

**EMERGENCY MEDICAL SERVICES IN
FRONTIER AREAS:
VOLUNTEER COMMUNITY ORGANIZATIONS**

April 2006



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DEFINITION OF FRONTIER

All references to “frontier” use the Consensus Definition of the Frontier Education Center unless otherwise indicated (www.frontierus.org/rep_geog.html#definition). Counties and/or frontier areas so defined have been developed with the involvement of all of the relevant State Offices of Rural Health (100 percent response rate). This definition has not been adopted by any Federal programs but has been adopted as policy by the Western Governors' Association (http://www.frontierus.org/pol_wga.html) and the National Rural Health Association. The Consensus Definition weights three elements – population density, distance in miles and travel time in minutes - which together, generally describe the geographic isolation of frontier communities from market and/or service centers. The Center understands that various programs will establish their own programmatic definitions and eligibility criteria.

Emergency Medical Services in Frontier Areas: Volunteer Community Organizations

I. BACKGROUND

The purpose of this paper is to provide information on paid and volunteer Emergency Medical Services (EMS) workers in frontier and rural areas. This is not a formal research paper, but a presentation of an information-gathering project and a fact checking of anecdotes.

Frontier and Rural Expert Panel. A panel of frontier and rural leaders from varied backgrounds met on April 14, 2005 to discuss several issues facing frontier and rural communities. The members of the panel are listed in Appendix A. Pertinent to this paper, a discussion was held on the broad topic ‘Volunteer and Paid Emergency Medical Services in Frontier and Rural Areas.’ In preparation for the meeting, readily available information was gathered to supplement the panel discussion. An Internet literature search for information on paid and volunteer EMS workers in frontier and rural areas was conducted. Because only limited information was available from any single source, multiple data sources were combined.

Information from State EMS Offices. Using the directory of the National Association of EMS Directors (NAEMSD), each State EMS office was contacted by email and/or telephone. Appendix C presents a compilation of State responses. Where possible, these data were supplemented by other data available online, including a 2003 survey conducted by the National EMSC (EMS for Children) Data Analysis Resource Center (NEDARC). It became clear that there is no uniform EMS data collection among the States. Some States collect information about paid or volunteer workers; others do not. Among those that do, only a few of those report rural or frontier services separately. Therefore, outreach was made directly to the field to clarify or expand upon the information available to the public and gathered for the Expert Panel.

Unsurprisingly, the view from the grassroots is often quite different from the data presented by various agencies. Complicating the entire project is the absolute lack of a consistent definition of the word “volunteer.”

A. Brief History of Modern EMS

Prior to the development of modern EMS in the 1960s, only a few hospitals in large cities provided ambulance service. In most communities, a trip to the hospital was provided by friends and family or by the funeral home. In the late 1950s, as more Americans became car owners and driving a car replaced other forms of transportation, more people were subsequently injured and killed in crashes. The first rescue squads began to emerge and they were primarily volunteer (Nelsen & Barley 1997). According to Nelsen & Barley (1997), “The EMT’s work emerged out of a series of social movements that first made a national priority and then a medical issue of what was initially a logistical problem: how to transport injured motorists to hospitals” (p. 627).

The modern era of EMS began after the 1966 publication by the National Academy of Sciences, National Research Council paper "Accidental Death and Disability: the Neglected Disease of

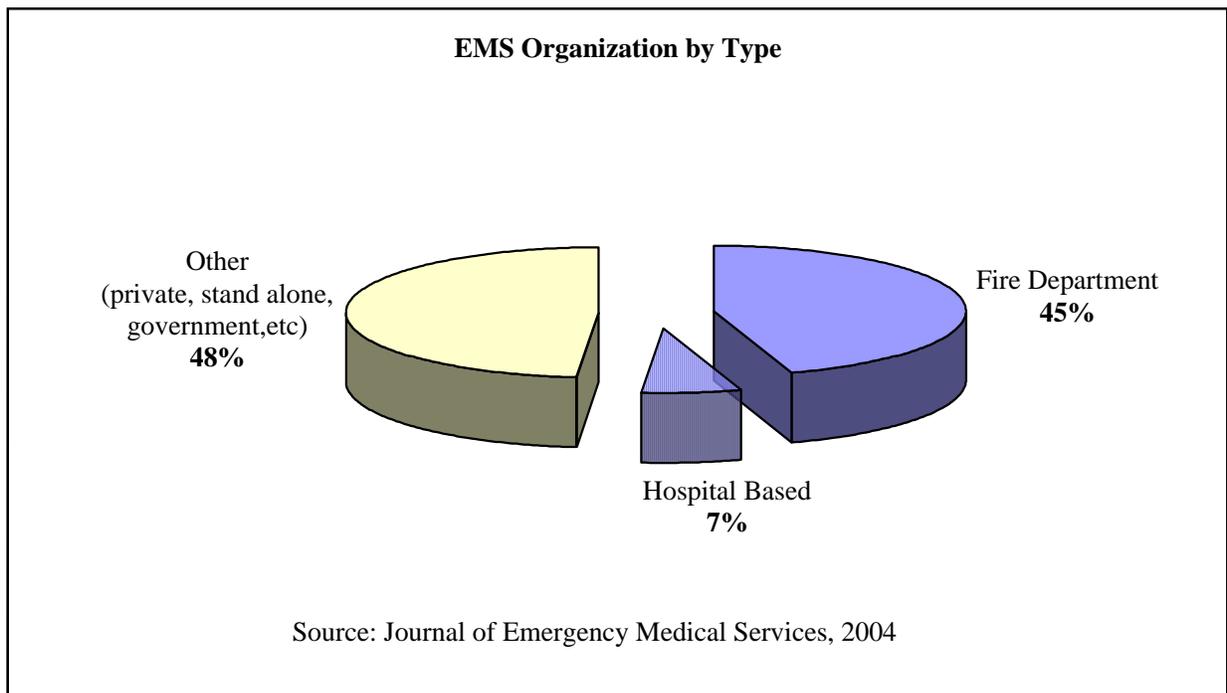
Modern Society” (McGinnis 2004). Improved equipment and advanced training for medics during the Viet Nam War led to numerous advances in emergency medicine. These new skills and equipment were soon put to use at home. The National Highway Safety Act of 1966 was the first Federal legislation requiring States to develop systems to rescue injured motorists. Most States provided these services by organizing and equipping volunteer rescue services. The Federal Emergency Medical Services Systems Act of 1973 established the first national standards for training and equipment.

In many communities, EMS is provided as a public safety function supported by the National Highway Transportation Safety Administration (NHTSA) as well as State and local governments. In other communities EMS is considered a health service with State and/or local support. Recently, Homeland Security planning has recognized the importance of EMS. A recent issue brief recommends creating an Emergency Medical Services Administration within the Department of Homeland Security (Cilluffo, Kaniewski and Maniscalco 2005).

B. Models of EMS Service Provision

In the United States, a number of funding and staffing models are used to provide EMS. Distinctions are 1. organizational type (public, private non-profit, private for-profit); 2. location/administration of service (stand alone, hospital based, fire service based, other); and 3. size of service (from large national corporations to small local squads).

According to the *Journal of Emergency Medical Services*, 44.89 percent of EMS systems are fire department based, 6.51 percent are hospital based, and 48.60 percent are either private, stand alone government agency, or other type (Journal of Emergency Medical Services 2004).



In the report "Rural Implications – 2003 National EMS Survey," Mears and colleagues found that EMS systems in rural States tend to be non-fire and non-hospital based (Mears, Kagarise and Raiser 2004). Other classifications can be made based on staffing (paid, volunteer, mixed paid and volunteer), billing (billed or not billed), and type of subsidy (no subsidy, subsidized through property taxes, sales taxes, other subsidy).

In most rural areas, EMS evolved from the same volunteer model as fire departments. A significant difference is that there are more ambulance calls than fire calls, longer distances to the scene as well as longer transport times. So the time commitment is often much greater for a community EMS volunteer than for a volunteer fire fighter.

Many consider EMS to be in the process of "professionalization," undergoing a transition from a volunteer service to a paid occupation (Nelsen & Barley 1997). In urban areas, this transition is mostly complete. Although some consider completion of this transition to be inevitable, others view this process as neither inevitable nor desirable. The 1996 NHTSA *EMS Agenda for the Future* asserts that provision of EMS services "will continue to be diverse at the local level" (McGinnis 2004).

Studying the mix of paid and volunteer EMS providers is difficult for a number of reasons. First, all EMS providers receive the same training, testing and certification at the State level, regardless of whether they are paid or volunteer. Most States do not track paid or volunteer status in their data systems.

Multiple Definitions of Volunteer. As mentioned previously, there is no single definition of "volunteer." In rural communities, many volunteers are paid a stipend for being on call or for responding to an emergency and/or transporting patients, but since they do not derive their living from this they are still considered volunteers. In North Dakota, for example, 90 to 95 percent of EMS workers are considered volunteer, while 45 percent report being compensated in some way for EMS work (UND Rural EMS Initiative 2000a). In some EMS systems, they might be reported as "paid" to the State EMS bureau, but in reality they are rarely compensated as a fulltime professional.

States have different criteria for classifying paid and volunteer work; a "volunteer" in one State may be classified as "paid" in another. For example, in Sheridan County, Kansas, EMS personnel are considered to be volunteers; however, information posted by the Kansas EMS Board lists four paid workers for Sheridan County. The "volunteers" cover 350-400 hours of call time per month for which they are paid \$1.10 per hour. By this State's standard, that qualifies as "paid," although the compensation would not be considered a primary wage.

Where a service makes use of both paid and volunteer providers, the service itself may be classified as paid. Wendover Ambulance in Nevada is a "paid" service, operating with four fulltime paid workers. Fifty volunteers, half of whom come from Salt Lake City, located 120 miles away, supplement this capacity.

For the purpose of this paper, "volunteers" are those who are described as volunteers by informants.

The problem is defining paid and volunteer. Some ambulance services pay individuals \$5 for a run or minimum wage. Some have a full time and part time staff on call during the day and a volunteer staff at night. There needs to be a national definition for "paid."

--Dean Cole, Director
Nebraska Division of Emergency Medical Services

II. CHALLENGES FACING VOLUNTEER EMS SYSTEMS

In frontier and rural areas, volunteers provide most EMS. Challenges facing volunteer EMS providers include the availability of volunteers, aging of the volunteer workforce, the impact of national standards and testing, challenges at the primary workplace, and maintaining skills in a low-volume environment.

A. Volunteer Availability

Many informants reported that recruiting and retaining EMS volunteers is becoming more difficult. The National Rural Health Association "Agenda for the Future" reports that 2000 and 2004 surveys of State EMS directors identified ongoing recruitment and retention of personnel as the greatest challenge (McGinnis 2004). Demographic, social, cultural and economic changes of the past 30-40 years have reduced the number of people who have time available to volunteer. Based on population alone, frontier and rural areas have a smaller pool of potential workers who must serve larger geographic areas. Many frontier and rural communities face declining populations, with older, often retired populations remaining. In many of these communities, economic stress causes individuals to work at more than one job when employment is available. There are often long commutes to distant jobs. Families in which both parents work have become common in rural communities. Many potential volunteers are also hampered by a lack of childcare options, especially with the unplanned, middle of the night, urgent nature of EMS.

A North Dakota survey of EMS personnel found that the time commitment was the most significant barrier to recruiting new providers, as well as the primary reason former EMT's give for leaving EMS (UND Rural EMS Initiative 2000b). Reports from Nebraska (Ullrich, Mueller and Shambaugh-Miller 2004) and Minnesota (Minnesota Department of Health 2002) identified the same factors. In these three States volunteers indicated that the time commitment was especially burdensome because they are either completely uncompensated or paid lower stipends than urban volunteers. Time away from job and time away from family were reported as significant barriers by rural squad leaders (UND Rural EMS Initiative 2000c). Retention is as serious a problem as recruitment; the survey found that the average volunteer plans on working in EMS for five years yet leaves after three.

A number of States are focusing on ways to improve volunteer recruitment and retention. The Rural Emergency Medical Services Initiative at the University of North Dakota Center for Rural Health developed an EMS Recruitment and Retention Manual (UND Rural EMS Initiative, no date). In Wisconsin, EMS Association Director Don Hunjadi reports that with effective

recruiting tools and working with local services, his organization has been able to attract one volunteer for each 500 - 1000 people in a service area.

B. Aging Volunteer Workforce

Aging volunteers will one day become retiring volunteers, further reducing the volunteer base. The 2002 report, "A Quiet Crisis: Minnesota's Rural Ambulance Services at Risk," shows that in rural Minnesota, volunteers make up 77 percent of personnel (Minnesota Department of Health 2002). In two regions (Southwest and South Central), the volunteer percentage is 91 and 92 percent. The average age of rural volunteers tends to be older with 45 percent over the age of 40, compared to 34 percent in urban areas.

A 2003 Nevada survey, "Nevada Emergency Medical Services Survey Results," documented that respondents in rural counties "were older on average than their urban counterparts, while at the same time Census figures show an older than average general population in many rural counties" (Fadali, Nolan and Harris 2003).

C. Impacts of National Standards and Testing

The National Registry of Emergency Medical Technicians (NREMT) administers a national exam for each level of emergency services provider in order to standardize training and testing. A benefit of standardization is increased reciprocity of workers among States. Some States require continuous NREMT testing; others require it only for the first licensure exam. The NREMT website shows only five States with no national registry exam requirement (NREMT 2005).

• Nevada

In 2005, Nevada joined 28 other States requiring EMT Basics to pass the NREMT exam. As of October 1, 2005, the test will also be required for EMT intermediate and paramedics in Nevada. The two main reasons for implementing the standardized test are reciprocity of certification among States and to raise standards of care. Nevada EMT's who currently hold State certification will remain certified without having to take the national test, or if they take it and fail, they remain certified.

The rate of those passing the NREMT exam in Nevada to date is 50 percent. Some people opt out of the training because they do not want to take the national test, or drop out at the time of the test. The class commitment is 110 hours of class time plus 10 hours of clinical experience. Soon the State may add components on Weapons of Mass Destruction and Incident Command. Adding this material would enable the State to apply for additional Federal funds; however, it will further increase the burden of recruiting and retaining personnel.

• Nebraska

A 2004 Nebraska EMS workforce study found that training requirements were cited as the second most common reason for EMT's leaving the field (Ullrich, Mueller and Shambaugh-Miller 2004). When asked what the most desired change was, the most common response was "fewer requirements to maintain credentials." Similar results were found in Minnesota and North

Dakota. While the importance of advances in technology and education as well as the public's expectation of high level care was recognized, one service director noted that it will take substantial financial support to make that level of care available in low population communities.

D. Challenges at the Primary Workplace

Volunteer EMT's report that responding during work hours is a problem. Some employers are reluctant to have employees leave their jobs. There are particular occupations where leaving is especially difficult, if not impossible; for example, classroom teachers or certain medical personnel. Hourly employees and those doing shift work report a loss of income while they are away from their job, as do self-employed volunteers. Distance to and from workplaces is frequently responsible for a squad's inability to respond to a call because EMT's away at work can't get to the ambulance quickly enough (Ullrich, Mueller and Shambaugh-Miller 2004).

One informant from rural New York Stated that 20 years ago volunteers were more abundant, as there were more businesses that allowed employees to take time for EMS response. Now there are fewer large businesses in the area, and the "Mom and Pop" operations often cannot afford to let their employees take the time to be an EMT during work hours.

While some employers are reluctant to have employees leave during the workday to respond to emergencies, even more are unsupportive of employees participating in long transports that take people away from the workplace for hours or even an entire workday. In Greeley County, Kansas, one informant stated that inter-facility transfers are more burdensome than emergency runs, due to the time involved. Until recently, their regular transport was to a town 90 miles away; now they sometimes transport to a town 170 miles away, because of perceived quality of care issues. It is anticipated that this will cause problems for both the volunteers and their employers.

One example of extreme distances may be found in the St. John's Valley of northern Maine. A patient transfer to Bangor takes 7 to 8 hours roundtrip, in good weather, and they occur two to three times a week. EMS volunteers are paid \$150 per trip for transfer to Bangor.

In Nebraska, more than one-third of volunteers found it difficult to get time off from their job to go on EMS calls. The Nevada study showed that more rural respondents (28 percent) said getting time off for EMS-related duties was difficult compared to urban residents (16 percent).

In some rural areas, daytime volunteer availability has become so scarce that services are paying for daytime EMS providers.

– Dan Williams, Wisconsin EMS Chief

E. Maintaining Skills in Low Volume Services

The infrequency of calls for service in small communities is another challenge for frontier and rural EMT's. Respondents repeatedly commented on the irony that, while patient acuity and the

length of transports are often greater in rural areas, the more highly trained personnel are in urban areas. Long transport times challenge the lower skill levels of rural providers.

In Nebraska, 15 percent of the EMS squads responded to 25 or fewer calls during 2003. In Nevada, some of the small services respond to only 12 to 30 calls per year. Low volume services need frequent training and hands-on opportunities for maintaining skills.

Frontier and rural EMS squads are less likely than urban squads to have personnel qualified at the Advanced Life Support (ALS) or paramedic level. The “rural ALS paradox” or “paramedicine paradox,” or lack of advanced skills in EMS squads in rural and frontier areas, is in part a result of the low volume environment (McGinnis 2004). Higher levels of training and certification are harder to maintain with insufficient practice.

Further, all EMS services have the same high fixed costs regardless of call volume. Low volume services cannot generate sufficient revenues to pay for the higher levels of training and commitment of paramedics (Capitol Area Rural Health Roundtable 2001).

Life is generally backwards. Paramedics are needed in the rural areas due to distance and lack of physicians and hospitals; yet the city is where the paramedics are, and the country is where the EMTs are.

--Randy Cardonell, speaking about rural Greeley County, Kansas

III. EXAMPLES OF PAID AND VOLUNTEER EMS PROGRAMS

In some States, all or most EMS workers are paid, while in other States a high percentage is volunteer. Programs in four States were reviewed as a sample of these differences.

A. State Programs

1. High Percentage of “Paid” Workers

Missouri

Paid emergency medical service has been the tradition in Missouri, although as in other States, there are different levels of paid. All workers identified as "paid" are not necessarily paid a forty-hour per week wage. According to Steven Maxwell, Licensing Coordinator in the State Bureau of EMS, many years ago the State encouraged the development of advanced life support services and today 95 to 96 percent of Missouri's EMS providers offer advanced life support.

In urban areas, ambulance services tend to be private; in rural areas they are often organized as ambulance districts with taxing authority and a six-member board. Most bill for services, but in some cases they rely only on tax revenue.

Rural recruitment is becoming a bigger problem. This is especially true at the paramedic level with more intensive training requirements and better-paid jobs in urban areas. Missouri uses the National Registry exam, and at the EMT Basic level, the pass rate is lower than at the more advanced levels. The State is working to identify the underlying factors for these differences in exam passage.

Staff at two frontier counties with ambulance districts, Chariton and Mercer, provided information for this report. According to USA Counties in Profile 2004, Chariton County has a population of 8142 people in a county of 755 square miles located in north central Missouri. Mercer County, located at the Iowa border of central Missouri has a population of 3618 in an area of 454 square miles. Both counties have lost substantial population over the last 35 years.

Both ambulance districts derive their revenue from taxes supplemented by billing. Neither county has a hospital. Chariton County Ambulance District makes 30-minute transports to three small hospitals. Mercer County Ambulance District transports are to a hospital 25 miles away.

Both offer advanced life support and train their staff in house. In the case of Chariton County, 25 volunteer first responders support the paid ALS units staffed by nurses and paramedics. According to Shane Grooms, Assistant Director of the Mercer County Ambulance District, when jobs become available, volunteers provide a pool of potential hires. Chariton County Ambulance District Superintendent William Pearman says recruiting workers is becoming more difficult especially at the advanced levels. He attributes this to both the isolated location and low pay.

Tennessee

In 1968, the Tennessee legislature gave local governments the authority to provide ambulance service, replacing the service supplied by funeral homes. In 1972, additional legislation established standards for ambulance services and consequently every county has an ambulance service. Tennessee ambulance service staff has been paid from the beginning. Because EMS is a required community service there is some property tax support, but most support comes from third party reimbursement. Joe Phillips, Director, Tennessee Division of Emergency Medical Services reported that most services are currently breaking even.

Phillips described Tennessee as being in a unique situation geographically and demographically. Large cities, with tertiary care facilities and trauma centers, are situated across the State at a distance of 100-200 miles from each other. In addition there are three medical schools and five teaching hospitals in the State. Tennessee is bordered by eight States and has a large inflow of patients from five of those States (MS, AL, GA, KY and VA). Although Tennessee has no frontier counties much of the State is rural. It is one of several States that from the beginning have had an all paid EMS system for urban and rural communities.

2. High Percentage of Volunteers

Nebraska

Nebraska's volunteer EMS services date back to the mid-1960s. In small communities across the State, various civic groups jumped in to provide ambulance service – fire departments, Jaycees, groups of citizens. They survived on bake sales and other local fundraisers. Today there are 423 volunteer ambulance services in a State of 1.7 million people. Eighty percent are volunteer services, some of which are affiliated with fire departments, others are stand-alone.

According to Dean Cole, Director of the Nebraska Division of Emergency Medical Services, recruiting volunteers is a huge challenge, especially in areas where the population is elderly and sparse. Coverage during the day is the biggest problem. The State EMS office is helping some small communities join together in tiered services with priority dispatch, so one community can cover for another or more than one can respond if needed. Seward County is working with its 13 ambulance services to put them all under one license and insurance policy so they can respond to each other's calls.

Tradition plays a role in maintaining many Nebraska services. They have been a valued part of the community for years.

Historically, billing was not a high priority because the ambulance response was often provided at no charge. As payment for service becomes critical to maintain the more costly, modern EMS system, there is sometimes resistance on the part of the public to pay for something that was formerly "free". Shared professional billing services are emerging as a solution for small agencies that do not have the expertise to manage complicated billing procedures.

Cole says Nebraska students do well on the National Registry exam. First responders have an 85 percent pass rate and all levels combined are at 80 percent. Nebraska has a proactive approach to training. They evaluated their training agencies and instructors and monitored those programs where students did well learning that successful instructors stick to the curriculum, test students often, have others monitor their style, and teach more than one class per year.

Nebraska learned that students who failed the national test often had difficulty reading. So in advance of taking EMT classes, students must take a reading comprehension inventory prepared by the University of Nebraska-Lincoln Adult Education Department. While the overall class material is rated at an 8th grade level, required course readings are rated at 10th grade through college sophomore level. If students do not do well on the inventory, organizers urge that they first work on reading skills before beginning EMT training.

The Nebraska EMS Division, in cooperation with the University of Nebraska-Lincoln, has developed eight online learning modules. Now, in addition to taking classes, students will be able to improve their preparation for the test using online materials. The EMS Division is also developing online courses for EMS instructors to help them become more effective when using telemedicine instructional technology.

Based on the continued growth of minority populations, particularly Hispanics, the State EMS Division is beginning to look at second language issues. While minorities are encouraged to volunteer, many have very demanding work schedules, leaving little time for volunteering.

Wisconsin

Rural Wisconsin EMS relies heavily on volunteers. Wisconsin is a home rule State, and every municipality has the responsibility to provide its own EMS either directly or through a contractual arrangement. In urban areas, these services are staffed by full time paid providers. In rural areas, coverage tends to be by volunteers.

Most volunteers receive some financial compensation for taking calls, for example, \$10 per call or \$50 per month. Since fewer volunteers are available during daytime hours, more services are paying a stipend for daytime service. Most ambulance services bill for services.

In 2002, the Wisconsin EMS Association (WEMSA) organized a Statewide effort to train individual ambulance services how to recruit new volunteers. WEMSA had found that simply putting out a call for volunteers was not effective. People failed to respond because they tended to think they would respond later, were intimidated by the responsibility and training, or perhaps had questions but were reluctant to ask them.

The focus of the volunteer recruitment effort was a Statewide media blitz coupled with local community events, such as an open house, spaghetti dinner or some other gathering to bring people together. WEMSA believes that when people see others turning out for a group information session, they are more likely to attend. Immediate follow-up with attendees is essential. Another tool used is inviting prospective volunteers to the workplace and having them ride along on ambulance runs.

Whitewater, Wisconsin, a city of 8,000 people, was close to being forced to hire workers to keep their service from closing. After being trained to conduct a recruiting campaign, they gained 45 volunteers. Twenty-eight went through the training, and 24 now serve with the department.

A new Statewide recruitment drive is being planned for 2006. The Wisconsin EMS Association has made their recruitment tools available to other agencies.

B. Local Programs

1. Paid and Volunteer: Two Communities with Shared Management

St. John's Valley, Northern Maine

Two adjacent towns located in frontier Aroostook County in the St. John's Valley of Northern Maine are each served by a town-operated ambulance service. Madawaska Ambulance Service is operated by all paid staff, the other, Ambulance Service Incorporated in Fort Kent, is primarily a volunteer service. The same person, John Labrie, manages both services.

Madawaska. For twenty hours per week, Labrie manages a full time paid crew, including a paramedic. The crew is housed at the fire station in Madawaska, a paper mill town of 5000 residents. The emergency service has benefited in the past from support from local government and the mill, which needs an immediate response when there is an accident. Five years ago there was an extensive local government subsidy. This year Madawaska Ambulance Service, which has an annual budget of \$350,000, collected \$250,000 through billing and collections and expects to be self-sufficient next year. An outside private company does billing.

Fort Kent. Labrie is also paid 16 hours per week to oversee the volunteer service in Fort Kent, Maine, a town 22 miles away. Labrie has a 0.5 FTE paid assistant in Fort Kent who helps manage the ambulance.

Thirty-six volunteers and five ambulances serve an area of 15,000-17,000 people. Two ambulances are stationed at the Northern Maine Medical Center in Fort Kent, and one in each of three towns 20-30 minutes away. These “volunteers” are paid \$2-3 hour for being on call and \$25 for responding to a call. Volunteers are on call for three 24-hour shifts a week.

Despite a strong tradition of volunteering in the area, it is becoming more difficult to recruit new volunteers. But tradition aside, Labrie says there has to be some remuneration for the amount of effort expected from these volunteers to compensate them for their time commitment and to improve retention. As stated previously, volunteers are currently paid a stipend for the 7-8 hour trip to transport patients to Bangor. In addition to Labrie, EMS coordinators in other States share his belief that EMS volunteering is far more demanding than most other types of volunteerism.

Training is linked to the Northern Maine Community College in Presque Isle, about 60 miles away, and is paid for by Ambulance Service Incorporated. The training combines students traveling to Presque Isle, faculty coming to the hospital, and some lectures delivered by telemedicine. Fort Kent is located near the Canadian border and has a large French-speaking population. Prospective volunteers must pass an English language test prior to taking the EMT course, but clearly their bilingual skills are an asset.

Labrie expects that eventually Fort Kent will have a fully paid service. Ambulance Service Incorporated has operated for 30 years and remains a volunteer service to keep costs down for the 12 small towns that together subsidize 25 percent of its operation. Labrie explained that if the ambulance service were staffed by full time paid EMT's, the budget would increase by 75 to 100 percent. Billing and collections has been moved to the billing department at Northern Maine Medical Center and the collection rate is improving.

From his vantage point, Labrie says the quality of the two services is equal, but the response time of Madawaska is faster because paid staff are on duty at all times.

2. Kansas Frontier Experience

The Kansas EMS office provided information on paid and volunteer workers in their 52 frontier counties. For the purpose of comparison they also provided the same information for the two largest counties. Data for 2005, 2000, and 1998 (the year they began collecting this data) was received. Unlike other States, frontier counties in Kansas have experienced increases in the numbers of volunteers since 1998 as well as increases in the numbers of paid personnel. The same pattern was true for the two urban counties.

But those increases do not translate to increased worker availability. In some cases workers are kept on the roster even when they move. The experience of the following two frontier counties, exemplifies the difficulties faced largely by volunteer services in remote, sparsely populated areas of Kansas.

Greeley County, Kansas

Greeley County Ambulance is a completely volunteer service. Greeley County is located in western Kansas and has a population of 1500 people in a 778 square mile area. Although Greeley County Ambulance lists 21 volunteers on their roster, ten make about 90 percent of the runs. The county pays the service \$7.00 per EMT per run, for up to four EMT's per run. These payments do not go to the volunteers but into an equipment and expense fund. The director receives \$350 per month, recently increased from \$156 per month. In addition to providing emergency care, Greeley County Ambulance transports patients to the hospital for tests, often without reimbursement.

Recruiting new, active volunteers is an ongoing problem. Greeley County Ambulance pays for all training and certification fees. The county pays for most continuing education and reimburses students for their initial training. Students have 50 percent of the training costs reimbursed after passing the national exam and the remaining 50 percent after one year of service as an EMT. In the last two years, two courses were held and as a result five EMT's joined the ambulance service. Of these, two will leave for college within the next year so the net gain over two years is three volunteers.

Economic pressures are believed to limit the involvement of new volunteers. Greeley County Ambulance is considering paying for on-call time and paying an hourly rate for transports directly to the techs. The national test is not a deterrent to volunteering, but after the initial National Registry test, most EMT's in Kansas maintain only their State certification, which has fewer requirements.

One important issue is the need for higher levels of skill, especially in rural areas. The town of Tribune, where Greeley County Ambulance is based, has an 18-bed Critical Access Hospital. People living close to town and those whose medical needs can be served by that facility, have a quick transport. But for people further away, or for those who need a higher level of care, there is a long transport, and often those patients require more advanced skills during transport.

Greeley County officials do not think it can afford a paid service. Billing is done by a volunteer who is paid a flat rate of \$8 per claim, with no additional fee for follow-up and/or clarifications.

Discussions with the county hospital billing department were initiated, but both the county commissioners and the ambulance service had issues with paying a higher fee.

Sheridan County, Kansas

Sheridan County is a 900 square mile county with about 2000 residents. A county-subsidized EMS program is based in Hoxie, Kansas where the Sheridan County Health Complex, a Critical Access Hospital, is located. Sheridan County EMS Director Debbie Kaufman says attracting volunteers is becoming increasingly difficult as the population decreases and EMS becomes more of a profession. Recently, Kaufman met with other members of the 18-county EMS region of northwest Kansas to discuss the extreme shortage of volunteers. There was a sense that in five years, without additional support or restructuring, they will not be able to continue to maintain volunteer services. Regionalization has been considered but, due to distances, there are concerns about the increased response times to reach patients.

The county began financial support in 1975. Currently, the county provides one-third of the budget of Sheridan County EMS with the remaining two-thirds from billing and collections. The service fields about 200 calls per year, an average of four per week. One-third of the calls are transfers – 85 miles to Hays, Kansas, or 260 miles to either Wichita or Denver. Volunteers receive a trip reimbursement stipend. There are four EMT's in town, plus one first responder. A few EMT's in other parts of the county help out on an informal basis.

C. Innovative Approaches to Maintaining Frontier EMS

Research identified two models, which have been developed to help maintain and support frontier ambulance services. One model is the cross training of hospital staff as EMT's and the other is a creative funding mechanism used in Utah.

Hospital cross training of staff has several advantages. The workers are already onsite and those that are selected for training have hospital jobs that can be interrupted. The training benefits the workers with additional career opportunities as well as providing additional EMS staff. Examples of two hospitals that provide emergency medical training to regular staff members in order to increase the availability of EMS workers follow.

The State of Utah has tackled EMS funding in an unusual but effective way. Utah takes a creative approach to generating revenue by adding a surcharge on all criminal fines.

Cross-Training Hospital Staff as EMT's

- Owyhee Community Health Facility, Nevada

The Owyhee Community Health Facility is a 15-bed hospital with a staff of 70 located on the Owyhee Indian reservation in frontier Elko County. The hospital provides EMS training annually to non-medical hospital workers. This approach has been successful and eight trained hospital workers are currently part of the ambulance service. When needed for an emergency, they are able to leave their regular position to assume emergency medical duties. Their rate of pay

depends on the service they are providing. While working as an EMT, they are paid as an EMT; while working in their daily job, they are paid their regular salary.

The ambulance averages 160 calls each year, with 75 percent of them being transfers to other facilities in larger communities such as Elko, Nevada (96 miles) or Boise, Idaho (142 miles). They respond to both reservation and non-reservation areas within a 50-mile radius, which crosses the Idaho/Nevada State line.

- Margaretville Memorial Hospital, New York

The ambulance service operated by Margaretville Memorial Hospital has a similar program in rural Delaware County, New York. The ambulance service area is approximately 706 square miles with a population of about 4200, with seasonal increases.

Hospital staff members are offered EMT training, which is reimbursed by the State, and once licensed, they augment the EMT pool. During daytime hours, when working as EMT's they are paid their regular plus an extra hourly rate for time spent on a call. Nights and weekends are covered by on call staff paid a stipend. The hospital and staff are reported to be satisfied with this arrangement. Among the EMS-trained staff members, certain occupations are more available for emergency response than others. For example, a housekeeper is usually more readily available than an operating room technician.

Utah Criminal Fine Revenue

In the State of Utah, every criminal conviction carries a surcharge, a portion of which benefits EMS (Utah Code Section 63-63a-1). In 2005 the State EMS program received \$2.5 million from these surcharges. These funds are used for administration, EMS training programs in high schools, competitive grants to ambulance services, and a per capita disbursement to counties. Many frontier and rural EMS services have used this source to purchase new ambulances and other equipment.

D. Issues Related to Billing and Collections

There was a great variability of knowledge about generating revenues through billing and collections among rural and frontier ambulance services. Many services do no billing at all and were therefore the least informed about the reimbursement system. At the other end of the spectrum are services that aggressively make every effort to capture all possible reimbursements. Some ambulance services turn the billing over to another department or agency and are not themselves informed about the billing and collection procedures.

Outside billing services were generally reported as a positive solution to billing difficulties. These are often contractual relationships where the billing and collections are either performed by a private company, a local health provider or hospital. Experienced billing services provide efficiency, knowledge of the process and more orderly collection of fees.

For example, the Wendover, Nevada ambulance is fully supported by its billing and collections. In order to insure that responders' narratives on run forms are complete and appropriate for

billing Medicare and other payors, the service pays a \$5 trip completion bonus each time the volunteers submit accurate and complete information.

IV. SUMMARY

In most cases, the decision to operate a volunteer ambulance service rather than a paid service is not a “choice,” but based on real or perceived financial limitations. It was frequently stated that (a) local governments cannot afford to provide the service, or (b) operating a volunteer service holds costs down for the local government. In some rural areas, camaraderie and tradition are strong factors in keeping a volunteer service.

Challenges to Staffing and Financial Sustainability

Several issues were raised numerous times and reflect current concerns of EMS staff working at both the State and community level.

- **Availability of volunteers.** EMS volunteers make a far greater time commitment than most civic or nonprofit organization volunteers, both in terms of responding to emergencies and training. Time pressures of job and family reduce time available to volunteer. Even communities that report a strong tradition of volunteerism are concerned about the changes underway. They acknowledge that both volunteers and their employers are finding it more difficult to make the commitment to EMS.

Increased training and licensure requirements impact recruitment and retention of volunteers. While training is often cited as a drawback to volunteering, training demands are more likely to increase than decrease in the future. Nebraska’s aggressive approach to training may provide a good model for other States.

- **Billing as a revenue source.** At this time, a minority of rural and frontier ambulance services maintain their operations through efficient billing and collection systems. For many ambulance services, billing and collection is either informal or not a high priority. This stems partially from the fact that in the past such services were sometimes offered at no cost to the users.

EMS systems have costs whether labor is fully paid, volunteer, or volunteer with a stipend. For many communities initiating billing to cover all costs is a hurdle that must be overcome in order to assure continued operations. Community perceptions appear to make it more difficult to institute fees for previously “free” service. It is more difficult when the public knows the services are provided by “volunteers,” but outreach and public education should help make the transition successful.

- **Insufficient volume to cover costs.** Emergency response and transport is an important health care service highly valued by the public. A high volume of services is required to reach or approach financial self-sufficiency. In most frontier and many rural areas, there will always be an insufficient number of services to cover all costs. Given the vast distances and low population of communities, it is difficult to always have a

paid crew available. Low population areas need creative solutions and most will always require some form of subsidy.

As systems change, one option is to work toward a blend of paid and volunteer EMT's within small ambulance services. There are a variety of types of blended systems.

Blended Systems: Successful Models

- **One Paid Staff Person**

A model for small communities consists of one paid staff person working 40 hours a week to respond as well as manage the administrative functions. Volunteers provide the rest of the staffing. This model is used in Wyoming. Except for five cities, most Wyoming ambulance services are sta

ffed with a paid director and volunteers who receive minimal pay for carrying a pager or responding to a call. In sparsely populated Wyoming, some individuals volunteer for more than one ambulance service.

- **Multiple Funding Sources**

Funding needs to be blended as well as staffing. In most localities there is some State and local support for training and equipment. Some services also receive revenue from billings. Missouri's use of ambulance districts, with taxing authority, is yet another approach. Services that respond to very few calls per month will never cover their costs through billing alone.

- **Shared Services**

Nebraska encourages cooperation among small services for dispatch and liability insurance as a way to improve efficiency and hold down costs. Similar cooperation might be encouraged for billing as well. Multi-agency cooperation is a positive way to maximize the limited resources found in rural communities.

Future Research

Research on frontier and rural EMS needs to identify methods to sustain EMS systems in small and/or geographically isolated communities.

According to EMS Researcher Gary Erisman, several questions must be answered

1. Can the current rural system of emergency response, particularly EMS, being largely made up of unpaid or minimally paid volunteers, be sustained into the future? What resources and assistance will it take to make it sustainable and who will provide them? ...

2. If the current system is not sustainable, what form will its replacement take? If the move is away from a system of unpaid volunteers to a fee paid system of some type, how will the already financially disenfranchised rural residents be able to pay for it? What costs will it add in terms of dollars? How many lives will be lost as a result of longer response times? Who will provide leadership ... [and] will they understand the uniqueness of the rural community, rural residents and their needs and expectations?

Gary Erisman, PhD, CSP, EMT/B-D

While many frontier and rural communities are providing EMS using a number of creative staffing and financing solutions, other communities are increasingly at risk from an EMS system in distress. To inform policy, it is important that future research identify fragile communities and ways that they can become sustainable. Despite anecdotal evidence that frontier and rural communities experiencing population losses may have difficulty maintaining their EMS systems, the lack of data hinders the ability to help them.

Future research focused on how to support frontier EMS might include:

- **Work with national EMS data collection projects to obtain county-level data on EMS.**

County-level data is important for three reasons: (a) “frontier” is frequently defined at the county level; (b) many public services, including EMS, are administered at the county level; (c) other useful analytic tools, such as the USDA Economic Research Service (ERS) economic and other typologies, are defined at the county level. The database for the National EMS Information System (NEMSIS) being developed for NHTSA will be completed late in 2006 and will include county-level data. Other partners include NEDARC, the National EMSC Data Analysis Resource Center.

- **Identify EMS systems at risk.** Communities that (a) are too small to support a private EMS service, (b) are losing the battle to attract and retain volunteers, and (c) cannot finance a paid EMS service, are at risk of losing EMS services, putting people at risk.

- **Identify factors associated with at risk EMS.** Analysis of demographic, social, economic, cultural, and political factors associated with the inability to assure adequate EMS coverage may lead to (a) easier identification of EMS systems at risk, (b) better understanding of why these systems are at risk, and (c) possible sustainability solutions.

- **Work with communities to develop local solutions.** The very local nature of EMS provides both opportunities and challenges. It is unlikely that a single strategy will benefit all communities in need. Participatory research can expose communities and researchers alike to new options and possibilities, and provide the technical assistance that communities may need to implement a sustainable EMS service.

- **Recognize the need for a public EMS safety net.** Not all communities will be able to support an EMS service. Additional grant programs and subsidies may be necessary to ensure adequate nationwide EMS coverage.

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Appendix C:

Frontier Education Center EMS Information Request, April 2005: Response Summaries

STATE	CONTACT	Paid	Volunteer	Source
AL	Jimmy D. Prince, Director EMS Division AL Dept Health P.O. Box 303017 Montgomery, AL 36130-3017 334-206-5383 www.adph.org	NA	NA	State does not track; many State-licensed EMT's work for both paid and volunteer agencies. ----- NEDARC* 20 % Paid Agencies 70 % Volunteer 10 % Combination
AK	Kathy McLeron EMS Unit Mgr., Community Health & EMS Section DHSS/Public Health P.O. Box 110616 Juneau, AK 99811-0616 907-465-3027 www.chems.alaska.gov	NA	NA	State does not track. ----- NEDARC 20 % Paid 70% Volunteer 10% Combination
AZ	Gene Wikle Bureau Chief of EMS AZ Dept. of Health Services 150 N. 18th Avenue, Suite 540 Phoenix, AZ 85007 602-364-3150; F: 602-364-3568 www.azdhs.gov/bems	48%	52%	AZ Fire District Survey
AR	David Taylor, Interim Director, Div. of EMS & Trauma Systems, AR Dept. of Health 4815 W. Markham St., Slot 38 Little Rock, AR 72205-3867 501-661-2262; F: 501-280-4901 www.healthylarkansas.com/ems	NA	NA	State does not track.
CA	Richard E. Watson, Interim Director, Emergency. Medical Services Authority 1930 Ninth St.	NA	NA	State does not track.

	Sacramento, CA 95814-7043 916-322-4336; F: 916-324-2875 www.emsa.ca.gov			
CO	D. Randy Kuykendall EMS Section Chief, Health Facility & EMS Div. Colorado Dept. of Public Health & Environment 4300 Cherry Creek Drive South, CDPHE, A2 Denver, CO 80246 303-692-2945; F: 303-691-7720			No response.
CT	Leonard Guercia, Director CT Dept. of Public Health Office of EMS 410 Capital Avenue, MS#12EMS Hartford, CT 06134-0308 860-509-7975; F: 860-509-7987 www.dph.state.ct.us	NA	NA	Data not available.
DE	Steve Blessing, Acting Director, EMS 655 South Bay Road, Suite 4-H Dover, DE 19901 302-744-5400; F: 302-739-2352			NEDARC 10% paid 5% volunteer 85% Combination
FL	Don Bennett, Chief, Bureau of EMS FL Dept. of Health, 4052 Bald Cypress Way Bin C18 Tallahassee, FL 32399-1738 850-245 4444 F: 850-488 2512 www.doh.state.fl.us/ems	100%		Fully paid.
GA	R. David Bean, Director Emergency Medical Services 2 Peachtree Street, Suite 12432 Atlanta, GA 30303 404-657-2594; F: 404-651-8036 www.ph.dhr.state.ga.us/program/ems	NA	NA	Not currently tracked "My expectation is that you will find few volunteer EMS workers in Georgia." -- David Bean, Director
HI	Donna Maiava, Chief EMS System State Department of Health 3627 Kilauea Avenue, Room 102 Honolulu, HI 96816 808-733-9210; F: 808-733-8332 http://hawaii.gov/doh/resource/ems/			NEDARC 100% Paid
ID	Dia Gainor, Chief Idaho Emergency Medical Services 590 W. Washington Street, P.O. Box	35%	34% Mixed –	Survey by county. ----- NEDARC

	83720 Boise, ID 83720-0036 208-334-4000; F: 208-334-4015 www.idems.idhw.state.id.us BoydE@idhw.state.id.us provided data		30%	43% Volunteer 57% Combination
IL	Gregory Scott, RN, BS, EMT-P Acting Chief, Div. of EMS & Highway Safety IL Department of Public Health 525 W. Jefferson Street, 3rd Floor Springfield, IL 62761-0001 217-785-2080; F: 217-524-0966 www.idph.state.il.us			Do not track. Imagines many rural are vols. ----- NEDARC 43% Paid 58% Volunteer
IN	Phil Roberts, Acting Director Indiana EMS Commission 302 W. Washington, Room E208 IGCS Indianapolis, IN 46204-2258 317-232-3980; F: 317-232-3895 www.in.gov/sema Respondent: Michael Garvey, Dep. Dir.	45.3%	54.67%	"54.67% of our EMS services are volunteer-based. I can estimate that nearly the same percentage of personnel at the EMT and above certification levels are also volunteer." ----- NEDARC 40% Paid 51% Volunteer 9% Combination
IA	Ray Jones, BA, PS, Bureau Chief of EMS Iowa Department of Public Health 401 SW 7th Street, Suite D Des Moines, IA 50309 515-725-0319; F: 515-725-0318 Website: www.idph.state.ia.us/ems	17.4%	82.6 % most are rural	82.6 percent of EMS workers in Iowa are volunteer. Most of these are rural. ----- NEDARC 24% Paid 70% Volunteer 6% Combination
KS	David Lake, Administrator Board of Emergency Medical Services 900 SW Jackson Landon State Office Building, Room 1031 Topeka, KS 66612-1228 785-296-7296; F: 785-296-62 response - Joe Moreland 785-296-	54% full and part time	32%	Rural v. Urban - 75% pop. in ten counties; there are 105 counties; 32% of 10,500 attendants report selves as vol. (possibly definition problem)

	7412			
KY	Brian Bishop, Executive Director Kentucky Board of Emergency Medical Services 2545 Lawrenceburg Road Frankfort, KY 40601 502-564-8963; F: 502-564 4687			No response.
LA	Nancy Bourgeois, Director Bureau of Emergency Medical Services P.O. Box 94215 Baton Rouge, LA 70804 225-763-5700; F: 225-763-5702	Almost 100%		Most are paid. Three rural community semi- paid fire depts. use about 30 vols. Grand Isle Vol. Emergency Services uses 15-20 vols. Two agencies - one urban, one rural, use EMS reserves – about 50 vols. On the paid side there are about 4500 certified EMS personnel, all levels.
ME	Jay Bradshaw, Director Maine Emergency Medical Services 152 State House Station Augusta, ME 04333-0152 207-626-3860; F: 207-287-6251 Website: www.maine.gov/dps/ems	NA	NA	From our data, we cannot identify whether a provider is paid, volunteer, or a combination of both. ----- NEDARC 25% paid, 50% volunteer 25% combination
MD	Robert Bass, MD Director Emergency Medical Services MIEMSS 653 W. Pratt Street Baltimore, MD 21201-1536 410-706-5074; F: 410-706-4768 Website: www.miemss.org			coming
MA	Louise Goyette, Director MA DPH/OEMS 2 Boylston Street, 3rd Floor Boston, MA 02116 617-753-7300; F: 617-753-7320 Website: www.state.ma.us/dph/oems	NA	NA	No data available.

MI	Robin Shivley, Acting EMS Section Chief, Michigan Dept. of Community Health, EMS & Trauma Section 320 S. Walnut Street, 6th Floor Lansing, MI 48913 517-241-3024; F: 517-241-9458 www.michigan.gov/mdch	NA	NA	No data available.
MN	Mary Hedges, Executive Director MN EMS Regulatory Board 2829 University Avenue SE, Suite 310 Minneapolis, MN 55414-3222 612-627-6000; F: 612-627-5442 Website: www.emsrb.state.mn.us		Est. 85% in rural areas	"We do not collect that information but estimate 85% of EMS workers in rural/frontier areas of Minnesota are "volunteer" (may be paid a small stipend per ambulance run or for call time)." ----- NEDARC 6% paid 56% volunteer 38% combination
MS	Keith Parker, EMS Director Div. of EMS State Department of Health P.O. Box 1700; 570 East Woodrow Wilson Jackson, MS 39215-1700 601-576-7366; F: 601-576-7373 Website: www.msdh.state.ms.us			NEDARC 99% paid 1% volunteer
MO	Paula Kempf, RN, Director Bureau of EMS Missouri Department of Health P.O. Box 570 Jefferson City, MO 65102-0570 573-751-6356; F: 573-751-6348 Website: http://dhss.state.mo.us/ems			State comment – only 3 volunteer services in State NEDARC 95% paid
MT	Jim DeTienne, Supervisor EMS&Trauma System Section MT Dept. of Public Health & Human Svcs. P.O. Box 202951 Helena, MT 59620 406-444-4460; F: 406-444-1814 Website: www.emsip.state.mt.us	NA	NA	Do not capture that information. ----- NEDARC 10% paid 70% volunteer 20% combination
NE	Dean Cole, Director	20%	80%	The problem is

	<p>Division of Emergency Medical Services 301 Centennial Mall South, 3rd Floor Box 95007 Lincoln, NE 68509-5007 402-471-0124; F: 402-471-0169 Website: www.hhs.state.ne.us/ems/emsindex.htm</p>			<p>defining paid and volunteer. Some ambulance services pay individuals \$5.00 for a run or minimum wage. Some have a fulltime/part-time staff on call during the day and a volunteer staff at night. There needs to be a national definition for paid. It is estimated that of Nebraska's 407 ambulance services, 80% are volunteer. Study due in March, results not yet available.</p>
NV	<p>Fergus Laughridge, Supervisor EMS Office Nevada State Health Division 1550 E. College Parkway, #158 Carson City, NV 89710 775-687-3065; F: 775-684-5313 Website: http://health2k.state.nv.us/ems</p>		<p>42% overall 51% rural</p>	<p>Rural Emergency Medical Services Outreach Project, Great Basin College 7/03 ----- NEDARC 36% paid 55% volunteer 9% combination</p>
NH	<p>Sue Prentiss, Bureau Chief of EMS NH Department of Safety 10 Hazen Drive Concord, NH 03305-0003 603-271-4568; F: 603-271-4567 Website: www.state.nh.us/safety/ems</p>	40%	60%	<p>Sixty percent volunteer. ----- NEDARC 39.5% paid 60.5% volunteer</p>
NJ	<p>Respondent: Robert Dinetz Coordinator- Education & Certification NJ Department of Health and Senior Services Division of Emergency Preparedness & Response Office of Emergency Medical Services P.O. Box 360 Trenton, NJ 08625-0360 609-633-7777; F: 609-633-7954</p>	100%		<p>New Jersey has no areas designated as rural or frontier under per the Federal government's definition of "rural" and/or "frontier".</p>

	Website: www.state.nj.us/health/ems			
NM	Jim Derrick, Chief EMS Bureau, Department of Health P.O. Box 26110 Santa Fe, NM 87502-6110 505-476-7702; F: 505-476-7810 Website: www.health.state.nm.us	45%	55%	State study by region. ----- NEDARC 45% paid 55% volunteer
NY	Ed Wronski, Director Bureau of EMS New York State Health Department 433 River Street, Suite 303 Troy, NY 12180-2299 518-402-0996; F: 518-402-0985 Website: www.health.state.ny.us	NA	NA	State does not track.
NC	Drexdal Pratt, Chief Office of EMS 2707 Mail Service Center Raleigh, NC 27699-2707 919-855-3935; F: 919-733-702	NA	NA	NA
ND	Tim Meyer, Director Div. of Emergency Health Services ND Department of Health 600 Boulevard Avenue; Dept. 301 Bismarck, ND 58505-0200 701-328-2388; F: 701-328-1890 Website: ww.state.health.nd.us			State does not track.
OH	Richard N. Rucker, Executive Director OH Department of Public Safety, Div. of EMS 1970 W. Broad Street Columbus, OH 43218-2073 614-466-9447; F: 614-995-7012 Website: www.ohiopublicsafety.com			NEDARC 14% paid 52% volunteer 34% combination
OK	Shawn Rogers, Director of EMS State Department of Health 1000 NE 10th Street, Room 1104 Oklahoma City, OK 73117 405-271-4027; F: 405-271-4240 Website: www.health.state.ok.us/program/ems/			NEDARC 78.7 % paid 21/3% volunteer
OR	Paul Bollinger, MPH, Pre-hospital Systems Manager DHS, Office of Public Health	37.4%	46.4%	NEDARC 90% combination

	Systems EMS & Trauma Systems Section P.O. Box 14450 Portland, OR 97263 503-731-4011; F: 503-731-4077 www.dhs.state.or.us/publichealth/ems		Mixed- 36.3%	
PA	Joe Schmider, Director EMS Office Pennsylvania Department of Health P.O. Box 90 Harrisburg, PA 17108 717-787-8740; F: 717-772-0910 Website: www.health.state.pa Respondent: Bob Cooney Emergency Medical Services Office	Est. 30.5% rural	Est. 69.5% rural	Estimate from the Pa Ambulance Licensing Database: Rural Personnel identified by licensed ambulance services in Pa Rural County (population less than 50% urban) 30.5%)paid, 69.5% volunteer; Urban- 52% paid personnel, 39% volunteer. Based on responses from 80% licensed ambulance. More data expected; results may change. - NEDARC 25% paid 25% volunteer 50% combination
RI	Peter Leary, Chief Emergency Medical Services Division Department of Health, Room 404 3 Capitol Hill Providence, RI 02908-5097 401-222-2401; F: 401-222-3352 Website: www.healthri.org	56%	44%	Ambulance Service Survey supplied. ----- NEDARC 50% paid 30% volunteer 20% combination
SC	Alonzo Smith, Director SC DHEC, Division of EMS 2600 Bull Street Columbia, SC 29201 803-545-4275; F: 803-545-4212 Website: www.scdhec.net/hr.ems			NEDARC 75% paid 5% volunteer 20% combination
SD	Bob Graff, Director			NEDARC

	Emergency Medical Services 118 West Capitol Avenue Pierre, SD 57501-2000 605-773-3915; F: 605-773-6631 www.state.sd.us/dps/ems			10% paid 10% volunteer 80% combination
TN	Joseph B. Phillips, Director Division of Emergency Medical Services Cordell Hull Bldg., First Floor 425 Fifth Avenue, North Nashville, TN 37247-0701 615-741-2584; F: 615-741-4217 www.state.tn.us/health/ems	100%		There are no volunteer emergency ambulance services. ----- NEDARC 99% paid 1% volunteer
TX	Terry Bavousett, Director EMS & Trauma Systems Coordinator Texas Department of Health Services 1100 49th Street Austin, TX 78756-3199 512-834-6740; F: 512-834-6736 www.tdh.state.tx.us/hcqs/ems/emshome	Frontier 48%	52%	Informal study by EMS office for legislator, 2/05. Frontier and Rural Counties - Certified EMS personnel affiliated with provider.
		Rural 73%	26%	
UT	Jan Buttrey, Director Bureau of EMS, Department of Health Box 142004; 288 N. 1460 West Salt Lake City, UT 84114-2004 801-538-6435; F: 801-538-6808 Respondent: Christine Warren christinewarren@utah.gov			Of a total of 55 licensed transport agencies in our rural/frontier counties, three are considered complete volunteer. NEDARC 80% paid 10% volunteer 10% combination
VT	Dan Manz, Director Emergency Medical Services Division Department of Health Box 70, 108 Cherry Street Burlington, VT 05402 802-863-7310; F: 802-863-7577 Website: www.state.vt.us/health/ems			No response.
VA	Gary Brown, Director Office of EMS Virginia Department of Health 1538 E. Parham Road Richmond, VA 23228 804-864-7605; F: 804-864-7580 www.vdh.state.va.us/oems			NEDARC 30% paid 60% volunteer 10% combination
WA	Janet Griffith Kastl, Director			NEDARC

	<p>Department of Health Office of Emerg. Medical & Trauma Prevention P.O. Box 47853 Olympia, WA 98504-7853 360-236-2828; F: 360-236-2829 www.doh.wa.gov/hsqa.emtp</p>			<p>28% paid 66% volunteer 6% combination</p>
WVA	<p>Mark E. King, Director WV Office of Emerg. Medical Services 350 Capitol Street, Room 515 Charleston, WV 25301 304-558-3956; F: 304-558-1437 Website: www.wvoems.org</p>			<p>State does not track ----- NEDARC 34% paid 35% volunteer 31% combination</p>
WI	<p>Dan Williams, Chief Emergency Medical Services WI DHFS, Div. Of Public Health P.O. Box 2659 Madison, WI 53701-2659 608-261-6870; F: 608-261-6392 Website: www.dhfs.state.wi.us/dph_emsip/</p>	20%	80%	<p>"We have approximately 16,000 Licensed EMS personnel; approximately 80% are non-paid volunteers. So...about 3,200 would be paid."</p>
WY	<p>Jim Mayberry, EMS Program Manager Wyoming Department of Health Hathaway Building, Room 446 Cheyenne, WY 82002 307-777-7955; F: 307-777-5639 Website: www.wdh.state.wy.us/ems</p>		Most vol. - usually paid director	<p>"... the vast majority of our EMS providers are not paid personnel in the sense that they are career EMS providers. Wyoming has 72 ambulance services with only 4-6 services being a full-time paid ambulance service. Most ambulance services are staffed with a paid director and then volunteers who receive minimal pay for carrying a pager or received a fixed amount when responding to a call. To break this down by county would be difficult as many services overlap into</p>

				adjoining counties and individuals may volunteer for more than one ambulance service. ----- NEDARC 13% paid 42% volunteer 45% combination
	* NEDARC = National EMSC Data Analysis Resources Center, www.nedarc.org .			