Source: *Prehosp Emerg Care (Prehospital emergency care : official journal of the National Association of EMS Physicians and the National Association of State EMS Directors.)* 1999 Apr-Jun; 3(2): 140-9

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Standard No: ISSN: 1090-3127; NLM Unique Journal Identifier: 9703530

Language: English

Abstract: OBJECTIVE: To analyze the potential for expanding the scope of practice of paramedics from public health, health planning, and health policy perspectives, utilizing data covering more than 42,000 emergency patients. METHODS: The authors conducted a retrospective study of 42,918 patients seen in two Baltimore emergency departments over a six-month period, 5,259 of whom were transported by emergency ambulance. The authors constructed epidemiologic profiles of in-hospital and prehospital patients, and merged ambulance data with discharge diagnoses. RESULTS: The 42,918 patients had a total of 2,118 different discharge diagnoses. The ten most frequent diagnoses of ambulance-transported patients were convulsions, injuries, asthma, congestive heart failure, chest pain, syncope and collapse, otitis media, abdominal pain, cardiac arrest, and respiratory abnormality. The ten most frequent diagnoses for all ED patients were otitis media, asthma, finger and nonspecific injuries, upper respiratory infections, chest pain, bronchitis, pharyngitis, gastroenteritis, nonspecific viral infections, and urinary tract infections. Infections accounted for 31.6% of the top 50% of diagnoses by volume, followed by injuries (24%) and cardiovascular cases (16.5%). However, 26.9% of ED patients received an assessment and diagnosis of general symptoms (no procedure). CONCLUSIONS: The high



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External Resources: [ILLiad](#) Send request to Illiad**FIND RELATED****More Like This:** [Advanced options ...](#)**Author(s):** Bissell RA ; Seaman KG ; Bass RR ; Racht E ; Gilbert C ; Weltge AF ; Doctor M ; Moriarity S ; Eslinger D ; Doherty R**Affiliation:** Department of Emergency Health Services, University of Maryland Baltimore County, Baltimore 21250, USA. bissell@umbc.edu**Title:** A medically wise approach to expanding the role of paramedics as physician extenders.**Source:** *Prehosp Emerg Care (Prehospital emergency care : official journal of the National Association of EMS Physicians and the National Association of State EMS Directors.)* 1999 Apr-Jun; 3(2): 170-3**Additional Info:** UNITED STATES**Standard No:** ISSN: 1090-3127; NLM Unique Journal Identifier: 9703530**Language:** English

Abstract: The authors examined a portion of the complex issue of the scope of practice of paramedics in light of the epidemiologic profile of emergency patients seen at two Baltimore hospitals. They suggest that the same approach could and should be used to help decide on the scope of work of prehospital personnel in any jurisdiction. The findings lead the authors to urge caution toward any potential changes to the work done by medics, because of the enormous breadth of presenting patient conditions. The authors suggest that the epidemiologic profile witnessed in Baltimore would require increased direct physician input on patient destination decisions for all medics who would be working under an expanded scope of functions, and the paper suggests a mechanism for accomplishing this goal. Finally, while there may be compelling economic reasons to change what medics do in the field, this article cautions health care managers to design changes, based on solid evidence, that will have a positive public health impact, and then work to evaluate the character of the impact after changes are implemented.

MESH Subject(s) below:**Descriptor: (Major):** [Job Description](#)

Emergency Medical Technicians and Paramedics

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Significant Points

- Job stress is common because hours of work are irregular and workers often must treat patients in life-or-death situations.
- Formal training and certification are required, but State requirements vary.
- Employment is projected to grow faster than average as paid emergency medical technician positions replace unpaid volunteers.
- Competition will be greater for jobs in local fire, police, and rescue squad departments than in private ambulance services; opportunities will be best for those who have advanced certification.

Nature of the Work

People's lives often depend on the quick reaction and competent care of emergency medical technicians (EMTs) and paramedics—EMTs with additional advanced training to perform more difficult prehospital medical procedures. Incidents as varied as automobile accidents, heart attacks, drownings, childbirth, and gunshot wounds all require immediate medical attention. EMTs and paramedics provide this vital attention as they care for and transport the sick or injured to a medical facility.

In an emergency, EMTs and paramedics typically are dispatched to the scene by a 911 operator, and often work with police and fire department personnel. (Police and detectives and firefighting occupations are discussed elsewhere in the *Handbook*.) Once they arrive, they determine the nature and extent of the patient's condition while trying to ascertain whether the patient has preexisting medical problems. Following strict rules and guidelines, they give appropriate emergency care and, when necessary, transport the patient. Some paramedics are trained to treat patients with minor injuries on the scene of an accident or at their home without transporting them to a medical facility. Emergency treatment for more complicated problems is carried out under the direction of medical doctors by radio preceding or during transport.

EMTs and paramedics may use special equipment, such as backboards, to immobilize patients before placing them on stretchers and securing them in the ambulance for transport to a medical facility. Usually, one EMT or paramedic drives while the other monitors the patient's vital signs and gives additional care as needed. Some EMTs work as part of the flight crew of helicopters that transport critically ill or injured patients to hospital trauma centers.

At the medical facility, EMTs and paramedics help transfer patients to the emergency department, report their observations and actions to emergency room staff, and may provide additional emergency treatment. After each run, EMTs and paramedics replace used supplies and check equipment. If a transported patient had a contagious disease, EMTs and paramedics decontaminate the interior of the ambulance and report cases to the proper authorities.

Beyond these general duties, the specific responsibilities of EMTs and paramedics depend on their level of qualification

and training. To determine this, the National Registry of Emergency Medical Technicians (NREMT) registers emergency medical service (EMS) providers at four levels: First Responder, EMT-Basic, EMT-Intermediate, and EMT-Paramedic. Some States, however, do their own certification and use numeric ratings from 1 to 4 to distinguish levels of proficiency.

The lowest-level workers—First Responders—are trained to provide basic emergency medical care because they tend to be the first persons to arrive at the scene of an incident. Many firefighters, police officers, and other emergency workers have this level of training. The EMT-Basic, also known as EMT-1, represents the first component of the emergency medical technician system. An EMT-1 is trained to care for patients at the scene of an accident and while transporting patients by ambulance to the hospital under medical direction. The EMT-1 has the emergency skills to assess a patient's condition and manage respiratory, cardiac, and trauma emergencies.

The EMT-Intermediate (EMT-2 and EMT-3) has more advanced training that allows the administration of intravenous fluids, the use of manual defibrillators to give lifesaving shocks to a stopped heart, and the application of advanced airway techniques and equipment to assist patients experiencing respiratory emergencies. EMT-Paramedics (EMT-4) provide the most extensive prehospital care. In addition to carrying out the procedures already described, paramedics may administer drugs orally and intravenously, interpret electrocardiograms (EKGs),



Emergency medical technicians provide medical care to patients at the scene of an emergency.

perform endotracheal intubations, and use monitors and other complex equipment.

Working Conditions

EMTs and paramedics work both indoors and outdoors, in all types of weather. They are required to do considerable kneeling, bending, and heavy lifting. These workers risk noise-induced hearing loss from sirens and back injuries from lifting patients. In addition, EMTs and paramedics may be exposed to diseases such as hepatitis-B and AIDS, as well as violence from drug overdose victims or mentally unstable patients. The work is not only physically strenuous, but also stressful, involving life-or-death situations and suffering patients. Nonetheless, many people find the work exciting and challenging and enjoy the opportunity to help others.

EMTs and paramedics employed by fire departments work about 50 hours a week. Those employed by hospitals frequently work between 45 and 60 hours a week, and those in private ambulance services, between 45 and 50 hours. Some of these workers, especially those in police and fire departments, are on call for extended periods. Because emergency services function 24 hours a day, EMTs and paramedics have irregular working hours that add to job stress.

Employment

EMTs and paramedics held about 179,000 jobs in 2002. Most career EMTs and paramedics work in metropolitan areas. There are many more volunteer EMTs and paramedics, especially in smaller cities, towns, and rural areas. These individuals volunteer for fire departments, emergency medical services (EMS), or hospitals, and may respond to only a few calls for service per month or may answer the majority of calls, especially in smaller communities. EMTs and paramedics work closely with firefighters, who often are certified as EMTs as well and act as first responders.

Full-time and part-time paid EMTs and paramedics were employed in a number of industries. About 4 out of 10 worked as employees of private ambulance services. About 3 out of 10 worked in local government for fire departments, public ambulance services, and EMS. Another 2 out of 10 were found in hospitals, working full time within the medical facility or responded to calls in ambulances or helicopters to transport critically ill or injured patients. The remainder worked in various industries providing emergency services.

Training, Other Qualifications, and Advancement

Formal training and certification is needed to become an EMT or paramedic. All 50 States have a certification procedure. In most States and the District of Columbia, registration with the NREMT is required at some or all levels of certification. Other States administer their own certification examination or provide the option of taking the NREMT examination. To maintain certification, EMTs and paramedics must reregister, usually every 2 years. In order to reregister, an individual must be working as an EMT or paramedic and meet a continuing education requirement.

Training is offered at progressive levels: EMT-Basic, also known as EMT-1; EMT-Intermediate, or EMT-2 and EMT-3; and EMT-Paramedic, or EMT-4. EMT-Basic coursework typically emphasizes emergency skills, such as managing respiratory, trauma, and cardiac emergencies, and patient assessment.

Formal courses are often combined with time in an emergency room or ambulance. The program also provides instruction and practice in dealing with bleeding, fractures, airway obstruction, cardiac arrest, and emergency childbirth. Students learn how to use and maintain common emergency equipment, such as backboards, suction devices, splints, oxygen delivery systems, and stretchers. Graduates of approved EMT basic training programs who pass a written and practical examination administered by the State certifying agency or the NREMT earn the title "Registered EMT-Basic." The course also is a prerequisite for EMT-Intermediate and EMT-Paramedic training.

EMT-Intermediate training requirements vary from State to State. Applicants can opt to receive training in EMT-Shock Trauma, wherein the caregiver learns to start intravenous fluids and give certain medications, or in EMT-Cardiac, which includes learning heart rhythms and administering advanced medications. Training commonly includes 35 to 55 hours of additional instruction beyond EMT-Basic coursework, and covers patient assessment as well as the use of advanced airway devices and intravenous fluids. Prerequisites for taking the EMT-Intermediate examination include registration as an EMT-Basic, required classroom work, and a specified amount of clinical experience.

The most advanced level of training for this occupation is EMT-Paramedic. At this level, the caregiver receives additional training in body function and learns more advanced skills. The Technology program usually lasts up to 2 years and results in an associate degree in applied science. Such education prepares the graduate to take the NREMT examination and become certified as an EMT-Paramedic. Extensive related coursework and clinical and field experience is required. Due to the longer training requirement, almost all EMT-Paramedics are in paid positions, rather than being volunteers. Refresher courses and continuing education are available for EMTs and paramedics at all levels.

EMTs and paramedics should be emotionally stable, have good dexterity, agility, and physical coordination, and be able to lift and carry heavy loads. They also need good eyesight (corrective lenses may be used) with accurate color vision.

Advancement beyond the EMT-Paramedic level usually means leaving fieldwork. An EMT-Paramedic can become a supervisor, operations manager, administrative director, or executive director of emergency services. Some EMTs and paramedics become instructors, dispatchers, or physician assistants, while others move into sales or marketing of emergency medical equipment. A number of people become EMTs and paramedics to assess their interest in healthcare, and then decide to return to school and become registered nurses, physicians, or other health workers.

Job Outlook

Employment of emergency medical technicians and paramedics is expected to grow faster than the average for all occupations through 2012. Population growth and urbanization will increase the demand for full-time paid EMTs and paramedics rather than for volunteers. In addition, a large segment of the population—the aging baby boomers—will further spur demand for EMT services as they become more likely to have medical emergencies. There will still be demand for part-time, volunteer EMTs and paramedics in rural areas and smaller metropolitan areas. In addition to those arising from job growth, openings will occur because of replacement needs; some workers leave

the occupation because of stressful working conditions, limited potential for advancement, and the modest pay and benefits in private-sector jobs.

Most opportunities for EMTs and paramedics are expected to be found in private ambulance services. Competition will be greater for jobs in local government, including fire, police, and independent third-service rescue squad departments, in which salaries and benefits tend to be slightly better. Opportunities will be best for those who have advanced certifications, such as EMT-Intermediate and EMT-Paramedic, as clients and patients demand higher levels of care before arriving at the hospital.

Earnings

Earnings of EMTs and paramedics depend on the employment setting and geographic location as well as the individual's training and experience. Median annual earnings of EMTs and paramedics were \$24,030 in 2002. The middle 50 percent earned between \$19,040 and \$31,600. The lowest 10 percent earned less than \$15,530, and the highest 10 percent earned more than \$41,980. Median annual earnings in the industries employing the largest numbers of EMTs and paramedics in 2002 were:

Local government	\$27,440
General medical and surgical hospitals	24,760
Other ambulatory health care services	22,180

Those in emergency medical services who are part of fire or police departments receive the same benefits as firefighters or police officers. For example, many are covered by pension plans that provide retirement at half pay after 20 or 25 years of service or if the worker is disabled in the line of duty.

Related Occupations

Other workers in occupations that require quick and level-headed reactions to life-or-death situations are air traffic controllers, firefighting occupations, physician assistants, police and detectives, and registered nurses.

Sources of Additional Information

General information about emergency medical technicians and paramedics is available from:

- ▶ National Association of Emergency Medical Technicians, P.O. Box 1400, Clinton, MS 39060-1400. Internet: <http://www.naemt.org>
- ▶ National Registry of Emergency Medical Technicians, Rocco V. Morando Bldg., 6610 Busch Blvd., P.O. Box 29233, Columbus, OH 43229. Internet: <http://www.nremt.org>
- ▶ National Highway Transportation Safety Administration, EMS Division, 400 7th St. SW., NTS-14, Washington, DC 20590. Internet: <http://www.nhtsa.dot.gov/people/injury/ems>