

# Arkansas Emergency Medical Services (EMS) Needs Assessment Survey: May 2009



## Arkansas Emergency Medical Services (EMS) Needs Assessment Survey 2008

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## Executive Summary

In an effort to understand the issues facing Arkansas's ambulance services, the Arkansas Department of Health's Office of Rural Health and Primary Care along with the Section of Emergency Medical Services (EMS) and Trauma Systems collaborated to survey ambulance service license-holders in Arkansas. The purpose of the current Needs Assessment is to compare responses between the 2004 and 2008 surveys in order to determine the current status of Arkansas Emergency Medical Services and the service providers' viewpoint as well as to measure progress over the past four years. One hundred and seventy-four (174) surveys were mailed with 131 being returned completed resulting in a **75%** response rate. Surveys were received from each of the 75 Arkansas counties.

In 2004, forty-two percent (42%) of ambulance services reported that it was "very or fairly difficult" for them to recruit pre-hospital health care providers; in 2008, this percentage has risen to fifty-three (53%). In 2004 when asked whether it was "very or fairly difficult" for them to retain pre-hospital health care providers, only twenty-one (21%) responded this way; in 2008, this perception has risen to thirty-one (31%). Recruitment and retention of EMS personnel is the highest priority concern followed by financial needs, training and upgrading of EMS personnel, communication equipment and continuing education for EMS personnel. **Collectively, ambulance service providers reported a twenty-one (21%) shortage at the paramedic level.** The majority eighty-two (82%) of the ambulance fleet in Arkansas is equipped at the advanced level, however, only one quarter of the EMT workforce is certified at the Paramedic level.

According to the Bureau of Labor Statistics, Arkansas is in the bottom quartile of the pay scale for EMS workers. From 2004 to 2008, the percentage of respondents reporting inadequate or low pay as a barrier to retention has risen from forty (40%) to forty-seven (47%). Although the percentage identified for "time away from family" went down slightly from 2004 to 2008, it is still reported as the second highest identified barrier to retention.

Training requirements as a barrier jumped from six percent (6%) in 2004 to seventeen percent (17%) in 2008. Advances in medical technologies will demand that pre-hospital providers seek continuing education as a necessary component of the EMS profession. When asked if there were training courses for medical directors, only twenty-three (23%) said yes and only seventeen (17%) said they had a standard operating procedures (SOP) or guide for such training. Only thirty-six (36%) of respondents reported having leadership training for rural EMS managers and only seventeen (17%) had SOP or guides for this training. Responses in both areas demonstrate that additional resources and awareness may be needed in these areas.

Having the ability to analyze results by rural vs. urban counties is new to the 2008 Assessment. A little over half fifty-three (53%) of all respondents reported applying for grant assistance, but when analyzed by area, fifty-six (56%) of rural respondents and forty-nine (49%) of urban respondents applied for grant assistance. It is important to note that fifty-four percent (54%) of the respondents to the current needs assessment survey

are privately owned entities and are therefore ineligible for many of the grant funding opportunities.

Approximately fifteen (15%) of the 131 returned surveys contained additional comments. The need for a statewide EMS trauma system was addressed as well as a shortage of paramedics. The most frequently mentioned topic under 'other needs' was **making grants available to private EMS providers**. This was mentioned in the context of grant funding earlier - specifically concerning the purchase of Arkansas Wireless Information Network (AWIN) radios.

When asked if the EMS service provider had the AWIN radios, fifty-two (52%) did not. More rural county ambulance service providers fifty-four (54%) reported not having AWIN radios compared with urban county ambulance services forty-six (46%). Seventy-five percent (75%) of respondents who had AWIN radio equipment reported that the average age of the equipment was two years or less.

The 2008 assessment revealed that close to half (49%) of the ambulance services responding to the survey reported that the average age of their VHF, UHF, or 800 MHz. capability radio equipment was under 5 years old. A sizable percentage (44%) however reported that the average age of their radio equipment was 6 to 10 years old. Only seven percent said the average age of their radio equipment was 11 years or more.

The primary source of funding for most EMS services is still reported as Medicare/Medicaid. This source of funding accounted for fifty-seven (57%) of the total in 2004 and has risen to account for almost two-thirds in 2008. Patient billing has overtaken City/County funding as the second highest source of funding. While it is interesting to note that sixty-three (63%) of ambulance services reported that Medicare/Medicaid was their primary source of funding, financial problems – mainly due to declining reimbursement – are the primary difficulty facing ambulance providers in Arkansas. Decreasing reimbursement rates have severely impacted the ability of ambulance services to carry out their necessary services. Low reimbursement rates affect ambulance services' financial solvability, in turn affecting the ability of the services to recruit/retain personnel and maintain equipment and facilities.

## Emergency Medical Services Snapshot October 2, 2008

The very nature of Emergency Medical Services is one of constant flux. For example, the following is a snapshot in time of the EMT workforce and ambulance service resources on October 2, 2008:

- **Pre-hospital Professionals Statewide**

EMT- Basic:	4225	70.53%	
Intermediate			
s:	154	2.57%	
Paramedics:	<u>1611</u>	26.89%	
	<b>Total Pre-hospital Professionals:</b>		<b>5990</b>
  
- **EMERGENCY MEDICAL SERVICES Instructors: 242**
  
- **EMERGENCY MEDICAL SERVICES Educational Sites: 34**
  
- **Length of EMT Courses: (all levels)**
  - EMT- Basic: 160 hours
  - \*Intermediate: 115 hours
  - \*Paramedic: 1200 hours
  - \* Candidates for Intermediate and Paramedic course must first obtain an EMT-Basic certification.
  
- **Air Services**

○ Helicopter Services In-state: 16	Out-of-state: 10	<b>Total: 26</b>
○ Fixed Wing Services In-state: 4	Out-of-state: 0	<b>Total: 4</b>
  
- **Types of Air Medical Vehicles:**

○ Helicopters In-state: 16	Out-of-state: 12	<b>Total: 28</b>
○ Fixed Wing In-state: 4	Out-of-state: 0	<b>Total: 4</b>

At the time the May 2008 Needs Assessment Survey was conducted, there were 203 licensed ambulance service providers transporting patients in 622 permitted ambulances statewide. The number of ambulances rose to 637 on October 2, 2008 when this EMS Snapshot was conducted.

Ambulance characteristics that remain constant include:

- All ambulances are equipped to treat trauma related injuries.
- All ambulances are inspected by the Department of Health yearly.
- On a basic ambulance, there is either one EMT and one driver or two EMTs (depending on the level of ambulance permit).
- There are two types of advanced level ambulances (ALS) – Intermediate and Paramedic. On the Intermediate ambulance, there must be a minimum of one EMT- Intermediate and one other certified EMT. On a paramedic ambulance, there must be a minimum of one Paramedic and one other certified EMT.

<b>Type of Ambulance</b>	<b># of Ambulances Licensed</b>	<b>Percentage of Ambulance Vehicles</b>
Paramedic	465	73%
Intermediate	6	0.94%
Basic	109	17.11%
Advanced Response (non-transport)	11	1.73%
Helicopter: Based In-state	16	2.51%
Helicopter: Based Out-of-state	12	1.88%
Fixed Wing: Based In-state	4	0.63%
Fixed Wing: Based Out-of-state	0	0.0%
Special Purpose	13	2.04%
Stretcher Ambulance (non-emergency basic)	1	0.16%
<b>Total Ambulances</b>	<b>637</b>	<b>100%</b>

Information obtained from CertScan October 2, 2008

The majority eighty-two (82%) of the ambulance fleet is equipped at the advanced level, however; only one quarter of the EMT workforce is certified at the Paramedic level. **This indicates that there may be an extreme underutilization of available advanced level ambulances within the state.**

## Section of Emergency Medical Services & Trauma Systems Overview

Emergency Medical Services and Trauma Systems' mission is to promulgate and enforce rules and regulations which foster and encourage the development of quality pre-hospital Emergency Medical Services for the citizens of the state; and to develop a statewide trauma systems plan for implementation and the designation of trauma centers throughout Arkansas. The Section is responsible for the following:

- Licenses and inspects ambulance services for proper equipment, drug control, medical direction and protocols.
- Reviews curriculum materials and course outlines for training sites and continuing education units.
- Tests Emergency Medical Technicians' skills and knowledge using the National Registry written exam and the Arkansas practical skills examination.
- Investigates complaints.
- Provides technical assistance to hospitals, emergency medical technicians, local governments and others interested in emergency care.
- Seeks to develop a statewide trauma system through sophisticated hardware and software applications that track ambulance runs and patient encounter forms.

### Rural Hospital Flexibility Program:

The Rural Hospital Flexibility (Flex) Program is a Federal initiative that provides funding to State Governments to strengthen rural health. The Office of Rural Health and Primary Care (ORHPC) supports improvement and integration of Emergency Medical Services through its FLEX program. In 2008, ORHPC provided funds to support the designation of a statewide trauma system by upgrading the existing Emergency Medical System data system to a web-based platform for real-time data transmission and improved data accessibility.

## About the 2008 Needs Assessment

Some ambulance service providers have several levels of licensures (i.e., a basic life support license as well as an advanced life support license). Ambulance service providers were asked to respond only at their highest level of licensure. Those whose license were out of state, held multiple levels of licensures within one county (ambulance services only submitted one survey at the highest level of licensure within the county), or were stretcher ambulances were not included leaving a population of 174 licensed ambulance services. Surveys were mailed to the qualifying 174 ambulance service providers with a postage paid return envelop on April 1, 2008.

- **One hundred and seventy-four (174) surveys were mailed and one hundred and thirty-one (131) were returned completed resulting in a 75% response rate.**

In 2004, a Needs Assessment was developed and conducted to determine the needs of ambulance service providers in the following areas: equipment and supplies, staffing/personnel, grant assistance, emergency preparedness, and priority needs.

Except for the following, the two survey instruments were the same:

### **Equipment and Supply Needs:**

- Question added in 2008 to determine whether internet access was dial up, high speed (DSL) or other

### **Emergency Preparedness:**

- Survey in 2008 included 'training courses for medical directors' and 'leadership training for rural EMERGENCY MEDICAL SERVICES managers' in questions regarding staff training and standard operating guides or procedures for training

### **Priority Needs:**

- In 2008, separated non-disposable medical equipment and computers/software from equipment needs

### **Manpower Statistics and Demographics: (2008 survey)**

- Collected county of provider service for all respondents in order to look at responses by demographics.
- Added levels of EMTs (i.e. EMT, EMT-I, EMT-P, EMT-Instructors)
- Asked how many EMTs each service felt they were short-staffed

### **Additional Questions were placed at end of 2008 survey:**

- Arkansas Wireless Information Network (AWIN) radios
- Inverters
- Personal Protection Equipment for extrication purposes
- Emergency Vehicle Operator Course (EVOC )
- Ambulance monitoring devices

**The purpose of the current Needs Assessment is to compare responses between 2004 and 2008 in order to determine the current status of Emergency Medical Services from the service providers' viewpoint as well as to measure progress over the past four years.**

## Rural vs. Urban

Arkansas is a rural state much like Montana, Idaho, and Nebraska in that there are only nine cities with populations over 50,000. (Please refer to Appendix C to view map.) Data gathered from this survey was originally analyzed at a statewide level. The Institute of Medicine's series on EMERGENCY MEDICAL SERVICES identifies major differences between rural and urban EMERGENCY MEDICAL SERVICES providers. For this reason, data was also analyzed to determine any differences between Arkansas' urban and rural EMERGENCY MEDICAL SERVICES providers.

There are many federal definitions of rural. For the purposes of this document, rural is defined using a comparison of Metropolitan vs. Non-metropolitan Statistical Areas. This definition was chosen to be consistent with the State Rural Health Plan developed by the Office of Rural Health and Primary Care.

Using this definition, 55 Arkansas counties were identified as rural (64%) and 20 were identified as urban (36%). One hundred and thirty-one (131) respondents completed and returned the 2008 Needs Assessment with **at least one respondent from each of the 75 Arkansas counties**. Of those, 84 were rural (64%) and 47 were urban (36%). Results showed that with the exception of non-disposable medical equipment, geography had no significant impact on priorities. Therefore, with the exception of minor notations, findings are presented from a statewide perspective.

## Survey Administration

The Arkansas Department of Health's Section of Emergency Medical Services and Trauma Systems and the Office of Rural Health and Primary Care - in conjunction with the Center for Health Statistics - collaborated to conduct the current needs assessment of all ambulance service providers in Arkansas.

In 2004, a nine-page, forty-one-question survey instrument was designed to determine needs of Emergency Medical Service providers in the following areas: **equipment and supplies, staffing/personnel, grant assistance, emergency preparedness, and priority needs**. In 2008, ten additional questions were added. (Frequency tabulations for each question in the survey are found in Appendix A; a copy of the survey is included in Appendix B; and a map of metropolitan statistical areas - the designation used to identify rural vs. urban counties - is in Appendix C.)

At the time of the 2008 survey, there were 203 licensed ambulance services in Arkansas. Some ambulance service providers have several levels of licensures within one county (i.e., a basic life support license as well as an advanced life support license). Ambulance service providers were asked to respond only at their highest level of licensure within their county. Those whose license were out of state or were stretcher ambulances were not included leaving a population of 174 licensed ambulance services.

Surveys were mailed to the remaining 174 ambulance service providers with a postage paid return envelop on April 1, 2008. Responses were required to be completed by May 9, 2008. Survey data was entered during the month of June. In July, follow up telephone calls were made to all ambulance providers who had not returned the survey. Calls were continued until completed surveys were received from each of the 75 Arkansas counties.

Several factors determine acceptable response rates. One is how the survey is actually administered. With surveys conducted through the mail, a 50% response rate is considered adequate (**Punch, K. F. (2003). *Survey Research: The Basics*. London: Sage Publications Ltd.**). **One hundred and seventy-four (174) surveys were mailed and one hundred and thirty-one (131) were completed resulting in a 75% response rate.** Since all 75 Arkansas counties were represented, data could be analyzed by area of response, i.e. rural vs. urban. A notice of completion will be mailed to all ambulance service providers directing them to the Arkansas Department of Health, Section of Emergency Medical System and Trauma System's website for complete survey results.

## General Findings

### Equipment and Supply Needs

As with the previous assessment, this report compares the percentages of services whose needs are fully or adequately met by that type of equipment or supply versus the percentages of services whose needs are somewhat met or not met at all by that same type of equipment or supply. “Fully Meets Needs” and Adequately Meets Needs” response categories were combined into one category while “Somewhat Meets Needs” and “Does Not Meet Needs at All” were combined into another category for comparison purposes. Percentages of services who indicated that the equipment they were asked to rate is “not applicable” were included since these might also indicate need, though as is demonstrated in the table, this column has consistently gone down.

Using this qualitative and quantitative approach to analyze and interpret the results, each of the different types of equipment fell into two distinct tiers: Most Frequently-Mentioned Needs and Least Frequently-Mentioned Needs. Please refer to Table 1 on page 14 for results.

***Q1-12: Directions: Based on your service assets and current condition of your equipment, please rate the following items as to whether they adequately meet the needs of your service. Please use the following response categories: 1=Does not meet needs at all, 2=somewhat meets needs, 3=Mostly meets needs, 4=adequately meets needs, 5=fully meets needs.***

Table 1 below indicates that there has been steady improvement in all areas regarding equipment and supply needs, even though there is still much work to be done.

**Table 1**  
**Equipment and Supply Needs\***

Equipment or Supply Item	2004 Findings NA %	2004 Findings Somewhat Meets Needs or Does Not Meet Needs at All %	2004 Mostly Meets Needs %	2004 Fully Meets Needs or Adequately Meets Needs %	2008 Findings NA %	2008 Findings Somewhat Meets Needs or Does Not Meet Needs at All %	2008 Mostly Meets Needs %	2008 Fully Meets Needs or Adequately Meets Needs %
Garages	5	27	17	52	4	18	18	60
Cellular telephones	19	16	16	50	9	12	18	61
Radio equipment	2	14	23	62	0	7	28	65
Training materials	1	17	25	57	2	10	23	66
Facilities (meetings, etc.)	3	24	14	60	1	14	17	68
Pediatric equipment	1	12	21	65	2	11	16	71
Ambulances	5	4	21	69	4	3	17	76
Personal protection equipment	0	7	21	71	0	2	17	81
Stretchers	3	7	9	80	0	3	14	83
Defibrillator	3	2	9	87	0	2	7	91
Non-disposable airway devices	11	0	9	80	6	0	3	91
Portable oxygen unit	0	1	7	92	0	1	3	95

\*Percentage in table may sum up to more than 100% due to rounding.

## **Most Frequently-Mentioned Needs in 2008 Survey**

- Garages - **60% reported garages “fully or adequately met needs”** compared with 52% in 2004, while **18% reported garages “somewhat met needs or needs not met at all”** compared with 27% in 2004.

- Cellular Telephones - **61% reported cellular telephones “fully or adequately met needs”** compared with 60% in 2004, while **12% reported cellular telephones “somewhat met needs or needs not met at all”** compared with 16% in 2004. Twelve percent (12%) indicated that cellular telephones weren't applicable, which likely means that those services answering the survey question this way do not currently utilize these pieces of communication equipment.

- Radio equipment - **65% reported radio equipment “fully or adequately met needs”** compared with 62% in 2004, while **7% reported radio equipment “somewhat met needs or needs not met at all”** compared with 14% in 2004.

- Training materials - **66% reported training materials “fully or adequately met needs”** compared with 57% in 2004, while **10% reported training materials “somewhat met needs or needs not met at all”** compared with 17% in 2004.

- Facilities - **68% reported facilities (meeting, etc.) “fully or adequately met needs”** when compared with 60% in 2004 - **14% reported facilities “somewhat met needs or needs not met at all”** compared with 24% in 2004.

- Pediatric equipment - **71% reported pediatric equipment “fully or adequately met needs”** compared with 65% in 2004, while **11% reported equipment “somewhat met needs or needs not met at all”** compared with 12% in 2004.

## **Least Frequently-Mentioned Needs**

- Portable oxygen units - **95% reported portable oxygen units “fully or adequately met needs”** compared with 92% in 2004, while **1% reported equipment “somewhat met needs or needs not met at all”** in both 2004 and 2008.

- Non-disposable airway devices - **91% reported equipment “fully or adequately met needs”** compared with 80% in 2004, while **0% reported equipment “somewhat met needs or needs not met at all”** in both 2004 and 2008.

- Defibrillator - **91% reported equipment “fully or adequately met needs”** compared with 87% in 2004, while **2% reported equipment “somewhat met needs or needs not met at all”** compared with 2% in 2004. **The rural health program may have assisted with the increase in the automated external defibrillator (AED). AEDs at the basic permit level are now required – a change that occurred in 2007.**

- Stretchers - **83% reported equipment “fully or adequately met needs”** compared with 80% in 2004, while **3% reported equipment “somewhat met needs or needs not met at all”** compared with 7% in 2004.

- Personal protection devices - **81% reported equipment “fully or adequately met needs”** compared with 71% in 2004, while **2% reported equipment “somewhat met needs or needs not met at all”** compared with 7% in 2004. **Arkansas Department of Health’s Section of EMS & Trauma Systems provided N-95 respirator masks and test kits to all Arkansas licensed ambulance services through a grant from the Centers for Disease Control in 2007.**

- Ambulances - **76% reported equipment “fully or adequately met needs”** compared with 69% in 2004, while **3% reported equipment “somewhat met needs or needs not met at all”** compared with 4% in 2004.

## **Billing**

***Q13. How does your service conduct billing activities (check all that apply)***

***Q14. Does your service use computerized billing?***

The majority of our EMERGENCY MEDICAL SERVICES service providers (76% - unchanged since 2004) reported that they bill patients directly and almost all of those (74%) use a computerized billing system to do so. Fifteen percent (15%) reported that they contract billing to an outside entity. Approximately 11% chose ‘other’ and most of those (86% total) either did not bill (43%) or the billing was handled by the parent company or hospital (43%).

***Q15. Does your service have internet access?***

***Q16. If your answer to #15 is yes, is your internet access:***

- Dial up***
- High Speed (DSL)***
- Other***

**Almost all (96% - up from 90% in 2004) of respondents had Internet access.** When asked to identify what they used to do so, only four percent (4%) had dial up as opposed to high speed (DSL, T-1 lines or cable) – and all of those respondents were in rural areas.

## **Staffing/Personnel Needs**

***These next two questions are about your efforts to recruit and retain health care providers (excluding support staff). Please use the following response categories: 1= Very difficult, 2 = Fairly difficult, 3 = Somewhat difficult, 4 = A little difficult, 5 = Not at all difficult***

***Q17. To what extent does your service have difficulty recruiting health care providers (excluding support staff)?***

***Q18. To what extent does your service have difficulty retaining health care providers (excluding support staff)?***

Questions measuring ambulance services’ perceptions about the ability to recruit and retain staff indicate that concerns in both areas are increasing. **In 2004, forty-two percent (42%) of EMS services reported that it was “very or fairly difficult” for them to recruit health care providers; in 2008, this percentage has risen to fifty-three (53%).** Forty-two percent (42%) of EMS services surveyed in 2008 expressed that it was “a little or somewhat difficulty” to recruit health care providers.

**In 2004 when asked whether it was “very or fairly difficult” for them to retain health care providers, only 21% responded this way; in 2008, this perception has risen to 31%.** Fifty-two (52) of EMS services surveyed in 2008 expressed that it was “a little or somewhat difficulty” to retain health care providers.

Table 2 below provides a snapshot of certified pre-hospital professional in the State of Arkansas over the last five years. There has been a 9% growth rate for EMT Basic’s, 8.1 percent increase in Intermediates and an **8.8 percent increase in the number of paramedics.** The majority (82%) of the ambulance fleet is equipped at the advanced level, however, only one quarter of the EMT workforce is certified at the Paramedic level. This indicates that there may be an extreme underutilization of available advanced level ambulances within the state.

**Table 2. Arkansas EMT Staffing**

EMT Level	Year of Report					2003-2007	
	2003*	2004*	2005*	2006*	2007*	Totals	Percent
Basic/Ambulance	3811	4004	3959	4175	4219	20168	71.52%
Intermediate	132	162	160	167	161	782	2.77%
Paramedic	1365	1374	1419	1554	1539	7251	25.71%
Total EMTs	5308	5540	5538	5896	5919	28201	100.00%
*Data obtained from CERTScan							

## Barriers to Retention

***Q19-28. In your opinion, to what extent do the following issues act as barriers to retention of local individuals into the local EMS system? Please use the following response categories: 1=Major Barrier, 2=somewhat of a Barrier, 3=Not a Barrier.***

Emergency Medical Service providers were asked about barriers to retention of EMTs in the local EMS system. Table 3 highlights the results of analyses of these questions from both the 2004 and 2008 Needs Assessment.

Improvement and integration of Emergency Medical Services is a priority in the Arkansas FLEX Program which is why Flex funds have been used to support EMS training sites across the state by purchasing equipment and providing partial scholarship support to EMTs to advance to Paramedic Level in rural areas.

**Table 3**

**Major Barriers to Retention**

	2004 Major Barrier	2004 Somewhat of a barrier %	2004 Not a Barrier %	2008 Major barrier %	2008 Somewhat of a barrier %	2008 Not a Barrier %
Inadequate or low pay	40	37	23	47	27	26
Time away from family	20	55	26	18	64	18
Training requirements	6	48	46	18	30	52
Long hours	19	54	27	14	63	23
Stress of EMS work	13	62	26	7	56	37
Poor retention effort	9	46	44	7	53	40
No interest in EMS	15	32	53	7	45	48
Physical demands	3	49	48	5	50	45
Health hazards	1	49	50	5	36	59
Medical liability	3	37	61	1	34	65

\*Percentage in table may sum up to more than 100% due to rounding.

**Inadequate or low pay has consistently remained at the top of the chart for barriers to retention of EMS personnel.** The Bureau of Labor Statistics provides the median and average wages for all occupations. Table 4 below provides both hourly and annual wages for EMTs nationwide.

Percentile	10	25	50 (Median)	(Average)	75	90
Hourly Wage	\$8.73	\$10.75	\$13.66	\$14.84	\$17.76	\$22.83
Annual Wage (2)	\$18,150	\$22,360	\$28,400	\$30,870	\$36,940	\$47,480

<http://www.bls.gov/oes/current/oes292041.htm> (accessed September 30, 2008)

According to the Bureau of Labor Statistics, Arkansas is in the bottom quartile of the pay scale for EMS workers. **From 2004 to 2008, the percentage of respondents reporting inadequate or low pay as a barrier to retention has risen from 40% to 47%.**

Although the percentage identified for “**time away from family**” went down slightly from 2004 to 2008, it is still reported as the second highest identified barrier to retention.

Training requirements jumped from six percent (6%) in 2004 to eighteen percent (18%) in 2008. Advances in medical technologies will continue to demand that pre-hospital providers seek continuing education as a necessary component of the EMS profession.

**Grant Assistance Needs** (question 29-31)

Many rural ambulance services have no formal budget process and hold fundraisers and apply for grants when balances get low. Grants can be an important source of funding for such things as capital equipment and continuing education. Two such examples include the USDA Community Facilities Grant Program, (for communities with a population less than 20,000), and the Arkansas Department of Rural Services, (for communities with populations of 3,000 or less). Both can be used to address fire, rescue and public safety needs. Over 60% of services surveyed reported they do not have an employee who has experience applying for grant assistance.

Questions were included on the survey to determine if any changes have occurred in the utilization of grant funds for Arkansas EMS services. Those **actively seeking grant funding went from thirty-eight percent (38%) in 2004 to fifty-three (53%) in 2008**. Fifty-one percent of the respondents in 2004 applied for grant assistance compared with 57% in the current survey.

Having the ability to analyze results by rural vs. urban counties is new to the 2008 Assessment. As already stated, a little over half (53%) of all respondents reported applying for grant assistance. When analyzed by area, fifty-six percent (56%) of rural respondents and forty-nine percent (49%) of urban respondents have made grant applications. (It is important to note that fifty-four percent (54%) of the respondents to the current needs assessment are privately owned entities and are ineligible for many of the grant funding opportunities).

Table 5: Grant Assistance Needs Questions	Response	Urban		Rural		Total	
		Count	%	Count	%	Count	%
Q29_Does your service actively seek out and apply for grant assistance?	No	24	51	37	44	61	47%
	Yes	23	49	47	56	70	53%
Q30_Has your service ever applied for grant assistance?	No	24	51	32	38	56	43%
	Yes	23	49	52	62	75	57%
Q31_Is there a member of your service who has experience applying for grant assistance?	No	27	57	51	61	78	60%
	Yes	20	43	33	39	53	40%

## **Emergency Preparedness**

In the aftermath of September 11, 2001, every Arkansan understands the importance of emergency preparedness. Likewise, service providers understand that determining the degree to which their services are prepared to deal with emergencies is vital. Two new areas – leadership training for EMS managers and training courses for medical directors – were added to the 2008 Needs Assessment.

For each type of emergency, services were asked to indicate whether or not a member of their service had received the appropriate training; whether the service had a standard operating guide or procedure for each emergency; and whether training courses for medical directors and leadership training for EMS managers had been provided.

### **Q32. Has any of your staff received training to respond to the following?**

- a) Hazardous Materials**
- b) Bioterrorism/Weapons of Mass Destruction**
- c) Explosions**
- d) Radioactive Materials**
- e) Mass Immunizations**
- f) Training classes for Medical Directors**
- g) Leadership training for EMS Managers**

**The majority of respondents (92% in 2008 vs. 91% in 2004) reported that they had received training to respond to hazardous materials.** Training for bioterrorism and weapons of mass destruction remained at 74% from 2004 to 2008. It is interesting to note that in urban areas, the percentage is 83% compared with 69% in rural areas. In 2004, fifty-nine percent (59%) reported that they received training to respond to radioactive materials. This percentage decrease to 57% in 2008. In 2004, one quarter of respondents reported that they had received training for mass immunizations; in 2008, this percentage rose to 59%.

### **Q33. Does your service have a standard operating guide or procedure for the following (see a-g above)**

The percentage of respondents having a standard operating guide or procedure for hazardous materials remained at 80% from 2004 to 2008. Other changes from 2004 to 2008 in the percentage of respondents reporting that they had a standard operating guide or procedures for emergencies included:

- Bioterrorism/weapons of mass destruction – dropped slightly from 51% in 2004 to 50% in 2008;
- Radioactive materials – remained at 47%;
- Explosions – rose from 43% in 2004 to 50% in 2008;
- Mass immunizations – rose from 21% in 2004 to 37% in 2008.

## **Inclusion of Training for Medical Directors and EMS Leadership Training**

Addressing emergency medical services (EMS) in rural areas is a core component of the Medicare Rural Hospital Flexibility Program (FLEX). Patient outcome and the quality of care depend on the care provided by EMS personnel at the scene of an emergency. As in any field of endeavor, the education process is essential to the success of the provision of emergency medical services (EMS). This can be achieved through the provision of efficient and effective training for EMS managers and medical directors focusing on care integration and networking, as well as quality and performance improvement.

EMS medical oversight (medical direction) may be “direct” (on-line) or “indirect” (off-line). Direct (on-line) medical oversight is the provision of real-time medical authority, leadership or advice by a physician or physician-designee to the EMT in the field by radio, telephone or other communication device (or when physically on-scene). Indirect (off-line) medical oversight is provided by the physician who is responsible for the overall medical care provided by the EMS service or system.

When asked if there were **training courses provided for medical directors, only 23% said yes and only 17% said they had a standard operating procedures (SOP) or guide for such training.** Only 36% of respondents reported having Leadership training for rural EMS managers and only 18% had SOP or guides for this training. Responses in both areas demonstrate that there is need for attention in this area.

## **Priority Needs**

In order to help respondents identify and rank the greatest needs of EMS services as a whole, a list was provided with twelve different topic areas. Respondents were asked to rank their service’s top five priority needs or concerns, with the highest priority being 1 and the fifth highest priority being ranked 5. Respondents were only asked to rank the top five areas which meant that five of the ten items would be ranked while other five topics would not receive a rank.

If an item was not given a rank, it was assigned a value of ‘8’, which is the midpoint between the range of values from 6-10. When a mean analysis is performed on the ten items, this allows one to easily see which items were more or less important to respondents. What this essentially means is that respondents ranked areas having an average rank of five or less were ranked often and highly by respondents. Areas that have an average rank of six or greater were ranked less often and less highly by respondents. Table 6 below shows the twelve identified needs in their order of ranking, with the highest priority at the top and the lowest at the bottom.

As can be seen in table 6, **recruitment and retention of EMS personnel is the highest priority followed by financial needs, training and upgrading of EMS personnel, communication equipment and lastly continuing education for EMS personnel.**

**Q34. From the list below, please rank your service's top priority needs or concerns. For example, please rank your highest priority as 1, your second highest priority as 2, and so on until you have ranked your top 5.**

**Table 6**  
**Priority Ranking of Needs**

Rank	Label
1	Priority Needs: Recruitment and retention of EMS personnel
2	Priority Needs: Financial Needs (reimbursement for services, concerns about sustainability, etc.)
3	Priority Needs: Training and upgrading EMS personnel
4	Priority Needs: Communication Equipment
5	Priority Needs: Continuing Education for EMS personnel
6	Priority Needs: Quality Assurance
7	Priority Needs: Medical Equipment (non-disposable)
8	Priority Needs: Hospital Relations
9	Priority Needs: Computers/Software
10	Priority Needs: Training equipment needs (such manikins, KEDs, long spine boards)
11	Priority Needs: Equipment for Hazmat and/or Bioterrorism response
12	Priority Needs: Supply needs (such as dressings, medications, etc.)

\*Percentage in table may sum up to more than 100% due to rounding.

When separating the responses into rural vs. urban areas, these priorities were identical with the exception of non-disposable medical equipment. For the rural, non-MSA counties, this need fell in the top 7 whereas it was at #9 for the urban counties.

EMTs have shorter distances to transport patients in urban areas than in rural areas – even in a state as small as Arkansas. Some equipment (such as defibrillator batteries and oxygen amounts) are not used up as quickly on shorter runs, so are not as big an issue as they might be in rural areas. In rural counties, these supplies are needed for longer periods of time due to the distance from facilities and longer time during transport. This means in rural areas, they constantly have to replace exhausted equipment and this ends up being a greater expense to small ambulance services.

Results to questions measuring perceptions about the ability of those providing EMS services to recruit and retain staff demonstrated that as a group, **over half (53%) felt it was 'very or fairly difficult' for them to recruit health care providers.** In 2004 *this percentage was 42%*. When divided into urban vs. rural, the rural respondents were at 59% whereas those in urban areas were at 43%.

In 2004, only 21% of respondents felt that retaining pre-hospital health care professionals was as an issue. Findings from the current assessment show that EMS providers see both recruitment and retention as growing issues.

## Other Needs

**Q35. Please discuss any other needs your service has concerning your service's ability to continue providing quality EMS services to your area.**

An open ended question was added to the survey to allow EMS service providers the opportunity to provide their feedback about needs that were not measured by the survey.

Approximately 15% of the 131 returned surveys contained additional comments in this section. The most frequently mentioned topic under 'other needs' was **making grants available to private EMS providers**. This was mentioned in context of grant funding - specifically concerning the purchase of AWIN radios. The need for a statewide EMS trauma system was addressed as well as a shortage of paramedics – which could fall under **recruitment and retention**. Needs already identified in the priority listing, recruitment and retention, financial concerns and ambulances were also again mentioned in this section.

## Manpower Statistics and Demographics

**Q36. Your service is: (check only the highest level of care that applies to your service)**

*Table 7. What is your highest level of licensure?*

Licensure	2004		2008	
	Count	Percent	Count	Percent
Paramedic Life Support	77	67.54	100	77.52%
1-B	19	16.67	15	11.63%
Air Ambulance	5	4.39	8	6.20%
Special Purpose	4	3.51	3	2.33%
Advanced Response	2	1.75	2	1.55%
1-A	7	6.14	1	0.78%

\*Percentage in table may sum up to more than 100% due to rounding. Two service providers did not respond to the above question in 2008.

Most EMS services responding to the survey were Paramedic Life Support Services (78%), followed by I-B services (12%).

**Q37. Your service is: (check all that apply):**

**Table 8. Base of Operations**

Type of Service	2008	
	Count	Percent
Private-based	71	54.20%
Hospital- based	18	13.74%
Volunteer-based	17	12.98%
Fire-based	14	10.69%
Public based	11	8.40%

\*Percentage in table may sum up to more than 100% due to rounding.

Table 8 above accurately represents the total population of EMS service providers in the state of Arkansas. Over half (54%) of the respondents to the survey indicated their service was classified as a “Private” service.

**Q38 Excluding support staff, how many of your health care providers (all levels) are:**

**Table 9. Service Provider Staffing**

Level of Certification	Paid EMTs	Paid Volunteers	Unpaid Volunteers	Totals	Percent
EMT	2088	87	1	2176	48.79%
EMT-I	172	0	5	177	3.97%
EMT-P	1703	32	1	1736	38.92%
EMT-Instructor	368	2	1	371	8.32%

The above table indicates staffing for ambulance service providers in that a majority of paramedics and intermediates are working in the pre-hospital emergency profession. This also indicates that several paramedics and intermediates are working at two or more ambulance services.

As outlined in the *Arkansas Emergency Medical Service 2007 Survey, Past and Present Paramedics* published April 2008, **14% of active paramedics reported working for two or more ambulance services.** *This survey may be viewed at the following website: [http://www.healthyarkansas.com/ems/pdf/2007\\_ems\\_paramedics\\_survey.pdf](http://www.healthyarkansas.com/ems/pdf/2007_ems_paramedics_survey.pdf)*

**Q39. At this time how many EMT (all levels) are you short for proper staffing?**

Collectively, ambulance service providers reported a shortage of EMTs at all levels. Ambulance service providers surveyed reported they are currently short 214 EMT-Basics, 5-Intermediates and 420 paramedics. Utilizing 2007 Arkansas Paramedic numbers outlined in Table 2 (page 17), ambulance providers are experiencing a 21 % shortage at the paramedic level. Ambulance service providers indicated a shortage of 214 EMT-Basics, however there are currently 2,176 certified EMT-Basics identified to be

working for a licensed ambulance service provider. (Table 9, page 24) This survey indicates that a large portion of the 4,225 currently certified EMT-Basics are not working in the EMS profession or they were employed with ambulance services who did not participate in survey.

## Primary Source of Funding

### **Q40. The primary source of funding for your service would be best described as:**

**Table 10. What is your primary source of funding?**

Source of Funding	2004		2008	
	Count	Percent	Count	Percent
Medicare/Medicaid	64	57	80	63
Patient billing	17	15	27	21
City/County funding	19	17	11	9
Fund raising	2	2	5	4
Other	11	10	5	4

\*Percentage in table may sum up to more than 100% due to rounding.

As can be seen in **Table 10**, the **primary source of funding for most EMS services is still reported as Medicare/Medicaid**. This source of funding accounted for 57% of the total in 2004 and has risen to account for almost two-thirds in 2008. Patient billing has overtaken City-County funding as the second highest source of funding.

## Communications Capabilities

### **Q41. What are your radio communication capabilities? (Check all that apply)**

The type of radio communication has not changed dramatically over the last four years with one exception; there are fewer services reporting 800 MHz capability (18.4% in 2004 to 14.5% in 2008). However, almost 90% indicated they had capabilities to communicate on the VHF high (150-174 MHz) frequency compared with 83% in 2004. Another 19% could communicate on the UHF frequency (450-510 MHz) in 2008 compared with 17.6% in 2004. Finally, EMS services indicated that 7.6% had the ability to communicate on the VHF low frequency (36-50 MHz) in 2008 while this percentage was 10.9 in 2004.

### **Q42. What is the average of age of your service's radio equipment? (Check only one)**

As was the case in 2004, there is a pretty even split between radios under five years of age (52% in 2004; 49% in 2008) and those six to ten years old (43% in 2004; 44% in 2008). The percentage of those 11 years or more went from five percent in 2004 to seven percent in 2008.

**Q43. What are your radio communication capabilities with other agencies? (Check all that apply)**

As can be seen from the Table 11 below, there has been across the board improvement in the ability to communicate with other agencies. Communication between ambulance providers and fire agencies has increased by almost 10% as has communication with other EMS agencies, medical first responders, state and highway police. The one area that has not shown improvement is between EMS providers and city police.

**Table 11. What are your radio communication capabilities with other agencies?**

Agencies	2004 Count	2004 Percent	2008 Count	2008 Percent
Hospital	111	93.2	121	92.37%
Fire	96	80.6	118	90.08%
Police - County	97	81.5	113	86.26%
Other EMS Agencies	80	67.2	112	85.50%
Police - City	97	81.5	102	77.86%
Medical First Responders	71	59.6	100	76.34%
Police - State	37	31.0	44	33.59%
Police - Highway	18	15.1	34	25.95%

**Q44. Do you have Arkansas' Wireless Information Network radios?**

Table 12 Arkansas' Wireless Information Network radios							
Q44_AWIN	Level of Care						
	Advanced Response	Air Ambulance	I-A	I-B	Paramedic Life Support	Special Purpose	Total
No	0	100	0	60	47	66.67	
Yes	100%	0	100	40	53	33.33	
<b>Total</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>15</b>	<b>100</b>	<b>3</b>	<b>129</b>
Frequency Missing = 2							

Note: Two respondents did not complete this question.

**When asked if the EMS provider had the Arkansas Wireless Information Network Radios, 52% did not.** The majority of respondents provide services at the Paramedic Life Support level. Of those forty-seven (47%) reported not having AWIN radios. More rural county ambulance service providers reported not having AWIN radios (54%) compared with urban county ambulance services (46%).

**Q45. If you checked yes to question #44, please respond to the following:**

- **Base radios**
- **Portable hand-held**
- **Mobile**

Forty-one percent (41%) of respondents who had AWIN radios reported that they had base radios; seventy-eight percent (78%) reported having hand held radios; forty-nine percent (49%) reported having a mobile AWIN.

**Q46. What is the average age of your service’s AWIN radio equipment?**

Seventy-five percent (75%) of respondents who had AWIN radio equipment reported that it was two years old or less.

**Q47. Who provided the AWIN radios?**

**Table 13. Entity responsible for providing AWIN radios**

Source	% of Radios purchased by this source
City	32.0%
Federal Government	28.8%
County	18.3%
Self-purchased	14.1%
State	5.9%
Other	0.8%

**Q48. If you are a private owned ambulance service, have you been included in your county’s distribution plan of the AWIN radios?**

Two thirds of the respondents who were privately owned ambulance services (47/71) did not answer this question. However, for those that did, 80% responded that they had been included in their county’s distribution plan.

**Inverters and Personal Protective Equipment**

**Q49. Do your ambulances have inverters?**

EMS providers reported that 93% of their ambulances were equipped with inverters.

**Q50. Do you have Personal Protective Equipment (PPE) for extrication purposes?**

When asked about Personal Protective Equipment (PPE) for extrication purposes, Self Contained Breathing Apparatus (SCBA) had the largest percent of no responses with almost three quarters of respondents stating that did not have that gear.

**Table 14. Do you have Personal Protective Equipment (PPE) for extrication purposes?**

<b>PPE</b>	<b>Yes - Frequency</b>	<b>Yes - Percent</b>	<b>No - Frequency</b>	<b>No - Percent</b>
<b>SCBA</b>	36	27.48	95	72.52
<b>Pants</b>	38	29.01	93	70.99
<b>Jackets</b>	40	30.53	91	69.47
<b>Boots</b>	40	30.53	91	69.47
<b>Helmets</b>	56	42.75	75	57.25
<b>Gloves</b>	72	54.96	59	45.04
<b>Goggles</b>	102	77.86	29	22.14

**Q51. Does your service offer Emergency Vehicle Operations Courses (EVOC)?**

**Q52. Does your service use any type of driver monitoring devices and if so, what are they?**

**Sixty percent (60%) of respondents indicated they did provide Emergency Vehicle Operations Courses for their employees.** When asked if the EMS service used any type of driver monitoring devices, over three quarters of the respondents (76%) did not.

**APPENDIX A**  
**FREQUENCIES**

Q1 - Do the following items adequately meet the needs of your service –Facilities?				
Q1_Facilities	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	38	29.23	38	29.23
Does not meet needs at all	6	4.62	44	33.85
Fully meets needs	50	38.46	94	72.31
Mostly meets needs	22	16.92	116	89.23
N/A	1	0.77	117	90
Somewhat meets needs	13	10	130	100

Frequency Missing = 1

Q2 - Do the following items adequately meet the needs of your service –Garages				
Q2_Garages	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	39	29.77	39	29.77
Does not meet needs at all	12	9.16	51	38.93
Fully meets needs	39	29.77	90	68.7
Mostly meets needs	24	18.32	114	87.02
N/A	5	3.82	119	90.84
Somewhat meets needs	12	9.16	131	100

Q3 - Do the following items adequately meet the needs of your service –Ambulances				
Q3_Ambulances	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	60	46.15	60	46.15
Fully meets needs	39	30.00	99	76.15
Mostly meets needs	22	16.92	121	93.08
N/A	5	3.85	126	96.92
Somewhat meets needs	4	3.08	130	100

Frequency Missing = 1

Q4 - Do the following items adequately meet the needs of your service –Stretchers				
Q4_Stretchers	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	63	48.46	63	48.46
Fully meets needs	45	34.62	108	83.08
Mostly meets needs	18	13.85	126	96.92
Somewhat meets needs	4	3.08	130	100

Frequency Missing = 1

Q5 - Do the following items adequately meet the needs of your service –Portable Oxygen				
Q5_Portable Oxygen	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	42	32.06	42	32.06
Fully meets needs	83	63.36	125	95.42
Mostly meets needs	4	3.05	129	98.47
Somewhat meets needs	2	1.53	131	100

Q6 - Do the following items adequately meet the needs of your service –Non-disposable airway devices				
Q6_Non-disposable airway devices	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	38	29.46	38	29.46
Fully meets needs	79	61.24	117	90.7
Mostly meets needs	4	3.1	121	93.8
N/A	8	6.2	129	100

Frequency Missing = 2

Q7 - Do the following items adequately meet the needs of your service –Personal Protection Devices				
Q7_Personal Protection Devices	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	53	40.46	53	40.46
Does not meet needs at all	1	0.76	54	41.22
Fully meets needs	53	40.46	107	81.68
Mostly meets needs	23	17.56	130	99.24
Somewhat meets needs	1	0.76	131	100

Q8 - Do the following items adequately meet the needs of your service –Radio Equipment				
Q8_Radio Equipment	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	42	32.06	42	32.06
Fully meets needs	43	32.82	85	64.89
Mostly meets needs	37	28.24	122	93.13
Somewhat meets needs	9	6.87	131	100

Q9 - Do the following items adequately meet the needs of your service –Cellular Phone				
Q9_Cellular Phone	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	27	20.93	27	20.93
Does not meet needs at all	5	3.88	32	24.81
Fully meets needs	52	40.31	84	65.12
Mostly meets needs	23	17.83	107	82.95
N/A	12	9.3	119	92.25
Somewhat meets needs	10	7.75	129	100

Frequency Missing = 2

Q10 - Do the following items adequately meet the needs of your service –Training Materials				
Q10_Training Materials	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	51	38.93	51	38.93
Does not meet needs at all	2	1.53	53	40.46
Fully meets needs	35	26.72	88	67.18
Mostly meets needs	30	22.9	118	90.08
N/A	2	1.53	120	91.6
Somewhat meets needs	11	8.4	131	100

Q11 – Do the following items adequately meet the needs of your service –Q11_Defibrilator				
Q11_Defibrilator	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	43	32.82	43	32.82
Does not meet needs at all	1	0.76	44	33.59
Fully meets needs	76	58.02	120	91.6
Mostly meets needs	9	6.87	129	98.47
Somewhat meets needs	2	1.53	131	100
Q12_Pediatric_Equipment				
Q12_Pediatric Equipment	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Adequately meets needs	47	36.15	47	36.15
Does not meet needs at all	1	0.77	48	36.92
Fully meets needs	46	35.38	94	72.31
Mostly meets needs	21	16.15	115	88.46
N/A	2	1.54	117	90
Somewhat meets needs	13	10	130	100

Frequency Missing = 1

Q13a_Service Bills Directly				
Q13a_Service Bills Directly	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	32	24.43	32	24.43
Yes	99	75.57	131	100
Q13b_Billing contracted to outside entity				
Q13b_Billing contracted to outside entity	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	111	84.73	111	84.73
Yes	20	15.27	131	100
Q13c - How does your service conduct billing activities - other				
Q13c_Oth_Specify	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Don't bill	6	42.86	6	42.86
Hospital bills	4	28.57	10	71.43
Past due bill contracted w/ collection	1	7.14	11	78.57
T-1	1	7.14	12	85.71
billing department in other area	2	14.28	14	100.00

Q14_Does your service use computerized billing?				
Q14_Computerized Billing	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	34	25.95	34	25.95
Yes	97	74.05	131	100

Frequency Missing = 117

Q15_Does your service have Internet Access?				
Q15_Internet_Access	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	5	3.82	5	3.82
Yes	126	96.18	131	100

Q16_If your answer to #15 is yes, is your internet access				
Q16a_Access_Type	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Dial Up	5	4.03	5	4.03
High Speed(DSL)	111	89.52	116	93.55
Other	8	6.45	124	100

Frequency Missing = 7

Q16a_Other_Type				
Q16a_Other_Type	Frequency	Percent	Cumulative Frequency	Cumulative Percent
ADSL 256 up 256Down	1	9.09	1	9.09
Cable	3	27.27	4	36.36
T-1	2	18.18	6	54.55
T-1 connection	1	9.09	7	63.64
T1	1	9.09	8	72.73
cable	1	9.09	9	81.82
wireless	2	18.18	11	100

Frequency Missing = 120

Q17_To what extent does your service have difficulty RECRUITING health care providers (excluding support staff)?				
Q17_Recruit_Staff	Frequency	Percent	Cumulative Frequency	Cumulative Percent
A little difficult	28	21.54	28	21.54
Fairly difficult	30	23.08	58	44.62
Not at all difficult	7	5.38	65	50
Somewhat difficult	26	20	91	70
Very difficult	39	30	130	100

Frequency Missing = 1

Q18_To what extent does your service have difficulty RETAINING health care providers (excluding support staff)?				
Q18_Retain_Staff	Frequency	Percent	Cumulative Frequency	Cumulative Percent
A little difficult	37	28.24	37	28.24
Fairly difficult	15	11.45	52	39.69
Not at all difficult	23	17.56	75	57.25
Somewhat difficult	31	23.66	106	80.92
Very difficult	25	19.08	131	100

Rank	Label	Mean	N
1	Priority Needs: Recruitment and retention of EMS personnel	3.30597	131
2	Priority Needs: Financial Needs (reimbursement for services, concerns about sustainability, etc.)	3.746269	131
3	Priority Needs: Training and upgrading EMS personnel	4.380597	131
4	Priority Needs: Communication Equipment	5.276119	131
5	Priority Needs: Continuing Education for EMS personnel	5.873134	131
6	Priority Needs: Quality Assurance	5.940299	131
7	Priority Needs: Medical Equipment (non-disposable)	5.947761	131
8	Priority Needs: Hospital Relations	6.171642	131
9	Priority Needs: Computers/Software	6.231343	131
10	Priority Needs: Training equipment needs (such as manikins, KEDs, long spine boards)	6.604478	131
11	Priority Needs: Equipment for Hazmat and/or Bioterrorism response	6.746269	131
12	Priority Needs: Supply needs (such as dressings, medications, etc.)	7.067164	131

Q19_ To what extent do the following issues act as barriers to RETENTION of local _ Time away from Family				
Q19_Time away from family	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	24	18.32	24	18.32
Not a barrier	23	17.56	47	35.88
Somewhat of a barrier	84	64.12	131	100
Q20_ To what extent do the following issues act as barriers to RETENTION of local _ Long hours				
Q20_Long hours	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	18	13.74	18	13.74
Not a barrier	30	22.9	48	36.64
Somewhat of a barrier	83	63.36	131	100
Q21_ To what extent do the following issues act as barriers to RETENTION of local _ training requirements				
Q21_training requirements	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	23	17.56	23	17.56
Not a barrier	68	51.91	91	69.47
Somewhat of a barrier	40	30.53	131	100
Q22_ To what extent do the following issues act as barriers to RETENTION of local _ stress of EMS work				
Q22_stress of EMS work	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	9	6.92	9	6.92
Not a barrier	48	36.92	57	43.85
Somewhat of a barrier	73	56.15	130	100

Frequency Missing = 1

Q23_ To what extent do the following issues act as barriers to RETENTION of local _ Inadequate or low pay				
Q23_Inadequate or low pay	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	61	47.66	61	47.66
Not a barrier	33	25.78	94	73.44
Somewhat of a barrier	34	26.56	128	100

Frequency Missing = 3

Q24_ To what extent do the following issues act as barriers to RETENTION of local _ poor retention effort				
Q24 poor retention effort	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	9	6.87	9	6.87
Not a barrier	52	39.69	61	46.56
Somewhat of a barrier	70	53.44	131	100

Q25_ To what extent do the following issues act as barriers to RETENTION of local _ physical demands				
Q25_physical demands	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	7	5.34	7	5.34
Not a barrier	59	45.04	66	50.38
Somewhat of a barrier	65	49.62	131	100

Q26_ To what extent do the following issues act as barriers to RETENTION of local _ health hazards				
Q26_health hazards	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	7	5.34	7	5.34
Not a barrier	77	58.78	84	64.12
Somewhat of a barrier	47	35.88	131	100

Q27_ To what extent do the following issues act as barriers to RETENTION of local _ no interest in EMS				
Q27_no_interest in EMS	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	9	6.87	9	6.87
Not a barrier	63	48.09	72	54.96
Somewhat of a barrier	59	45.04	131	100

Q28_ To what extent do the following issues act as barriers to RETENTION of local _ Medical liability				
Q28_medical_liability	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Major Barrier	2	1.53	2	1.53
Not a barrier	85	64.89	87	66.41
Somewhat of a barrier	44	33.59	131	100

Q29_Does your service actively seek out and apply for grant assistance?				
Q29_Grant_asst	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	61	46.56	61	46.56
Yes	70	53.44	131	100

Q30_Has your service ever applied for a grant?				
Q30_Grant_applied	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	56	42.75	56	42.75
Yes	75	57.25	131	100
Q31_Is there a member of your service who has experience applying for grant assistance?				
Q35_Grant_exper	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	78	59.54	78	59.54
Yes	53	40.46	131	100
Q32a_ Has any of your staff received training to respond to the following? Hazardous materials				
Q32a_Train_hazmat	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	10	7.63	10	7.63
Yes	121	92.37	131	100
Q32b_ Has any of your staff received training to respond to the following? Bioterrorism/WMD				
Q32b_Train_bio_wmd	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	34	25.95	34	25.95
Yes	97	74.05	131	100
Q32c_ Has any of your staff received training to respond to the following? Explosions				
Q32c_Train_explosions	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	49	37.4	49	37.4
Yes	82	62.6	131	100
Q32d_ Has any of your staff received training to respond to the following? Radioactive materials				
Q32d_Train_radioactive	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	56	42.75	56	42.75
Yes	75	57.25	131	100
Q32e_ Has any of your staff received training to respond to the following? Mass immunization				
Q32e_Train_immunize	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	54	41.22	54	41.22
Yes	77	58.78	131	100
Q32f_ Has any of your staff received training to respond to the following? Training courses for Medical Directors				
Q32f_Train_med_dir	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	101	77.1	101	77.1
Yes	30	22.9	131	100
Q32g_ Has any of your staff received training to respond to the following? Leadership training for rural EMS Manag.				
Q32g_Train_EMS Managers	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	84	64.12	84	64.12
Yes	47	35.88	131	100

Q33a_Does your service have a standard operating guide or procedure for the following? Hazardous Materials				
Q33a_SOP_hazmat	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	27	20.61	27	20.61
Yes	104	79.39	131	100

  

Q33b_Does your service have a standard operating guide or procedure for the following? Bioterrorism/WMD				
Q33b_SOP_bio_wmd	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	66	50.38	66	50.38
Yes	65	49.62	131	100

  

Q33c_Does your service have a standard operating guide or procedure for the following? Explosions				
Q33c_SOP_explosions	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	66	50.38	66	50.38
Yes	65	49.62	131	100

Q33d_Does your service have a standard operating guide or procedure for the following? Radioactive materials				
Q33d_SOP_radioactive	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	70	53.44	70	53.44
Yes	61	46.56	131	100

  

Q33e_Does your service have a standard operating guide or procedure for the following? Mass Immunizations				
Q33e_SOP_immunize	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	83	63.36	83	63.36
Yes	48	36.64	131	100

  

Q33f_Does your service have a standard operating guide or procedure for the following? Training courses for medical directors				
Q33f_SOP_medical directors	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	109	83.21	109	83.21
Yes	22	16.79	131	100

  

Q33g_Does your service have a standard operating guide or procedure for the following? Leadership training for rural EMS managers				
Q33g_SOP_leadership	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	107	81.68	107	81.68
Yes	24	18.32	131	100

Question 34. Priority Areas by Rank of Importance			
Variable	Label	Mean	N
Q34e_Recruit_retain	Priority Needs: Recruiting and retention of EMS personnel	3.30597	131
Q34d_Financial	Priority Needs: Financial Needs (reimbursement for services, concerns about sustainability, etc.)	3.746269	131
Q34a_Train_upgrade	Priority Needs: Training and upgrading EMS personnel	4.380597	131
Q34i_Comm_Equip	Priority Needs: Communication Equipment	5.276119	131

Q34g_Cont_Ed	Priority Needs: Continuing Education for EMS personnel	5.873134	131
Q34h_OA	Priority Needs: Quality Assurance	5.940299	131
Q34k_ND_Med_Equip	Priority Needs: Medical Equipment (non-disposable)	5.947761	131
Q34f_hosp_relations	Priority Needs: Hospital Relations	6.171642	131
Q34l_Computers_software	Priority Needs: Computers/Software	6.231343	131
Q34c_Train_Equipment	Priority Needs: Training equipment needs (such manikins, KEDs, long spine boards)	6.604478	131
Q34j_Hazmat_Bio_Equip	Priority Needs: Equipment for Hazmat and/or Bioterrorism response	6.746269	131
Q34b_Supplies	Priority Needs: Supply needs (such as dressings, medications, etc.)	7.067164	131

Q35_Please discuss any other needs your service has concerning your service's ability to continue providing quality EMS services to your area.				
Q50m_other	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Access to awin, Make grants available to private EMS	1	5.26	1	5.26
Basic EMT's should be able to do finger sticks	1	5.26	2	10.53
EMT not passing Paramedic National	1	5.26	3	15.79
Federal Grant Funds	1	5.26	4	21.05
More Operating Revenue	1	5.26	5	26.32
State EMS Trauma System	1	5.26	6	31.58
The use of glucometer on a basic unit	1	5.26	7	36.84
access to AWIN	1	5.26	8	42.11
all well just shortage of medics	1	5.26	9	47.37
better pay, retention of employees	1	5.26	10	52.63
computer/software computer in Ambulance	1	5.26	11	57.89
dependable transportation	1	5.26	12	63.16
funds appriated to real volunteer ems	1	5.26	13	68.42
good at this time shortage of medics only	1	5.26	14	73.68
grants exclude private services/hospital diversion	1	5.26	15	78.95
more operating revenue	1	5.26	16	84.21
need better units/ambulances	1	5.26	17	89.47
recruitment and retention	2	10.53	19	100

Frequency Missing = 112

Question 36. Your service is: (Check only the highest level of care that applies to your service)

Q36_Level_of_care				
Q36_Level_of_care	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Advanced Response	2	1.55	2	1.55
Air Ambulance	8	6.2	10	7.75
I-A	1	0.78	11	8.53
I-B	15	11.63	26	20.16
Paramedic Life Support	100	77.52	126	97.67

Special Purpose	3	2.33	129	100
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Q37. Your service is:		
	Frequency	Percent
Private-based	71	54.20%
Hospital-based	18	13.74%
Volunteer-based	17	12.98%
Fire-based	14	10.69%
Public-based	11	8.40%

Q38 Excluding support staff, how many of your health care providers (all levels) are:					
	Paid EMTs	Paid Volunteers	Unpaid Volunteers		
EMT	2088	87	1	2176	48.79%
EMT-I	172	0	5	177	3.97%
EMT-P	1703	32	1	1736	38.92%
EMT-INSTRUCTOR	368	2	1	371	8.32%

Q39. At this time how many EMT (all levels) are you short for proper staffing?

Q39. At this time, how many Emergency Medical Technicians (all levels) are you short for proper staffing?	# of facilities responding per county	1) EMT-Ambulance	2) EMT-Intermediate	3) EMT-Paramedic
Arkansas	2	2	0	5
Ashley	2	2	0	4
Baxter	1	2	0	3
Benton	10	11	0	37
Boone	1	0	0	3
Bradley	1	1	0	2
Calhoun	1	10	0	5
Carroll	2	6	0	8
Chicot	2	2	0	9
Clark	1	1	0	2
Clay	1	0	0	1
Cleburne	4	11	0	3
Cleveland	1	1	0	1
Columbia	1	0	0	2
Conway	1	1	0	1
Craighead	5	4	0	11
Crawford	1	6	0	17
Crittenden	5	48	0	19
Cross	1	0	0	0
Dallas	1	1	0	1
Desha	4	0	0	1

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<b>Q39. At this time, how many Emergency Medical Technicians (all levels) are you short for proper staffing?</b>	<b># of facilities responding per county</b>	<b>1) EMT-Ambulance</b>	<b>2) EMT-Intermediate</b>	<b>3) EMT-Paramedic</b>
Drew	1	4	0	1
Faulkner	2	3	0	17
Franklin	1	0	0	0
Fulton	1	1	0	3
Garland	4	2	0	12
Grant	1	3	0	17
Greene	1	0	0	4
Hempstead	2	0	0	5
Hot Spring	1	2	0	5
Howard	1	0	0	0
Independence	2	1	0	8
Izard	1	0	0	5
Jackson	1	3	0	4
Jefferson	2	0	0	13
Johnson	1	0	0	4
Lafayette	2	6	0	7
Lawrence	1	4	0	5
Little River	1	0	0	3
Lee	1	0	0	0
Lincoln	1	0	0	0
Logan	2	0	0	3
Lonoke	3	5	3	9
Madison	1	0	0	8
Marion	1	2	0	2
Miller	1	0	0	15
Mississippi	2	0	0	1
Monroe	1	0	0	1
Montgomery	1	5	0	2
Nevada	1	0	0	1
Newton	1		0	1
Ouachita	1	2	2	6
Perry	1	0	0	3
Phillips	1	0	0	3
Pike	2	0	0	1
Poinsette	3	8	0	10
Polk	1	1	0	4
Pope	2	1	0	5
Prairie	2	2	0	0

<b>Q39. At this time, how many Emergency Medical Technicians (all levels) are you short for proper staffing?</b>	<b># of facilities responding per county</b>	<b>1) EMT-Ambulance</b>	<b>2) EMT-Intermediate</b>	<b>3) EMT-Paramedic</b>
Pulaski	4	3	0	40
Randolph	1	0	0	1
Saline	1	0	0	1
Scott	1	0	0	2
Searcy	2	4	0	0
Sebastian	1	0	0	10
Sevier	1	1	0	3
Sharp	1	2	0	4
St. Francis	1	0	0	4
Stone	1	1	0	7
Union	5	16	0	17
Van Buren	2	1	0	8
Washington	3	6	0	14
White	2	12	0	3
Woodruff	2	4	0	8
Yell	1	0	0	3

<b>Q40_The primary source of funding for your service would be best described as:</b>				
<b>Q40_Prim_fund_srce</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
<b>City/County funding</b>	11	8.59	11	8.59
<b>Fund raising</b>	5	3.91	16	12.5
<b>Medicare/Medicaid</b>	80	62.5	96	75
<b>Other</b>	5	3.91	101	78.91
<b>Patient billing</b>	27	21.09	128	100

Frequency Missing = 3

<b>Q40a_Other Description</b>				
<b>Q40a_Other</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
<b>Industry</b>	1	20	1	20
<b>Insurance Inc</b>	1	20	2	40
<b>Membership</b>	1	20	3	60
<b>contract with county</b>	1	20	4	80
<b>donations</b>	1	20	5	100

Frequency Missing = 126

**Q41. What are your radio communication capabilities? (Check all that apply)**

<b>Q41_VHF low (36-50) MHz</b>				
<b>Q41-1_rad_VHFlow</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	121	92.37	121	92.37
Yes	10	7.63	131	100
<b>Q41b_VHF high (150-174 MHz)</b>				
<b>Q41-2_rad_VHFhigh</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	14	10.69	14	10.69
Yes	117	89.31	131	100
<b>Q41c_UHF (450-510 MHz)</b>				
<b>Q41_3_rad_UHF</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	106	80.92	106	80.92
Yes	25	19.08	131	100
<b>Q41d_800mHz</b>				
<b>Q41_4_rad_800mHz</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	112	85.5	112	85.5
Yes	19	14.5	131	100

<b>Q42_What is the average age of your service's radio equipment?</b>				
<b>Q42_radio_age</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0 - 5 years	63	48.84	63	48.84
11 years or older	9	6.98	72	55.81
6 to 10 years	57	44.19	129	100

Frequency Missing = 2

**Q43. What are your radio communication capabilities with other agencies? (Check all that apply)**

<b>Q43_1_r_pol_city</b>				
<b>Q43_1_r_pol_city</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	29	22.14	29	22.14
Yes	102	77.86	131	100

<b>Q43_2_r_pol_cnty</b>				
<b>Q43_2_r_pol_cnty</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	18	13.74	18	13.74
Yes	113	86.26	131	100

Q43_3_r_pol_st				
Q43_3_r_pol_st	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	87	66.41	87	66.41
Yes	44	33.59	131	100

Q43_4_r_pol_hwy				
Q43_4_r_pol_hwy	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	97	74.05	97	74.05
Yes	34	25.95	131	100

Q43_5_r_fire_resc				
Q43_5_r_fire_resc	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	13	9.92	13	9.92
Yes	118	90.08	131	100

Q43_6_r_hosp				
Q43_6_r_hosp	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	10	7.63	10	7.63
Yes	121	92.37	131	100

Q43_7_r_medIstresp				
Q43_7_r_medIstresp	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	31	23.66	31	23.66
Yes	100	76.34	131	100

Q43_8_r_otherems				
Q43_8_r_otherems	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	19	14.5	19	14.5
Yes	112	85.5	131	100

Q44. Do you have Arkansas' Wireless Information Network radios?

Q44_AWIN				
Q44_AWIN	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	68	51.91	68	51.91
Yes	63	48.09	131	100

**Q45. If you checked yes to question #44, please respond to the following:**

<b>Q45_1_base_rad</b>				
<b>Q45_1_base_rad</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	105	80.15	105	80.15
1	18	13.74	123	93.89
2	5	3.82	128	97.71
5	1	0.76	129	98.47
10	2	1.53	131	100
<b>Q45_2_hand_held</b>				
<b>Q45_2_hand_held</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	82	62.6	82	62.6
1	15	11.45	97	74.05
2	6	4.58	103	78.63
3	4	3.05	107	81.68
4	3	2.29	110	83.97
5	5	3.82	115	87.79
6	3	2.29	118	90.08
7	1	0.76	119	90.84
8	1	0.76	120	91.6
10	2	1.53	122	93.13
12	1	0.76	123	93.89
16	2	1.53	125	95.42
21	1	0.76	126	96.18
58	1	0.76	127	96.95
104	1	0.76	128	97.71
136	3	2.29	131	100

<b>Q45_3_mobile</b>				
<b>Q45_3_mobile</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	100	76.34	100	76.34
1	14	10.69	114	87.02
2	3	2.29	117	89.31
4	1	0.76	118	90.08
5	2	1.53	120	91.6
6	1	0.76	121	92.37
8	2	1.53	123	93.89
9	1	0.76	124	94.66
11	2	1.53	126	96.18
13	1	0.76	127	96.95
38	1	0.76	128	97.71
49	3	2.29	131	100

**Q46. What is the average age of your service's AWIN radio equipment?**

Q46_AWIN_age				
Q46_AWIN_age	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0 - 2 years	48	75	48	75
3 to five years	16	25	64	100

Frequency Missing = 67

**Q47. Who provided the AWIN radios?**

Obs	_TYPE_	_FREQ_	Self-purchased	City provided	County provided	State provided	Federally provided
1	0	131	67	152	87	28	137

**Q48. If you are a private owned ambulance service, have you been included in your county's distribution plan?**

Q48_r_dist_plan				
Q48_r_dist_plan	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	9	25	9	25
Yes	27	75	36	100

**Q49. Do your ambulances have inverters?**

	Frequency	%
# of ambulances that have inverters	649	93.25%
# of ambulances that do not have inverters	47	6.75%
	696	100.00%

**Q50. Do you have Personal Protective Equipment (PPE) for extrication purposes? (Check all that apply)**

Q50_1_PPE_goggles				
Q50_1_PPE_goggles	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	29	22.14	29	22.14
Yes	102	77.86	131	100

Q50_2_PPE_helmets				
Q50_2_PPE_helmets	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	75	57.25	75	57.25
Yes	56	42.75	131	100

<b>Q50_3_PPE_jackets</b>				
<b>Q50_3_PPE_jackets</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	91	69.47	91	69.47
Yes	40	30.53	131	100

<b>Q50_4_PPE_pants</b>				
<b>Q50_4_PPE_pants</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	93	70.99	93	70.99
Yes	38	29.01	131	100

<b>Q50_5_PPE_boots</b>				
<b>Q50_5_PPE_boots</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	91	69.47	91	69.47
Yes	40	30.53	131	100

<b>Q50_6_PPE_gloves</b>				
<b>Q50_6_PPE_Gloves</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	59	45.04	59	45.04
Yes	72	54.96	131	100

<b>Q50_7_PPE_SCBA</b>				
<b>Q50_7_PPE_SCBA</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	95	72.52	95	72.52
Yes	36	27.48	131	100

<b>Q50_8_other</b>				
<b>Q50_8_other</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	112	85.5	112	85.5
Yes	19	14.5	131	100

<b>Q50_9_other_exp</b>				
<b>Q50_9_other_exp</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
Don't do extrication	7	58.33	7	58.33
Haz-mat suits, Resp. Bullet Prof Vest	1	8.33	8	66.67
Level 2 hazmat	1	8.33	9	75
helmet with visor	1	8.33	10	83.33
jaws of life	1	8.33	11	91.67
level 2 hazmat	1	8.33	12	100

Frequency Missing = 119

<b>Q51_Does your service offer Emergency Vehicle Operations Courses (EVOC)</b>				
<b>Q51_EVOC</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	52	39.69	52	39.69
Yes	79	60.31	131	100

<b>Q52_Does your service use any type of driver monitoring devices and if so, what are they?</b>				
<b>Q52_driv_mon_dev</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
No	100	76.34	100	76.34
Yes	31	23.66	131	100

<b>Q52a_yes_explain</b>				
<b>Q52o_yes_explain</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
AUL's	1	3.85	1	3.85
AVL	3	11.54	4	15.38
Drive Cam	5	19.23	9	34.62
GPS Tracking	2	7.69	11	42.31
In house Training	1	3.85	12	46.15
Road Safety "black box"	3	11.54	15	57.69
Road Safety System	1	3.85	16	61.54
Sky Tracking	1	3.85	17	65.38
Universal Tracking Solution	3	11.54	20	76.92
Universal Tracking Solution	3	11.54	23	88.46
VDO	1	3.85	24	92.31
street eagle GPS	1	3.85	25	96.15
vdo	1	3.85	26	100

Frequency Missing = 105

**APPENDIX B**  
**2008 NEEDS ASSESSMENT SURVEY**

**Arkansas Department of Health  
Section of Emergency Medical Services and Trauma Systems  
Office of Rural Health and Primary Care**

**Emergency Medical Services (EMS) Needs Assessment Survey 2008**

**DEAR SERVICE MANAGER:**

**Introduction**

The Arkansas Department of Health's Section of Emergency Medical Services and Trauma Systems and the Office of Rural Health and Primary Care have joined together to form a partnership to conduct this survey of all EMS providers in Arkansas.

The purpose of conducting this survey is to gather data to better understand the needs and viewpoints of Arkansas' EMS providers - who provide much-needed and vital services to the communities they serve. Results from the survey will be used to help allocate staff resources and federal and state funding to improve the level of service of EMS providers in Arkansas.

**Directions**

**We ask that you - or the current director or manager for this EMS service - complete the survey for your service** according to the directions in the survey and mail it back to us in the postage-paid envelope provided.

**Please note:** *If your service is licensed to provide more than one type of care (for example, Paramedic Life Support, Basic Life Support, or Intermediate Life Support), we ask that you please fill out only one survey per service area. Please do not distinguish your answers between the types of care provided by your service; answer the questions based on the highest level of care provided by your service.*

Your opinions are extremely valuable and will be given important consideration as we determine how to allocate future resources and funding to improve EMS services in Arkansas. Therefore, we kindly ask that you complete this survey to help us understand your needs and concerns as an EMS provider.

**Please return the survey to the below address by May 9, 2008.**

**For questions about the survey, contact:**

David Taylor, Section Chief  
Section of EMS and Trauma Systems  
5800 West 10<sup>th</sup> St. Suite 800  
Little Rock, AR 72204-1763  
(501) 661-2262

E-mail: [david.taylor@arkansas.gov](mailto:david.taylor@arkansas.gov)

**Ambulance Service Name:** \_\_\_\_\_ **AR. License #** \_\_\_\_\_

**Individual Completing Survey:** \_\_\_\_\_

**Contact Phone Number:** (\_\_\_\_)-\_\_\_\_-\_\_\_\_\_

**Equipment and Supply Needs**

Based on your service assets and current condition of your equipment, please rate the following items as to whether they adequately meet the needs of your service. Please use the following response categories:  
1=Does not meet needs at all, 2=Somewhat meets needs, 3=Mostly meets needs, 4=Adequately meets needs, 5=Fully meets needs.

Please circle only **one** answer per question.

	Does not meet needs at all	Somewhat meets needs	Mostly meets needs	Adequately meets needs	Fully meets needs	Not Applicable
1. Facilities (meetings, etc.)	1	2	3	4	5	N/A
2. Garages	1	2	3	4	5	N/A
3. Ambulances	1	2	3	4	5	N/A
4. Stretchers/Cots	1	2	3	4	5	N/A
5. Portable oxygen unit	1	2	3	4	5	N/A

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6.	Non-disposable airway devices	1	2	3	4	5	N/A
7.	Personal protection equipment	1	2	3	4	5	N/A
8.	Radio equipment	1	2	3	4	5	N/A
9.	Cellular telephones	1	2	3	4	5	N/A
10.	Training materials	1	2	3	4	5	N/A
11.	Defibrillator	1	2	3	4	5	N/A
12.	Pediatric equipment	1	2	3	4	5	N/A

13. How does your service conduct billing activities? (*Check all that apply*)

- 1) Service bills directly
- 2) Billing contracted to outside entity
- 3) Other (specify)

\_\_\_\_\_

14. Does your service use computerized billing? (*Check only one*)

- 1) Yes
- 2) No
- 3) Not applicable

15. Does your service have **Internet** access? (*Check only one*)

- 1) Yes
- 2) No

16. If your answer to #15 is yes, is your internet access:

- 1) Dial up
- 2) High Speed (DSL)
- 3) Other (specify)

\_\_\_\_\_

**Staffing/Personnel Needs**

These next two questions are about your efforts to recruit and retain health care providers (excluding support staff). Please use the following response categories: 1=Very difficult, 2=Fairly difficult, 3=Somewhat difficult, 4=A little difficult, 5=Not at all difficult.

Please circle only **one** answer per question.

	Very difficult 1	Fairly difficult 2	Somewhat difficult 3	A little difficult 4	Not at all difficult 5
17. To what extent does your service have difficulty <b>recruiting</b> health care providers (excluding support staff)?					
18. To what extent does your service have difficulty <b>retaining</b> health care providers (excluding support staff)?					

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In your opinion, to what extent do the following issues act as barriers to **retention** of local individuals into the local EMS system? Please use the following response categories: 1=Major Barrier, 2=Somewhat of a Barrier, 3=Not a Barrier.

Please circle only **one** answer per question.

	Major Barrier	Somewhat of a Barrier	Not a Barrier
19. Time away from family	1	2	3
20. Long hours	1	2	3
21. Training requirements	1	2	3
22. Stress of EMS work	1	2	3
23. Inadequate or low pay	1	2	3
24. Poor retention effort	1	2	3
25. Physical demands	1	2	3
26. Health hazards	1	2	3
27. No interest in EMS	1	2	3
28. Medical liability	1	2	3

**Grant Assistance Needs**

29. Does your service **actively** seek out and apply for **grant assistance** (local/state/federal)?  
(Check only one)

- 1) Yes
- 2) No

30. Excluding the Rural Health Services Revolving Fund (for EMS), has your service ever **applied** for grant assistance? (Check only one)

- 1) Yes
- 2) No

31. Is there a member of your service who has experience applying for grant assistance?  
(Check only one)

- 1) Yes
- 2) No

**Emergency Preparedness**

32. Has any of your staff received training to respond to the following?

Circle "Yes" **or** "No" for **EACH** area listed below.

- |   |     |    |
|---|-----|----|
| A) Hazardous Materials                        | Yes | No |
| B) Bioterrorism/Weapons of Mass Destruction   | Yes | No |
| C) Explosions                                 | Yes | No |
| D) Radioactive Materials                      | Yes | No |
| E) Mass Immunization                          | Yes | No |
| F) Training courses for medical directors     | Yes | No |
| G) Leadership training for rural EMS managers | Yes | No |

33. Does your service have a standard operating guide or procedure for the following?

Circle "Yes" or "No" for **EACH** area listed below.

- |   |     |    |
|---|-----|----|
| A) Hazardous Materials                        | Yes | No |
| B) Bioterrorism/Weapons of Mass Destruction   | Yes | No |
| C) Explosions                                 | Yes | No |
| D) Radioactive Materials                      | Yes | No |
| E) Mass Immunization                          | Yes | No |
| F) Training courses for medical directors     | Yes | No |
| G) Leadership training for rural EMS managers | Yes | No |

**Priority Needs**

34. From the list below, please rank your service's **top 5 priority needs or concerns**. For example, please rank your highest priority as 1, your second highest priority area as 2, and so on until you have ranked your top 5.

**RANK**

A)	Training and upgrading EMS personnel	
B)	Supply needs (such as dressings, medications, etc.)	
C)	Training equipment needs (such manikins, KEDs, long spine boards)	
D)	Financial needs (reimbursement for services, concerns about sustainability, etc.)	
E)	Recruitment and retention of EMS personnel	
F)	Relations with hospitals	
G)	Continuing Education for EMS personnel	
H)	Quality Assurance	
I)	Communication Equipment	
J)	Equipment for Hazmat and/or Bioterrorism response	
K)	Medical Equipment (non-disposable)	
L)	Computers/Software	

35. Please discuss any **other needs** your service has concerning your service's ability to continue providing quality EMS services to your area. Attach a separate sheet of paper, if necessary.

**Manpower Statistics and Demographics**

36. Your service is: *(Check only the highest level of care that applies to your service)*

- 1) I-B
- 2) I-A
- 3) Paramedic Life Support
- 4) Advanced Response
- 5) Special Purpose
- 6) Air Ambulance

37. Your service is: *(Check all that apply)*

- 1) Hospital-Based
- 2) Fire-Based
- 3) Private
- 4) Volunteer
- 5) Public

38. **Excluding support staff**, how many of your health care providers (all levels) are:

A. Paid staff	Number	Totals
1) EMT	_____	
2) EMT-Intermediate	_____	
3) EMT-Paramedic	_____	
4) EMT-Instructor	_____	
Total paid staff <i>(not including EMT-Instructors)</i>		_____

**B. Paid Volunteers – (receive stipends, gas and/or training reimbursement)**

1) EMT	_____	
2) EMT-Intermediate	_____	
3) EMT-Paramedic	_____	
4) EMT-Instructor	_____	
Total paid volunteers <i>(not including EMT-Instructors)</i>		_____

**C. Unpaid volunteers (no monetary pay)**

1) EMT	_____	
2) EMT-Intermediate	_____	
3) EMT-Paramedic	_____	
4) EMT-Instructor	_____	
Total unpaid volunteers <i>(not including EMT-Instructors)</i>		_____

39. At this time, how many Emergency Medical Technicians (all levels) are you short for proper staffing?

- 1) EMT- Ambulance \_\_\_\_\_
- 2) EMT- Intermediate \_\_\_\_\_
- 3) EMT- Paramedic \_\_\_\_\_

40. The **primary** source of funding for your service would be best described as:  
*(Check only one)*

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- 1) Patient billing
- 2) Medicare/Medicaid
- 3) City/County funding
- 4) Fund raising
- 5) Other

41. What are your radio communication capabilities?  
(Check all that apply)

- 1) VHF Low (36-50 MHz)
- 2) VHF High (150-174 MHz)
- 3) UHF (450-510 MHz)
- 4) 800 MHz

42. What is the average age of your service's radio equipment?  
(Check only one)

- 1) 0 to 5 years
- 2) 6 to 10 years
- 3) 11 years or older

43. What are your radio communication capabilities with other agencies?  
(Check all that apply)

- 1) Police - city
- 2) Police - county
- 3) Police - state
- 4) Police - highway
- 5) Fire/Rescue
- 6) Hospital
- 7) Medical First Responders
- 8) Other EMS agencies

44. Do you have Arkansas' Wireless Information Network radios?  
(Check only one)

- 1) Yes
- 2) No

45. If you checked yes to question # 44, please respond to the following:

		Quantity		
1)	Base Radios	YES	NO	
2)	Portable (Hand Held)	YES	NO	
3)	Mobile	YES	NO	

46. What is the average age of your service's AWIN radio equipment?  
(Check only one)

- 1) 0 to 2 years
- 2) 3 to 5 years
- 3) 6 years or older

47. Who provided the AWIN radios?

	Who Provided Radios	Check all that apply	# Radios Purchased
1)	Self-Purchased		
2)	City		
3)	County		
4)	State		
5)	Federal		
6)	Other		

48. If you are a private owned ambulance service, have you been included in your county's distribution plan of the AWIN radios?  
(Check only one)

- 1) Yes
- 2) No

If you marked **other**, please explain:

49. Do your ambulances have inverters?

1)	# of ambulances that <b>have</b> inverters	2)	# of ambulances that <b>do not</b> have inverters

50. Do you have Personal Protective Equipment (PPE) for extrication purposes?  
(Check all that apply)

- 1) Safety Goggles
- 2) Head Gear (Safety Helmets)
- 3) Jackets (such as fire turnouts)
- 4) Pants (such as fire turnouts)
- 5) Steel Toed Boots
- 6) Gloves (Heavy Duty)
- 7) SCBAs
- 8) Other

If you marked **other**, please explain:

51. Does your service offer Emergency Vehicle Operations Courses? (EVOC)

- 1) Yes
- 2) No

52. Does your service use any type of driver monitoring devices and if so, what are they?

- 1) Yes
- 2) No

If yes, please explain.

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Please return the survey to the below address by May 9, 2008.

Thank you for completing the survey, please mail in the enclosed postage-paid envelope provided to the following:

Section of EMS & Trauma Systems  
Arkansas Department of Health  
5800 West 10<sup>th</sup> St. Suite 800  
Little Rock, AR 72204-1763

**APPENDIX C**  
**2008**  
**ARKANSAS MAP OF METROPOLITAN**  
**STATISTICAL AREAS**

# Arkansas Metropolitan and Non-Metropolitan Statistical Areas

