

Nebraska  
Center  
for  
Rural  
Health  
Research

Emergency Medical Service Volunteer Personnel in Nebraska:  
Workforce of the Present, Hope for the Future?

A Report of the Nebraska Center for Rural Health Research  
to  
The Nebraska Health and Human Services System

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## Introduction

This report fulfills a contractual obligation of the Nebraska Center for Rural Health Research (NCRHR) to the Nebraska Health and Human Services System. *The project was funded using the resources of the Rural Hospital Flexibility Grant awarded to Nebraska by the U.S. Department of Health and Human Services, Federal Office of Rural Health Policy (H54RH00005).* During 2004, the NCRHR agreed to survey past and present workers in emergency medical services (EMS) in Nebraska who were volunteers, their supervisors, and students preparing to be emergency medical responders. The purposes of this project were to

- Discover reasons persons volunteer to be emergency medical personnel
- Discover reasons persons discontinue volunteer service
- Learn of the attractions of being a volunteer in an ambulance service
- Discern some of the issues associated with a volunteer workforce
- Help identify ways of strengthening EMS in Nebraska, as related to the workforce

This report contains information satisfying those purposes and additional information concerning job satisfaction, continuing education, and stress management. A report completed by the NCRHR in 2002 is a companion document that addressed questions about the organization of the EMS in Nebraska.

This report is based on the findings of four separate surveys conducted in April and May 2004. Questionnaires were sent to the ambulance service managers of every volunteer ambulance service in each of the state's seven EMS regions—Metro, Northeast, Southeast, North Central, South Central, Western, and Panhandle. Separate surveys were sent to randomly selected samples of current and retired members of volunteer ambulance services (retirees were defined as previously certified EMS personnel holding a license that had lapsed in the previous five years). Finally, surveys were distributed to students enrolled in emergency medical technician (EMT) courses that tended to cater to aspiring members of volunteer services. Student surveys were completed in class during training sessions. The number of survey respondents is shown below:

Service manager survey	274
Current member survey	554
Retired member survey	345
Student survey	204

## **Principle Findings**

**Reasons people became volunteer emergency medical providers** (in descending order of frequency of selection from a list of possibilities):

- Satisfaction in helping others
- Community need
- Interest in emergency medical/trauma care
- Challenge of providing emergency care
- Satisfaction in being part of an organization/team
- Medical career advancement (for students only)

**Reasons people discontinued volunteer service** (in descending order of frequency of selection from a list of possibilities):

- Time commitment
- Training requirements
- Age
- Shortage of personnel for backup
- Lack of leadership
- Poor retention efforts
- Personality conflict with personnel
- Personal health

**Leading sources of dissatisfaction among current service members** (in descending order of frequency of selection from a list of possibilities):

- Amount of local dollars for EMS
- Professional respect from nurses
- Sufficient local EMS providers in general

- Time for co-worker interaction
- Supervisor's leadership ability
- Supervisor's availability for questions/problems
- Sufficient similarly certified EMS workers

**Most desired changes identified by current members and retirees** (in descending order of frequency of selection from a list of possibilities, with the exception of the last change, which was second for retirees):

- Fewer requirements to maintain credentials
- More benefits
- Higher quality EMS continuing education
- Better teamwork

#### **Difficulties responding to demand**

- In regions other than Metro and Northeast, 15% of services responded to 25 or fewer calls in 2003.
- More than two-thirds of service managers (71.9%) reported that there were times when their service had difficulty covering calls.
- Problems covering calls occurred most commonly during daytime hours, and distance from work was the most common factor causing difficulty.
- More than one-third of volunteers found it difficult or very difficult to get time off from their regular job to go on EMS calls.

#### **Learning activities among EMT volunteers**

- A majority of current volunteers (57.4%) reported having access to distance learning tools at their service.
- Nearly all current volunteers (90.3%) said they would utilize distance learning as a means to keep up hours for recertification.
- In four of seven regions, fewer than half of the responding services had Internet/e-mail facilities available.

- Distance learning facilities were accessible in most services in every region except Southeast (excluding Lancaster and Gage counties).
- Fewer than one in five service managers reported that anyone on their staff had the ability to speak a foreign language.

## Why People Volunteer as EMS Workers

Data in Table 1 show reasons that current members, retirees, service managers, and students gave for becoming EMS responders. Current members are separated into those with more or less than 10 years time in service to detect any differences based on when they started service.

Table 1. Factors in the Decision to Become an EMT

Factor	All Current Members <sup>a</sup>	Current Members Less Than 10 Years <sup>a</sup>	Current Members 10 Years or More <sup>a</sup>	Retirees <sup>b</sup>	Service Managers <sup>c</sup>	Students <sup>d</sup>
Satisfaction in helping others	354 (63.9%)	159 (64.3%)	184 (66.6%)	194 (56.2%)	105 (38.3%)	141 (69.1%)
Community need	296 (53.4%)	129 (52.2%)	158 (57.2%)	175 (50.7%)	137 (50.0%)	63 (30.8%)
Interest in emergency medical/trauma care	235 (42.4%)	119 (48.1%)	110 (39.8%)	148 (42.9%)	70 (25.5%)	134 (65.6%)
Challenge of providing emergency care	108 (19.4%)	60 (24.2%)	45 (16.3%)	88 (25.5%)	38 (13.8%)	70 (34.3%)
Satisfaction of being part of an organization/team	107 (19.3%)	44 (17.8%)	58 (21.0%)	66 (19.1%)	-- --	56 (27.4%)
Urged by family/friends	54 (9.7%)	21 (8.5%)	30 (10.8%)	26 (7.5%)	30 (10.9%)	12 (5.9%)
Medical career advancement	35 (6.3%)	26 (10.5%)	9 (3.2%)	25 (7.2%)	3 (1.0%)	66 (32.3%)
Other	27 (4.8%)	12 (4.8%)	14 (5.0%)	20 (5.8%)	8 (2.9%)	21 (10.3%)
Earn living as a paid EMT	9 (1.6%)	6 (2.4%)	3 (1.0%)	12 (3.4%)	9 (3.2%)	32 (15.6%)

<sup>a</sup>Data from current member survey. Members were asked to indicate the factors that played a major part in their decision to become an EMT.

<sup>b</sup>Data from retiree survey. Retirees were asked to indicate the factors that played a major part in their decision to become an EMT.

<sup>c</sup>Data from service manager survey. Service managers were asked to indicate the factors that are important in attracting new recruits to their service.

<sup>d</sup>Data from student survey. Students were asked to indicate the factors that played a major part in their decision to become an EMT.

For all categories of respondents, the primary motivation for becoming an EMT was either “satisfaction in helping others” or “community need.” Student motivations were broader than those of the other groups, with a larger proportion of students indicating career-type motivations as important. This may be a reflection of the large proportion of student respondents coming from training programs in Omaha and Lincoln, which prepare students for professional (not volunteer) services in those cities.

Within the general response of volunteering to fill a community need, interesting patterns emerge as a function of age, length of service, and volume of runs made by the local service. Members indicating that “earn a living as a paid EMT” was a major factor in their decision to become an EMT (n = 9) were statistically significantly younger than members not indicating that this was a major factor. The same is true of those for whom “medical career advancement” was a major factor in the decision to become an EMT. Members indicating that “community need” was a major factor were statistically significantly older than members not indicating that this was a major factor.

Members indicating that “medical career advancement” was a major factor in their decision to become an EMT had statistically significant shorter tenure as an EMT than did members not indicating that this was a major factor. Members indicating that “community need” was a major factor had statistically significant longer tenure than did members not indicating that this was a major factor.

Members indicating that “earn a living as a paid EMT” was a major factor in their decision to become an EMT (n = 9) reported making statistically significantly more runs per month than did members not indicating that this was a major factor.

Since people join EMS in large part for reasons of civic commitment, ambulance services can use symbols of recognition to encourage that civic spirit. Table 2 shows the various ways ambulance services recognized the contributions of volunteers.

**Table 2. Number and Percentage of Services Providing Volunteer Benefits and Recognition**

<u>Benefit/Recognition</u>	
Banquets honoring members	159 (58.0%)
Certificates	128 (46.7%)
Community-wide public recognition	93 (33.9%)
Health insurance	15 (5.4%)
Jackets	182 (66.4%)
Life insurance	197 (71.9%)
Other	18 (6.5%)
Retirement benefits	13 (4.7%)
Shirts and other clothing	180 (65.6%)
Services whose volunteers receive one or none of the above items	35 (12.8%)

<sup>a</sup>Data from service manager survey.

Three of the benefits in Table 2 are of tangible value: health insurance, life insurance, and retirement benefits. Most services provided more than one benefit, but 13% reported providing either no, or only one, benefit.

There may be some payment made to EMTs, but they do not normally receive direct compensation. As shown in Table 3, approximately two-thirds of EMTs received some form of payment, but very few were paid a salary or hourly rate, and fewer than one-fourth were paid for each run they made.

Table 3. Payment to EMTs

	All Current Members <sup>a</sup>	Service Managers <sup>b</sup>
Receive payment for work as EMT		
Yes	325 (60.8%)	192 (70.6%)
No	210 (39.2%)	80 (29.4%)
If 'yes', what form of payment is received?		
Monthly/annual salary	9 (2.8%)	3 (1.6%)
Paid hourly rate	29 (8.9%)	10 (5.3%)
Paid per run	74 (22.8%)	40 (21.1%)
Reimbursed for conference fees, etc.	284 (87.4%)	180 (93.8%)

<sup>a</sup>Data from current member survey.

<sup>b</sup>Data from service manager survey.

People were attracted to EMT service for a variety of reasons, with commitment to community (helping others and community need) being the most predominant. The sense of community welfare may be linked to recognition of the service and compensation for expenses directly related to the service (conference fees, etc.).

## Reasons for Leaving EMT Service

Retention is as important to maintaining a volunteer work force as is recruitment. Why do people decide to retire from volunteer service? Table 4 shows reasons current members might leave, reasons retirees gave for leaving, and reasons service managers gave for people in their service potentially leaving.

Table 4. Reasons for Leaving EMS

Reason	Current Members <sup>a</sup> Likely to Leave in Less than 5 Years	Retirees <sup>b</sup>	Service Managers <sup>c</sup>
Time commitment	45 (27.3%)	90 (26.0%)	96 (35.0%)
Training requirements	34 (20.6%)	70 (20.8%)	89 (32.4%)
Age	31 (18.8%)	33 (9.5%)	5 (1.8%)
Shortage of personnel for backup	23 (13.9%)	36 (10.4%)	30 (10.9%)
Lack of leadership	21 (12.7%)	50 (14.4%)	5 (1.8%)
Poor retention efforts	17 (10.3%)	34 (9.8%)	7 (2.5%)
Personality conflict with personnel	14 (8.5%)	61 (17.6%)	13 (4.7%)
Legal liability	14 (8.5%)	25 (7.2%)	9 (3.2%)
Personal health	13 (7.9%)	37 (10.7%)	1 (0.3%)
Poor recruitment efforts	11 (6.7%)	20 (5.8%)	6 (2.1%)
Inadequate/no pay	9 (5.5%)	13 (3.7%)	15 (5.4%)
"I've done my time"	9 (5.5%)	18 (5.2%)	20 (7.3%)
Physical demands of EMS work	9 (5.5%)	18 (5.2%)	5 (1.8%)
Critical incident stress	7 (4.2%)	18 (5.2%)	1 (0.3%)
Other	7 (4.2%)	29 (8.4%)	6 (2.1%)
Health hazards	7 (4.2%)	9 (2.6%)	2 (0.7%)
Relocating/leaving town	5 (3.0%)	14 (4.0%)	
Lack of adequate equipment	4 (2.4%)	7 (2.0%)	3 (1.0%)

<sup>a</sup>Data from current member survey. Current members indicating that they were likely to leave in less than five years were asked about the extent each of the listed factors would play in that decision.

<sup>b</sup>Data from retiree survey. Retirees were asked about the impact each of the factors played in their decision to retire.

<sup>c</sup>Data from service manager survey. Service managers were asked about the extent each of the factors played in their service's difficulty retaining volunteers.

Most current service members indicated that they intended to stay with their EMS service for five years or more. The most frequently indicated factors in decisions to leave EMS were "time commitment," and "training requirements." This ranking holds true for current members contemplating leaving service in five years or less, retirees citing their reasons for leaving, and service managers in their efforts to retain volunteers. Shortage of personnel for backup was a factor for more than 10% of current members, retirees, and service managers. Retirees and current members shared other reasons (at least 10%) such as lack of leadership, age, and poor retention efforts. Retirees were the only group in which more than 10% identified personality conflict with personnel as a factor in leaving EMS.

Retention of existing personnel may depend on increasing their satisfaction with their activities as EMTs. Table 5 provides the reasons current EMTs gave for dissatisfaction with their jobs and/or duties.

**Table 5. Sources of Dissatisfaction in EMS-Related Jobs/Duties Among Current Members**

Source of Dissatisfaction	Number and Percentage of Survey Respondents
Amount of local dollars for EMS	191 (34.4%)
Professional respect from nurses	101 (18.2%)
Sufficient local EMS providers in general	82 (14.8%)
Professional respect from physicians	81 (14.6%)
Time for co-worker interaction	72 (13.0%)
Supervisor's leadership ability	71 (12.8%)
Supervisor's availability for questions/problems	69 (12.45%)
Sufficient similarly certified EMS workers	66 (11.9%)
Availability of physician support	60 (10.8%)
Access to EMS continuing education	60 (10.8%)
Supervisor's level of competence	59 (10.6%)
Amount of time off from EMS duties	56 (10.1%)
Relationship with other area squads	56 (10.1%)
Emotional support from co-workers	54 (9.7%)
EMS-related level of stress	54 (9.7%)
Close relationships with co-workers	52 (9.3%)
Quality of available EMS continuing education	43 (7.7%)
Quantity of EMS equipment/supplies	38 (6.8%)
The volunteer nature of EMS work	32 (5.7%)
Professional respect from local citizens	29 (5.2%)
Degree of responsibility/autonomy	28 (5.0%)
Quality of EMS equipment/supplies	26 (4.6%)
Quality of care provided by local EMS workforce	24 (4.3%)

Current service members responded to a broad range of possible sources of dissatisfaction in their EMS-related job/duties. Of all of sources of dissatisfaction, “amount of local dollars for EMS” was the only one identified as an issue by more than 25% of the respondents.

Considering leaving the volunteer service and dissatisfaction could be related to the burden being a volunteer imposes on EMTs. To test this hypothesis, the six leading factors for leaving EMS and the top 14 sources of dissatisfaction were compared to the number of runs EMTs reported making each month. Statistically significant *negative* correlations were found between the number of runs EMTs report making and “training requirements” as a factor in leaving EMT service, and between “sufficient local EMS providers in general,” “sufficient similarly certified EMS workers,” and “access to EMS continuing education” as sources of dissatisfaction. In other words, EMTs averaging more than three runs per month were less likely to specify “training requirements” as a factor in their decision to leave EMS than were those averaging three or fewer runs per month. Only the source of dissatisfaction, “amount of local dollars for EMS,” was positively correlated with the

number of runs per month (i.e., EMTs averaging more than three runs per month were more likely to cite “local dollars” as a source of dissatisfaction than were those averaging three or fewer runs per month).

The length of time that current service members expect to remain with their service is also important. Table 6 shows the length of time current EMTs expected to remain in ambulance service. More than two-thirds anticipated doing so for five or more years.

**Table 6. Length of Time Current Service Members Expect to Remain an EMT**

Length of Time	All Current Members
Less than a year	36 (6.8%)
1-2 years	42 (7.9%)
2-4 years	87 (16.4%)
5 or more years	363 (68.7%)

One might assume that willingness to remain a volunteer may also be a function of the demand the position places on people. But statistical analysis indicated that there was no relationship between the number of hours current members reported working or the number of runs they made in an average month and the time they expected to remain active. In our survey, respondent age was statistically significantly related to anticipated tenure as an EMT. Nearly 78% of respondents under 40 years of age indicated that they intended to remain an EMT for five or more years (compared to 64% of respondents 40 years of age or older).

**Difficulties Responding to Demand**

Difficulties maintaining adequate numbers of volunteer EMTs could cause problems meeting the demand for ambulance runs in some Nebraska communities. Demand on services varies across the state, as indicated in Tables 7 and 8.

**Table 7. Service Characteristics: Calls and Responses, Metro Region and All Other Regions,<sup>a</sup> 2003**

Calls and responses	Metro Region Mean/Range	All Other Regions Mean/Range
Total calls	240.2 (22-807)	101.6 (4-783)
Number of transports	199.5 (10-807)	78.9 (0-745)
Average response time (minutes)	6.8 (4-15)	6.5 (1-40)
Average transport time (minutes)	21.4 (6-45)	32.9 (0-330)

<sup>a</sup>Data from service manager survey.

Ambulance services in the Metro Region responded to more calls and provided more transports than did services in non-metro regions. Average response times in both areas were roughly the same.

Table 8. Service Characteristics: Responses to Calls by Region,<sup>a</sup> 2003

Calls	Metro	North			South		
		Central	Northeast	Panhandle	Central	Southeast <sup>b</sup>	Western
0-12	0	1 (2.4%)	3 (4.6%)	1 (5.0%)	3 (6.4%)	4 (10.8%)	2 (7.7%)
13-25	1 (5.6%)	6 (14.6%)	3 (4.6%)	2 (10.0%)	10 (21.3%)	4 (10.8%)	3 (11.5%)
26-50	1 (5.6%)	9 (22.0%)	18 (27.3%)	2 (10.0%)	12 (35.5%)	14 (37.8%)	10 (38.5%)
51-100	3 (16.7%)	9 (22.0%)	21 (31.8%)	3 (15.0%)	14 (29.8%)	2 (5.4%)	6 (23.1%)
Over 100	13 (72.2%)	16 (39.0%)	21 (31.8%)	12 (60.0%)	8 (17.0%)	13 (35.1%)	5 (19.2%)

<sup>a</sup>Data from service manager survey.

<sup>b</sup>Southeast Region, excluding responses from services in Lancaster and Gage counties.

Aside from the Metro and Northeast Regions, 15% or more of volunteer services in all regions responded to 25 or fewer calls in 2003. Over 27% of the reporting services in the South Central Region responded to 25 or fewer calls in 2003. Sixty percent (60%) of the reporting services from the Panhandle Region indicated that they responded to over 100 calls during 2003.

Table 9 shows that a large majority (71.9%) of responding service managers reported that there were times when their ambulance service had difficulty covering calls. Of those indicating such difficulty, most indicated that they had such problems during daytime hours. The biggest factor contributing to those difficulties was the “distance from work.” Comments on surveys showed that many of the volunteers (particularly in the more rural regions, e.g., farmers or ranchers) worked at some distance from the service or even at a significant distance from their home towns (people commuting to employment in other municipalities).

Workload itself did not appear to be a factor contributing to the difficulty in covering calls. Services that averaged six or fewer EMS calls per member during 2003 were more likely to indicate that they had difficulty covering calls than were services that had a busier workload (64% vs. 48%).

**Table 9. Difficulty Covering Calls<sup>a</sup>**

Difficulty covering calls	
Yes	195 (71.9%)
No	76 (28.0%)
Specific periods of difficulty	
At night	20 (7.4%)
During days	189 (69.2%)
On weekends	50 (18.5%)
During holidays	64 (23.5%)
Factors making call coverage difficult	
Distance from work	113 (41.2%)
Conflict with employers	27 (9.8%)
Child care obligations	18 (6.5%)
Too few service members	10 (3.6%)
Other	6 (2.1%)
Other family issues	5 (1.8%)

<sup>a</sup>Data from service manager survey.

As shown in Table 10, most volunteers indicated that it was not difficult to get time off from their regular job to go on EMS calls. For those reporting such difficulty, the most common reason was “schedule/shift work,” indicating that the nature of the volunteer’s work did not allow them to leave without prior notice. Distance to service was again an important concern as were a number of other employment-based reasons for difficulty. A significant proportion of volunteer EMS volunteers indicated that they had to take leave without pay when leaving work to respond to EMS calls.

**Table 10. Difficulty Covering Calls<sup>a</sup>**

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How difficult is it to get time off from your regular job to go on EMS calls?		
1 (Very easy)	162	(31.2%)
2	71	(13.6%)
3	87	(16.7%)
4	64	(12.3%)
5 (Very difficult)	135	(26.0%)
Why is it difficult to get time off for EMS service?		
Lack of support from employer	37	(6.6%)
Lack of support from co-workers	10	(1.8%)
Schedule/shift work	129	(23.2%)
Loss of personal income	66	(11.9%)
Other work-related issues	51	(9.2%)
Distance to service	58	(10.4%)
Child care issues	9	(1.6%)
Other	14	(2.5%)
Does your employer pay you for the time you are away from work on EMS runs?		
Yes	158	(33.0%)
I'm self-employed	121	(25.3%)
No, I have to use vacation hours	44	(9.2%)
No, I take leave without pay	155	(32.4%)

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<sup>a</sup>Data from current member survey.

Another difficulty local and regional service managers may encounter is having the right complement of EMTs, as determined by their qualification level, available to respond to emergencies of varying demand (intensity of on-site care needed). Table 11 shows the average complement of EMTs in responding ambulance services by level of training and region. Volunteer ambulance services in the Metro EMS Region have a higher percentage of Intermediate and Paramedic EMTs on their rosters than do services in other regions of the state (which tend to have proportionally more First Responders on their rosters).

**Table 11. Level of Training of EMS Personnel, Metro Region and All Other Regions<sup>a</sup>**

Level of Training	Metro EMS Region	All Other Regions
	Mean/Range	Mean/Range
First Responder	2.5 (0-27.3)	13.0 (0-100)
EMT Basic	81.6 (54.8-100)	83.1 (0-100)
EMT Intermediate	4.3 (0-20)	2.6 (0-100)
EMT Paramedic	11.6 (0-40)	1.3 (0-33.3)

<sup>a</sup>Data from service manager survey.

Services may experience general difficulties recruiting persons to the EMS. Persons who have retired from service were asked if their town had problems recruiting individuals to EMS. Table 12 shows the results for the state and the seven EMS regions. While there was slight variation in the level of difficulty in recruiting individuals to EMS among the various regions in the state, all regions indicated that this process was difficult. More than 25% of respondents indicated that their community had “great difficulty” recruiting for EMS.

In spite of this difficulty in attracting new recruits, the vast majority (91%) of current service managers indicated that they believed the level of care they provided met community needs. However, 37% felt that their personnel should be trained to a higher level.

**Table 12. Community Difficulty Recruiting EMS Personnel<sup>a</sup>**

Amount of Difficulty	Entire State	Metro EMS Region	All Other Regions
No difficulty	16 (5.1%)	4 (5.4%)	12 (5.2%)
A little difficulty	26 (8.3%)	6 (8.1%)	18 (7.9%)
Some difficulty	106 (33.7%)	27 (36.5%)	73 (31.9%)
A lot of difficulty	82 (26.0%)	20 (27.0%)	61 (26.6%)
Great difficulty	85 (27.0%)	17 (23.0%)	65 (28.4%)

<sup>a</sup>Data from retired service member survey.

### Learning Activities Among EMT Volunteers

A report from the NCRHR in 2001 discussed the educational programs provided to incoming EMTs and persons wishing to upgrade their skills (see “Current Issues and New Approaches: The EMS Survey in Nebraska” available at <http://www.unmc.edu/rural/documents/pr01-6.pdf>). The surveys used in 2004 included questions concerning continuing education. Table 13 shows the responses of current members to questions concerning access to distance learning and their willingness to use distance education. Current members were also asked to report the number of hours of EMS continuing education they received in the past 12 months, and the results are displayed in Table 14. More than two-thirds had received more than 12 hours of continuing education.

**Table 13. Continuing Education Access and Utilization**

Survey Item	Response	Number and Percentage of Survey Respondents <sup>a</sup>
Does your ambulance service provide access to distance learning tools such as computer-based learning, video learning, or other distance-learning facilities?	yes	299 (57.4%)
	no	222 (42.6%)
Would you utilize distance learning, computer-based learning, or video learning as a means to keep up your hours for recertification?	yes	475 (90.3%)
	no	51 (9.7%)

<sup>a</sup>Data from current service member survey.

**Table 14. Hours of EMS Continuing Education**

Number of Hours	Number and Percentage of Survey Respondents <sup>a</sup>
None	14 (2.7%)
1 to 12 hours	164 (31.1%)
13 to 24 hours	183 (34.7%)
25 to 36 hours	75 (14.2%)
37 to 48 hours	42 (8.0%)
49 to 60 hours	23 (4.4%)
61 or more hours	26 (4.9%)

<sup>a</sup>Data from current service member survey

To make continuing education more convenient to personnel in the services throughout Nebraska, distance education could be considered as an alternative. Table 15 shows the availability of various types of training equipment in services in each of the state’s EMS regions.

**Table 15. Agency Availability of Training Equipment, by Region<sup>a</sup>**

Training Equipment	Metro	North Central	Northeast	Panhandle	South Central	Southeast <sup>b</sup>	Western
TV/VCR	19 (100%)	40 (95.2%)	69 (100%)	19 (86.4%)	45 (91.8%)	37 (94.9%)	23 (88.5%)
Computer	15 (79.0%)	18 (46.2%)	49 (75.4%)	10 (45.5%)	30 (63.8%)	25 (64.1%)	11 (42.3%)
Internet/Email	12 (66.7%)	13 (32.5%)	40 (63.5%)	8 (36.4%)	22 (46.8%)	20 (51.3%)	8 (32.0%)
Distance learning <sup>c</sup>	10 (52.6%)	32 (78.1%)	43 (66.2%)	11 (52.4%)	24 (53.3%)	11 (30.6%)	20 (76.9%)

<sup>a</sup>Data from service manager survey.

<sup>b</sup>Southeast Region, excluding responses from services in Lancaster and Gage counties.

<sup>c</sup>Access to a distance-learning facility (e.g., ESU).

### Other Information About EMT Service Volunteers

**Table 16. Critical Incident Stress Management (CISM) Utilization**

Survey Item	Ambulance Services <sup>a</sup>	Service Members <sup>b</sup>
Service utilizes CISM	144 (53.1%)	448 (85.2%)
How many times utilized <sup>c</sup>		
1 or less	91 (61.9%)	290 (66.5%)
2 or more	56 (38.1%)	146 (33.5%)
Has CISM been beneficial?		
Yes, very	97 (57.4%)	133 (48.1%)
Yes, somewhat	61 (36.1%)	122 (42.2%)
Not very beneficial	8 (4.7%)	19 (6.6%)
Not at all beneficial	3 (1.8%)	9 (3.1%)

<sup>a</sup>Data from service manager survey.

<sup>b</sup>Data from current member survey.

<sup>c</sup>Service managers were asked, “How many times has CISM been used in the last three years?” Current members were asked, “How many times have you participated in a briefing or defusing?”

Table 17. Staff Able to Speak Foreign Language

Region	Number and Percentage of Staff Able to Speak a Foreign Language <sup>a</sup>
Metro Region	4 (21.1%)
North Central Region	6 (14.6%)
Northeast Region	14 (20.0%)
Panhandle Region	6 (27.3%)
South Central Region	8 (16.3%)
Southeast Region	4 (8.7%)
Western Region	3 (11.5%)
Total for all Regions	45 (16.5%)

Language spoken (state):	
Spanish	39 (14.4%)
Other language	10 (3.7%)

<sup>a</sup>Data from service manager survey.

Table 18. Non-Patient Care Volunteers<sup>a</sup>

Non-Patient Care Function Performed by Service Volunteers	Number and Percentage of Volunteers Performing Function
Fundraising	67 (24.6%)
Driving	158 (57.7%)
Billing	25 (9.2%)
Vehicle maintenance	94 (34.4%)
Building maintenance	64 (23.4%)
Other	15 (5.6%)

<sup>a</sup>Data from service manager survey.

Table 19. Policies and Procedures Manual<sup>a</sup>

Number and percentage of responding services with written policies and procedures manual	248 (91.2%)
Number and percentage of responding services whose members are provided with a copy of the policies and procedures manual	209 (85.0%)

<sup>a</sup>Data from service manager survey.

Table 20. Role of Physician Advisor and Perceptions of Service Managers, by EMS Region<sup>a</sup>

Role/Perception	Metro	North Central	Northeast	Panhandle	South Central	Southeast <sup>b</sup>	Western
Physician advisor is readily available to agency	17 (89.5%)	36 (87.8%)	63 (91.3%)	20 (90.9%)	42 (85.7%)	37 (92.5%)	23 (88.5%)
Physician advisor attends training sessions	7 (36.8%)	14 (34.2%)	33 (49.3%)	8 (36.4%)	18 (36.7%)	12 (30.0%)	10 (38.5%)
Physician advisor has knowledge of pre-hospital issues	17 (89.5%)	39 (92.9%)	61 (88.4%)	17 (77.3%)	45 (93.8%)	40 (100%)	23 (92.0%)
Physician advisor conducts case reviews	10 (52.6%)	11 (26.8%)	32 (46.4%)	10 (45.5%)	20 (41.7%)	15 (37.5%)	9 (34.6%)
Physician advisor is supportive of service	17 (89.5%)	38 (92.7%)	66 (95.7%)	20 (90.9%)	46 (93.4%)	38 (95.0%)	23 (88.5%)
Physician advisor provides clear protocols and standing orders	18 (94.7%)	35 (83.3%)	58 (86.6%)	18 (81.8%)	39 (79.6%)	38 (97.4%)	23 (88.5%)
Service manager feels that standing orders are restrictive	1 (5.3%)	1 (2.4%)	11 (16.4%)	4 (19.1%)	2 (4.1%)	2 (5.1%)	3 (12.5%)

<sup>a</sup>Data from service manager survey.

<sup>b</sup>Southeast Region, excluding responses from services in Lancaster and Gage counties.

## Appendix: Information About the Surveys

Surveys of ambulance service managers, members (current and retired), and EMS students were conducted in April and May 2004. Student surveys were distributed and completed in class during training sessions. Surveys of the other populations were conducted following the procedures outlined by Dillman (“Mail and Internet Surveys: The Tailored Design Method.” Don A. Dillman. John Wiley and Sons, Inc. 2000). Retirees were defined as previously certified EMS personnel holding a license that had lapsed in the previous five years.

Survey populations were provided by the Nebraska Health and Human Services System (NHHSS). As the principle focus of the project was to be on volunteer services, we excluded staff, members, retirees, and services from Nebraska cities known to use paid, professional EMS staff. In addition (owing to its unusually large size), the service response from the Bellevue Volunteer Fire Department was excluded from the report. Training programs that tended to cater to volunteer services and were willing to participate in the survey were identified by NHHSS staff.

For current and retired members, we conducted a simple random sample from their respective populations. Since the population sizes for service managers and training programs were small, all members of these populations were surveyed. Table A1 shows the population and sample sizes used in the surveys, as well as the rate of return:

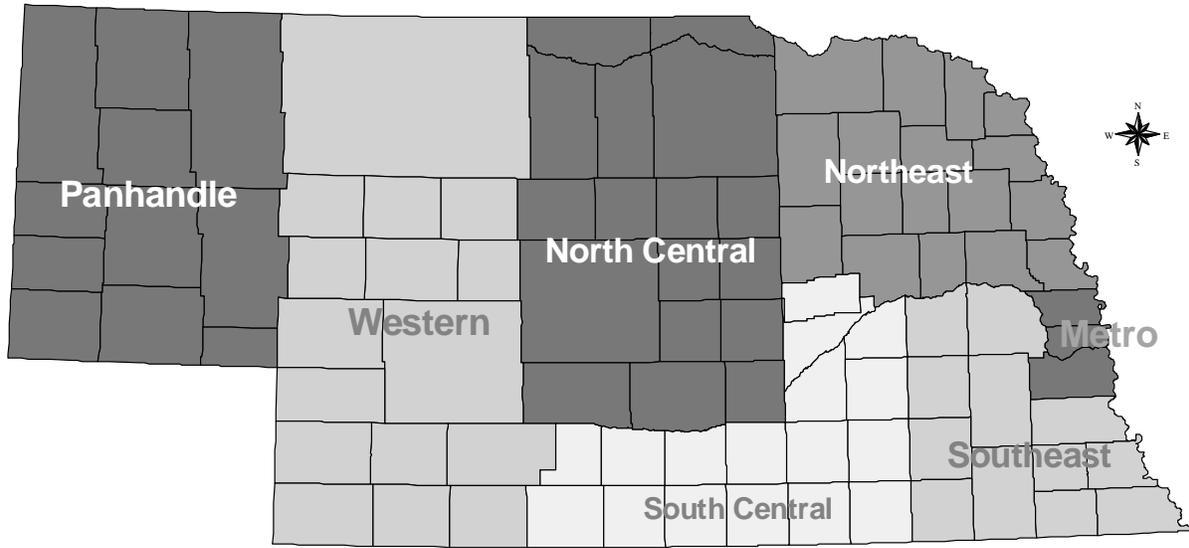
Table A1. Population and Sample Size, EMS Volunteer Personnel Survey

Survey Group	State Population	Volunteer Population	Sample Size	Unable to Contact	Returned	Rate
Service managers	402	328	328**	0	274	83.5%
Current members	8,442	5,603	900	25	554	63.3%
Retired members	3,875	2,300	800	199	345	57.4%
Students*	---	534	534	---	204	38.2%

\*Students from 15 programs identified by NDHHS staff. Completed surveys from 9 programs were received. Volunteer and sample size numbers were based on estimates of total enrollment in these 15 programs.

\*\*Excludes Bellevue Volunteer Fire Department.

## Nebraska Emergency Medical Services Program Regions, 2004



Source: Nebraska Health and Human Services System, 2004  
 Cartography: Nebraska Center for Rural Health Research, UNMC, 2004



Table A2. Respondents by Region,<sup>a</sup> Current Members, Service Managers, and Retirees

Region	Current Members			Service Managers		Retirees
	State Total	Survey Responses		State Total	Survey Responses	Survey Responses
Metro	359	27 (4.8%)		23	19 (6.9%)	75 (24.2%)
North Central	876	97 (17.5%)		51	42 (15.3%)	76 (24.5%)
Northeast	1,437	144 (25.9%)		79	70 (25.6%)	19 (6.1%)
Panhandle	339	31 (5.6%)		26	22 (8.0%)	29 (9.4%)
South Central	1,045	97 (17.5%)		62	49 (17.9%)	16 (5.2%)
Southeast	1,043	106 (19.1%)		58	46 (16.8%)	59 (19.0%)
Western	504	52 (9.4%)		30	26 (9.5%)	36 (11.6%)
<b>TOTAL</b>	<b>5,603</b>	<b>554 (100%)</b>		<b>329</b>	<b>274 (100%)</b>	<b>310 (100%)</b>

<sup>a</sup>Region of origin for current members and service managers was determined by mailing address. Self-reporting was used to determine region of origin for retirees, and not all respondents answered the question. Data for region of origin of all retirees in the state is not available.

An excellent response rate was achieved for the service manager survey both overall and within each region. The sample of current members was not designed to stratify results by region, but each EMS region in the state is nearly equally represented. The total number of retirees in each region cannot be established with the data presently available.

Table A3. Student Respondents by Program

Program	
Central Community College – Grand Island	8 (3.9%)
Central Community College – Columbus	8 (3.9%)
Central Community College – Lexington	7 (3.4%)
Creighton University	48 (23.5%)
McCook Community College	17 (8.3%)
Central Community College – Hastings	37 (18.1%)
Metropolitan Community College	27 (13.2%)
Southeast Community College	36 (17.7%)
EMS Training Network	16 (7.8%)

Although student survey packets were distributed to 15 active EMS training programs, only the 9 programs shown in Table A3 returned surveys. None of the responding programs were from the Panhandle Region, and the vast majority of responding programs were from the southern half of the state. Half of the responding students were from programs based in Lincoln or Omaha.

Table A4 shows that there is a larger proportion of First Responders and a smaller proportion of volunteers at higher certifications among “members less than 10 years” than among “members 10 years or more.” Volunteers who have been in the system longer may decide to upgrade their skills, or the data may reflect a difference in personal preferences.

There are proportionally more females in the category “members less than 10 years” than in the category “members 10 years or more.” While the reasons for this difference are not immediately apparent, the change in gender mix may signal a need to change programs designed to retain volunteers. Those who have been volunteer service members less than 10 years are proportionately better educated than those with 10 or more years in their volunteer roles. This may reflect the changing demographics in the state.

Table A4. Respondent Characteristics: Current Members, Retirees, and Students

Characteristics	All Current Members <sup>a</sup>	Current Members Less Than 10 Years <sup>a</sup>	Current Members 10 Years or More <sup>a</sup>	Retirees <sup>b</sup>	Students <sup>c</sup>
<b>Current Certification Level</b>					
First Responder	63 (11.9%)	44 (17.8%)	11 (4.1%)		
EMT Basic	427 (80.6%)	193 (78.1%)	228 (85.1%)	249 (80.1%)	
EMT Intermediate	29 (5.6%)	6 (2.4%)	22 (8.2%)	60 (19.3%)	
EMT Paramedic	11 (2.1%)	4 (1.6%)	7 (2.6%)	2 (0.6%)	
Not Certified					
<b>Sex</b>					
Male	304 (56.6%)	114 (46.2%)	184 (66.9%)	174 (54.7%)	124 (60.8%)
Female	233 (43.4%)	133 (53.9%)	91 (33.1%)	144 (45.3%)	80 (39.2%)
<b>Education</b>					
High school graduate or equivalent	137 (25.8%)	48 (19.5%)	85 (31.5%)	87 (27.2%)	35 (17.2%)
Some college, no degree	181 (34.1%)	88 (35.8%)	86 (31.9%)	111 (34.7%)	114 (55.9%)
Associate's degree	117 (22.0%)	66 (26.8%)	51 (18.9%)	64 (20.0%)	27 (13.2%)
Bachelor's degree	54 (10.2%)	26 (10.6%)	27 (10.0%)	33 (10.3%)	20 (9.8%)
Post-grad educ./degree	42 (7.9%)	18 (7.3%)	18 (7.3%)	25 (7.8%)	8 (3.9%)

<sup>a</sup>Data from current member survey.

<sup>b</sup>Data from retiree survey.

<sup>c</sup>Data from student survey.

Table A5. Respondent Characteristics: Current Members, Retirees, Service Managers, and Students

Characteristic	All Current Members <sup>a</sup> Mean/Range	Retirees <sup>b</sup> Mean/Range	Service Managers <sup>c</sup> Mean/Range	Students <sup>d</sup> Mean/Range
Average number of years certified as EMT	11.7 (1-40)	11.7 (1-37)	14.2 (1-62)	
Average number of years lived in present community	25.5 (1-80)		28.6 (1-61)	13.9 (0-47)
Average age of respondent	44.8 (21-87)	48.7 (11-85)	45.1 (16-69)	27.2 (18-61)

<sup>a</sup>Data from current member survey.

<sup>b</sup>Data from retiree survey. Retirees were not asked the number of years they had lived in the community where they worked in EMS.

<sup>c</sup>Data from service manager survey.

<sup>d</sup>Data from student survey.

Most people involved in EMS work have done so in excess of 10 years, with many of them serving well over 25 years. Those who are currently in service tend to be long-time residents of their communities, and most of them are in their mid-40s. These findings hint at a cultural expectation of community service among persons with deep roots in the community.

Table A6 shows that a large majority of the volunteer ambulance services in the state are governed either by their city/county or by a rural fire board. Very few services are private- or hospital-based.

**Table A6. Service Characteristics: Administration<sup>a</sup>**

<b>Service Governing Body</b>	
City	92 (34.5%)
County	15 (5.6%)
EMS tax district	4 (1.5%)
Rural fire board	103 (38.6%)
Hospital-based	7 (2.6%)
Private	2 (0.8%)
Non-profit corporation	32 (11.9%)
Other	12 (4.5%)
<b>Current Service Level License</b>	
Basic	244 (89.4%)
Advanced	29 (10.6%)

<sup>a</sup>Data from service manager survey.

Table A7. Service Characteristics: Membership, Metro Region and All Other Regions<sup>a</sup>

	Metro EMS Region	All Other Regions
	Mean/Range	Mean/Range
Maximum membership by bylaw	35.3 (5-75)	33.1 (5-99)
Percent of service at licensed levels		
First Responder	2.5 (0-27.3)	13.0 (0-100)
EMT Basic	81.6 (54.8-100)	83.1 (0-100)
EMT Intermediate	4.3 (0-20)	2.6 (0-100)
EMT Paramedic	11.6 (0-40)	1.3 (0-33.3)
New membership certifications by year		
Added in 2000	2.1 (0-5)	1.1 (0-10)
Added in 2001	2.2 (0-6)	1.3 (0-20)
Added in 2002	2.4 (0-5)	1.3 (0-7)
Added in 2003	2.5 (0-6)	1.4 (0-13)
Membership tenure distribution (%)		
Less than 1 years	12.8 (0-62.5)	7.6 (0-100)
1-2 years	14.1 (0-36.3)	10.5 (0-50)
3-5 years	17.3 (0-50)	17.7 (0-100)
6-10 years	19.3 (0-48)	22.3 (0-100)
More than 10 years	36.5 (0-75)	41.9 (0-100)
Membership age distribution (%)		
18-19 years old	0.7 (0-12.5)	0.5 (0-31.0)
20-29 years old	29.0 (0-71.4)	14.1 (0-86.7)
30-49 years old	51.8 (14.3-86.4)	61.3 (0-100)
50-59 years old	13.6 (0-30.3)	17.7 (0-100)
60-69 years old	4.4 (0-25)	5.4 (0-100)
70 or more	0.5 (0-4.5)	0.9 (0-50)

<sup>a</sup>Data from service manager survey.

There are clear differences between the composition of volunteer services in the Metro Region (Douglas, Sarpy, and Cass counties) and the other regions of the state. Services in the Metro Region have fewer first responders on their rolls with correspondingly more paramedics. Metro services tend to add more members each year but, on average, services all across the state appear to show a slight increase in new member enrollment from 2000 through 2003. The distribution of member service tenure shows that non-Metro Region ambulance services have a larger proportion of long-term volunteers than do Metro Region services. In addition, non-Metro Region services have a slightly older population of volunteers than do Metro Region services.