Characteristics of Volunteer Compared to Paid EMS Professionals in the United States

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Introduction

Emergency medical response is provided by volunteer EMS and fire organizations in many areas of the United States.

The demographics and characteristics of volunteer EMS professionals is not widely understood, especially for those professionals for whom volunteering is their main EMS job.

Understanding volunteerism can help recruitment and retention of this important subset of EMS professionals.

Objective

Compare the characteristics of nationally-certified volunteer and paid EMS professionals in the United States.

Methods

Data Source

National EMS Certification database

- Participants were asked demographic and EMS-related characteristics, including if they volunteered as their main EMS job, as part of the biennial recertification application.

Participants

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

Included currently working, non-military, EMTs or higher, aged 18-85 years with data on volunteer status.

Variables

Proportion of volunteers per state

- Volunteer defined as receiving nominal or no compensation for the provision of EMS services at an agency as main EMS job.

Demographic characteristics

- Age
- Certification level
- Service type
- Sex
- Community size
- Geographic location (State)

Analysis

Descriptive and comparative (Chi-square, Wilcoxon rank sum) statistics calculated.

Results

87,471 responses received (response rate = 82%) with 80,742 respondents included.

Of all included respondents, 13% volunteered at their main EMS job.

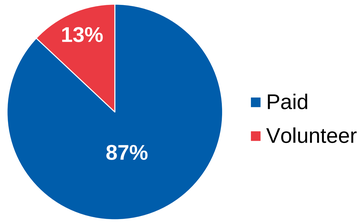

Figure 1. Proportion of volunteers.

Median age of volunteers was 40 years (IQR 30-52) compared to 36 years (IQR 29-45) for paid (p<0.001).

Table. Demographic characteristics of EMS professionals with paid versus volunteer jobs at their main EMS agency.

Characteristic	Paid, n (%) (n=70,603)	Volunteer, n (%) (n=10,139)	p-value
Sex			<0.001
Female	16,194 (23.1)	3,816 (37.9)	
Male	54,023 (76.9)	6,250 (62.1)	
Minority status			<0.001
Non-Hispanic White	56,911 (83.3)	8,902 (90.7)	
Minority	11,380 (16.7)	909 (9.3)	
Education Level			<0.001
HS/GED or less	13,005 (18.4)	1,826 (18.0)	
Some college	22,944 (32.5)	2,887 (28.5)	
Associate degree	15,851 (22.5)	1,675 (16.5)	
Bachelor's degree or more	18,794 (26.6)	3,750 (37.0)	
Certification Level			<0.001
EMT	34,193 (48.4)	8,394 (82.8)	
AEMT	3,079 (4.4)	455 (4.5)	
Paramedic	33,331 (47.2)	1,290 (12.7)	
Community size			<0.001
Rural	21,053 (31.0)	7,312 (74.0)	
Urban	46,917 (69.0)	2,572 (26.0)	
Primary Role			<0.001
Patient care provider	57,102 (81.1)	8,710 (86.4)	
Administrator/supervisor	8,077 (11.5)	417 (4.1)	
Other	5,219 (7.4)	958 (9.4)	
Agency Type			<0.001
Fire department	30,340 (43.1)	4,980 (49.6)	
Municipal	8319 (11.8)	1,623 (16.2)	
Private	14,386 (20.4)	1,425 (14.2)	
Other	17,386 (24.7)	2,005 (20.0)	
Service Type			<0.001
Predominately 911	45,648 (65.0)	8,165 (81.2)	
Predominately medical transport	3,751 (5.3)	189 (1.9)	
Equal mix of 911 and medical transport	10,007 (14.3)	734 (7.3)	
Other	10,782 (15.4)	972 (9.7)	

Results (continued)

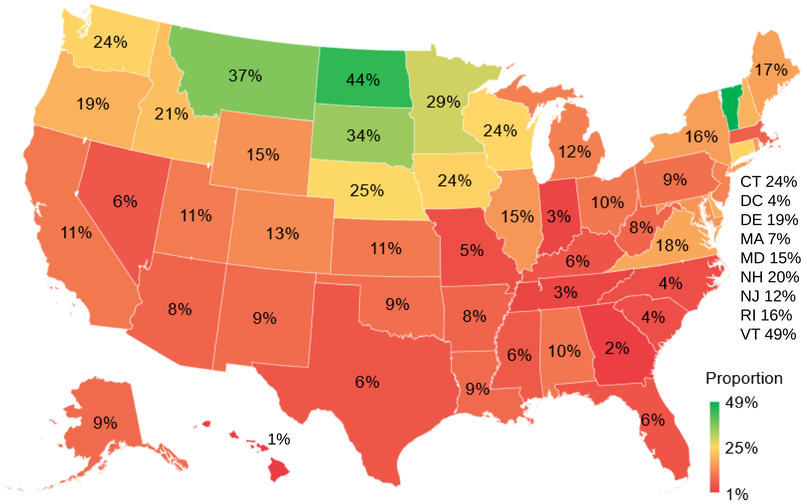

Figure 2. Proportion of respondents who volunteered at a main EMS job per state. The highest proportion of volunteers were in Vermont (49%) and North Dakota (44%).

Limitations

Paying occupation of volunteers and actual time spent volunteering in EMS was not assessed.

Respondents were sample of entire nationally-certified population so differences from whole population may exist.

Response rate was high but response bias still possible.

Conclusion

Volunteers comprised 13% of the EMS workforce in a sample of nationally-certified EMS professionals.

A larger proportion of volunteers were: female, higher educated, EMTs, from rural communities, and providing predominately 911 service than their paid counterparts.

Future work is needed to understand the regulations and policy implications that promote volunteerism in EMS.

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