

Characteristics of Nationally-Certified Prehospital Patient Care Providers in the United States

Madison K. Rivard, BS, NREMT^{1,2}, Rebecca E. Cash, MPH, NRP^{1,2}, Ashish R. Panchal, MD, PhD³

1. The National Registry of EMTs, Columbus, Ohio, 2. The Ohio State University College of Public Health 3. Department of Emergency Medicine, The Ohio State University Wexner Medical Center, Columbus, Ohio



Introduction

EMS professionals are a key aspect of healthcare services in the US.

Little information available that describes the national EMS workforce who provides patient care and roles and settings in which they work.

Objective

Describe the workforce characteristics of nationally-certified EMS professionals who provide patient care in the U.S.

Methods

Data Source

National EMS Certification database. This was a cross-sectional analysis of an optional 10-question workforce profile on demographics and job characteristics for EMS professionals.

Population

EMS professionals who recertified their National EMS Certification between October 1, 2017 – March 31, 2018.

Included EMS professionals who were functioning as a patient care provider for at least one non-military organization, certified at EMT level or higher, aged 18 to 85 years.

Analysis

Descriptive statistics were calculated.

Results

87,471 / 106,677 responses received.

Response rate = 82%

69,422 responses included in analysis.

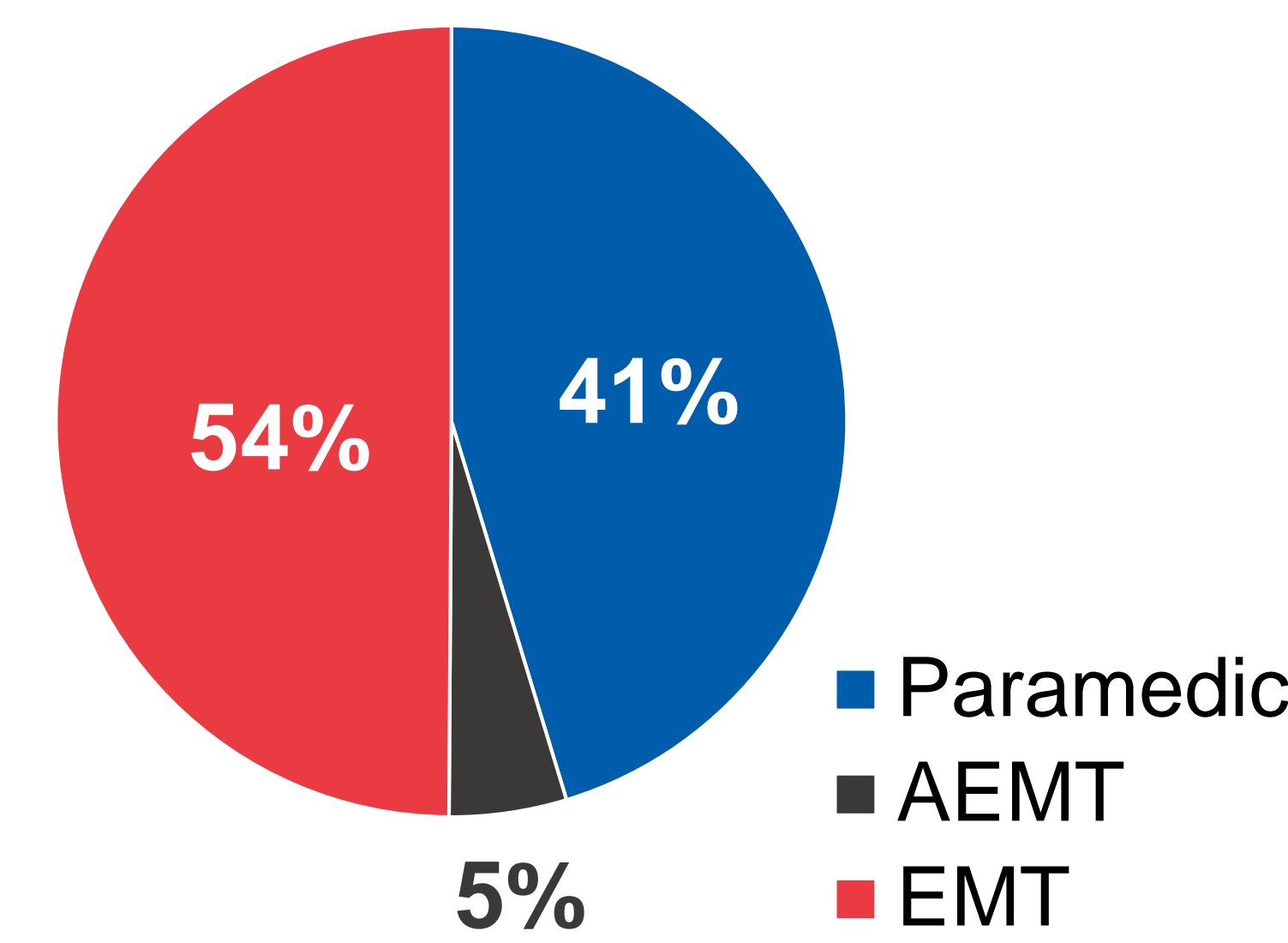


Figure. Certification levels of study population.

Table 1. EMS professional demographics of 3 certification levels and overall. Majority are male, in early- to mid-30's, non-Hispanic white, with some college experience.

Characteristic	Overall n (%) (n=69,422)	EMT n (%) (n=34,607)	AEMT n (%) (n=3,353)	Paramedic n (%) (n=31,462)
Sex				
Female	16,446 (23.8)	9,064 (26.4)	858 (25.7)	6,524 (20.8)
Male	52,621 (76.2)	25,325 (73.6)	2,479 (74.3)	24,817 (79.2)
Age - median (IQR)	36 (29–46)	35 (27–45)	36 (29–45)	38 (31–46)
Minority Status				
Non-Hispanic White	57,659 (85.6)	27,761 (82.7)	2,763 (84.9)	27,135 (88.8)
Minority	9,697 (14.4)	5,797 (17.3)	493 (15.1)	3,407 (11.2)
Education Level				
HS/GED or less	13,242 (19.1)	7,974 (23.0)	749 (22.3)	4,519 (14.4)
Some college	22,671 (32.7)	11,698 (33.8)	1,247 (37.2)	9,726 (31.0)
Associates degree	15,193 (21.9)	5,615 (16.2)	570 (17.0)	9,008 (28.6)
Bachelor's degree or more	18,307 (26.4)	9,318 (26.9)	787 (23.5)	8,202 (26.1)

Table 2. EMS professionals and time capacity of their current EMS position. Approximately 1/3 of EMS professionals hold multiple EMS positions at all three levels of certification, and most have worked for 3–7 years.

Characteristic	Overall n (%) (n=69,422)	EMT n (%) (n=34,607)	AEMT n (%) (n=3,353)	Paramedic n (%) (n=31,462)
Full Time	53,207 (77.4)	23,125 (67.7)	2,516 (75.7)	27,566 (88.2)
Number of Organizations				
1	49,831 (71.8)	26,934 (77.8)	2,253 (67.1)	20,644 (65.6)
2 or more	19,591 (28.2)	7,673 (22.2)	1,100 (32.8)	10,818 (34.4)
Years of Experience				
2 years or less	19,259 (27.7)	11,592 (33.5)	857 (25.6)	6,810 (21.7)
3-7 years	20,646 (29.7)	10,068 (29.1)	1,161 (34.6)	9,417 (29.9)
8-15 years	16,570 (23.9)	7,206 (20.8)	814 (24.3)	8,550 (27.2)
16+ years	12,770 (18.4)	5,639 (16.3)	513 (15.3)	6,618 (21.0)

Results (continued)

Table 3. EMS Main Job Characteristics. Majority worked at fire or private agencies, and provided 911 service while working in urban settings.

Characteristic	Overall n (%) (n=69,422)	EMT n (%) (n=34,607)	AEMT n (%) (n=3,353)	Paramedic n (%) (n=31,462)
Main Agency				
Fire	33,232 (48.0)	17,655 (51.3)	1,767 (52.8)	13,810 (44.0)
Private	14,855 (21.5)	7,449 (21.6)	729 (21.8)	6,677 (21.3)
Governmental Non-Fire	8,493 (12.3)	3,707 (10.8)	402 (12.0)	4,384 (14.0)
Hospital	7,428 (10.7)	3,088 (9.0)	318 (9.5)	4,022 (12.8)
Other	3,178 (4.6)	2,206 (6.4)	121 (3.6)	851 (2.7)
Air Medical	1,993 (2.9)	330 (1.0)	9 (0.3)	1,654 (5.3)
Service Type				
911	49,664 (71.9)	24,470 (71.1)	2,585 (77.5)	22,609 (72.1)
911 & Medical Transport	9,917 (14.4)	4,447 (12.9)	446 (13.4)	5,024 (16.0)
Medical Transport	3,518 (5.1)	2,058 (6.0)	132 (4.0)	1,328 (4.2)
In-hospital Services	2,952 (4.3)	1,664 (4.8)	89 (2.7)	1,199 (3.8)
Other	2,738 (4.0)	1,614 (4.7)	72 (2.2)	1,052 (3.4)
Mobile Integrated Health	282 (0.4)	143 (0.4)	11 (0.3)	128 (0.4)
Community Size				
Urban (>25,000 people)	45,141 (65.0)	20,288 (58.6)	1,952 (58.2)	22,901 (72.8)
Rural (<25,000 people)	24,281 (35.0)	14,319 (41.4)	1,401 (41.8)	8,561 (27.2)

Limitations

Potential exclusion of EMS professionals who hold multiple roles.

Evaluation includes only nationally-certified EMS population.

Conclusion

In this sample of nationally-certified EMS professionals providing patient care, the majority worked full-time, at fire or private agencies, and provided 911 service while working in urban settings.

Future work should describe regional variations in characteristics of EMS professionals, as well as EMS professionals working in multiple roles.

Special thanks to the EMS professionals serving our communities who make this work possible.