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# Emergency Medical Technicians and Paramedics

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## Significant Points

- Employment is projected to grow faster than the average as paid positions replace unpaid volunteers.
- Emergency medical technicians and paramedics need formal training and certification, but requirements vary by State.
- Emergency services function 24 hours a day so emergency medical technicians and paramedics have irregular working hours.
- Opportunities will be best for those who have earned advanced certifications.

## Nature of the Work

People's lives often depend on the quick reaction and competent care of emergency medical technicians (EMTs) and paramedics. Incidents as varied as automobile accidents, heart attacks, slips and falls, childbirth, and gunshot wounds all require immediate medical attention. EMTs and paramedics provide this vital service as they care for and transport the sick or injured to a medical facility.

In an emergency, EMTs and paramedics are typically dispatched by a 911 operator to the scene, where they often work with police and fire fighters. (Police and detectives and fire-fighting occupations are discussed elsewhere in the *Handbook*.) Once they arrive, EMTs and paramedics assess the nature of the patient's condition while trying to determine whether the patient has any pre-existing medical conditions. Following medical protocols and guidelines, they provide 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 they may treat them at their home without transporting them to a medical facility. Emergency treatment is carried out under the medical direction of physicians.

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. These workers generally work in teams. During the transport of a patient, one EMT or paramedic drives while the other monitors the patient's vital signs and gives additional care as needed. Some paramedics work as part of a helicopter's flight crew to 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 department 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.

EMTs and paramedics also provide transportation for patients from one medical facility to another, particularly if they

work for private ambulance services. Patients often need to be transferred to a hospital that specializes in their injury or illness or to a nursing home.

Beyond these general duties, the specific responsibilities of EMTs and paramedics depend on their level of qualification and training. The National Registry of Emergency Medical Technicians (NREMT) certifies emergency medical service providers at five levels: First Responder; EMT-Basic; EMT-Intermediate, which has two levels called 1985 and 1999; and Paramedic. Some States, however, have their own certification programs and use distinct names and titles.

The EMT-Basic represents the first component of the emergency medical technician system. An EMT trained at this level is prepared to care for patients at the scene of an accident and while transporting patients by ambulance to the hospital under medical direction. The EMT-Basic has the emergency skills to assess a patient's condition and manage respiratory, cardiac, and trauma emergencies.

The EMT-Intermediate has more advanced training. However, the specific tasks that those certified at this level are allowed to perform varies greatly from by State.

EMT-Paramedics provide the most extensive pre-hospital care. In addition to carrying out the procedures of the other levels, paramedics may administer drugs orally and intravenously, interpret electrocardiograms (EKGs), perform endotracheal intubations, and use monitors and other complex equipment. However, like EMT-Immediate, what Paramedics are permitted to do varies from State to State.

**Work environment.** EMTs and paramedics work both indoors and out, 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 mentally unstable patients. The work is not only physically strenuous but can be stressful, sometimes 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



*Emergency medical technicians and paramedics often work in pairs, where one person drives the ambulance and the other monitors the patient.*

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.

### Training, Other Qualifications, and Advancement

Generally, a high school diploma is required to enter a training program to become an EMT or paramedic. Workers must complete a formal training and certification process.

**Education and training.** A high school diploma is usually required to enter a formal emergency medical technician training program. Training is offered at progressive levels: EMT-Basic, EMT-Intermediate, and EMT-Paramedic.

At the EMT-Basic level, coursework 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 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 must pass a written and practical examination administered by the State certifying agency or the NREMT.

At the EMT-Intermediate level, training requirements vary by State. The nationally defined levels (EMT-Intermediate 1985 and EMT-Intermediate 1999) typically require 30 to 350 hours of training based on scope of practice. Students learn advanced skills such as the use of advanced airway devices, intravenous fluids, and some medications.

The most advanced level of training for this occupation is EMT-Paramedic. At this level, the caregiver receives training in anatomy and physiology as well as advanced medical skills. Most commonly, the training is conducted in community colleges and technical schools over 1 to 2 years and may result in an associate's degree. Such education prepares the graduate to take the NREMT examination and become certified as a Paramedic. Extensive related coursework and clinical and field experience is required. Refresher courses and continuing education are available for EMTs and paramedics at all levels.

**Licensure.** All 50 States require certification for each of the EMT levels. 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 either the NREMT or State examination. To maintain certification, EMTs and paramedics must recertify, usually every 2 years. Generally, they must be working as an EMT or paramedic and meet a continuing education requirement.

### Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Emergency medical technicians and paramedics.....	29-2041	201,000	240,000	39,000	19

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

**Other qualifications.** 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.** Paramedics can become supervisors, operations managers, administrative directors, or executive directors of emergency services. Some EMTs and paramedics become instructors, dispatchers, or physician assistants; others move into sales or marketing of emergency medical equipment. A number of people become EMTs and paramedics to test their interest in health care before training as registered nurses, physicians, or other health workers.

### Employment

EMTs and paramedics held about 201,000 jobs in 2006. Most career EMTs and paramedics work in metropolitan areas. Volunteer EMTs and paramedics are more common in small cities, towns, and rural areas. These individuals volunteer for fire departments, emergency medical services, or hospitals and may respond to only a few calls per month. About 30 percent of EMTs or paramedics belong to a union.

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 emergency medical services. Another 2 out of 10 worked full time in hospitals 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.

### Job Outlook

Employment for EMTs and paramedics is expected to grow faster than the average for all occupations through 2016. Job prospects should be good, particularly in cities and private ambulance services.

**Employment change.** Employment of emergency medical technicians and paramedics is expected to grow by 19 percent between 2006 and 2016, which is faster than the average for all occupations. Full-time paid EMTs and paramedics will be needed to replace unpaid volunteers. It is becoming increasingly difficult for emergency medical services to recruit and retain unpaid volunteers because of the amount of training and the large time commitment these positions require. As a result, more paid EMTs and paramedics are needed. Furthermore, as a large segment of the population—aging members of the baby boom generation—becomes more likely to have medical emergencies, demand will increase for EMTs and paramedics. There also will still be demand for part-time, volunteer EMTs and paramedics in rural areas and smaller metropolitan areas.

**Job prospects.** Job prospects should be favorable. Many job openings will arise from growth and from the need to replace workers who leave the occupation because of the limited potential for advancement, as well as the modest pay and benefits in private-sector jobs.

Job opportunities should be best in private ambulance services. Competition will be greater for jobs in local government, including fire, police, and independent third-service rescue squad departments which tend to have better salaries and benefits. EMTs and paramedics who have advanced education and certifications, such as Paramedic level certification, should enjoy the most favorable job prospects 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 of their jobs, as well as their training and experience. Median annual earnings of EMTs and paramedics were \$27,070 in May 2006. The middle 50 percent earned between \$21,290 and \$35,210. The lowest 10 percent earned less than \$17,300, and the highest 10 percent earned more than \$45,280. Median annual earnings in the industries employing the largest numbers of EMTs and paramedics in May 2006 were \$23,250 in general medical and surgical hospitals and \$20,350 in ambulance services.

Those in emergency medical services who are part of fire or police departments typically 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 Highway Traffic Safety Administration, EMS Division, 400 7th St.SW., NTS-14, Washington, DC 20590. Internet: <http://www.ems.gov>
- ▶ 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>