

Arkansas Emergency Medical Services (EMS) Career Survey: The Employee's Perspective August 2006



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SECTION OF EMS & TRAUMA SYSTEMS



CENTER FOR HEALTH STATISTICS

About the Report

From July 2003 through January 2005, a survey of Arkansas Emergency Medical Technicians (EMTs) and a survey of Emergency Medical Service (EMS) providers was conducted by the Arkansas Department of Health and Human Services, Section of EMS and Trauma Systems. The purpose of these surveys was two-fold: one was to prepare for long-range educational planning for the EMTs and the other was to conduct a needs assessment of the EMS providers. The results are summarized below:

Emergency Medical Technicians

- ❖ Two thirds of all Emergency Medical Technicians (EMTs) are over the age of 35
 - ❖ Sixty-one percent (61%) are certified at the basic level.
 - ❖ Almost 60% have been at that level for over five years.
 - ❖ Eighty-two percent (82%) are not currently in school.
 - ❖ The top five reasons identified for not being in school were:
 - No job advancement opportunity
 - No income incentives
 - Family dynamics
 - Scheduling conflicts
 - Few job opportunities
 - ❖ Of the remaining 18% in school, over half are planning on going into another health related career for the higher pay.
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Emergency Medical Service Providers (EMS Needs Assessment Survey: March, 2004)

The top 5 concerns among EMS providers were:

- Financial and reimbursement needs
- Recruiting and retention of EMS personnel
- Training and upgrading EMS personnel
- Equipment needs
- Continuing Education for EMS personnel

The most frequently mentioned barriers to retention of EMTs were:

- ❖ Inadequate or low pay (40%)
 - ❖ Time away from family (20%)
 - ❖ Long hours (19%)
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Introduction

From July 2003 through January 2005, Arkansas Emergency Medical Technicians (EMTs) were given the opportunity to respond to a survey in order to provide a snapshot of their profession and to help the Section of EMS and Trauma Systems prepare for long-range educational planning.

During the same time period the EMS Needs Assessment Survey was administered to the approximately 200 EMS ambulance service providers to help understand what essential services, equipment and personnel are necessary and available to function effectively.

Although the EMS Career Survey is more of an opinion survey rather than a scientific one, the findings can provide insight about health personnel needs to leaders and communities as well as help the Section of EMS & Trauma Systems develop realistic long-range educational planning for EMTs.

Survey Administration

Over a period of three years, the Arkansas Department of Health & Human Services, Division of Health and the Office of Rural Health and Primary Care – along with the Section of Emergency Medical Services and Trauma Systems – collaborated to survey the approximately 5,700 certified Emergency Medical Technicians (EMT) in the state.

The survey was administered in July 2003, January 2004, July 2004 and January 2005 in order to coincide with the re-certification periods for EMTs. All EMTs are required to renew their certification every two years. By including the survey in the renewal packets, everyone was allowed an equal opportunity to respond. This method of distribution also kept expenses down on administration.

Overview of training required for Emergency Medical Technicians (EMTs)

In Arkansas, there are three levels of certification for EMT personnel and each requires a higher level of expertise.

EMT-B	Basic/Ambulance
EMT-I	Intermediate
EMT-P	Paramedic

The Section of Emergency Medical Services and Trauma Systems is responsible for the oversight of training necessary for all levels.

➤ **EMT-Basic/Ambulance-** As of April 2006, there were 4,175 Basic EMTs in Arkansas, accounting for approximately 70% of all certified EMTs in the state.

Skills include: Rescue and extrication, situation assessment, triage, establish and maintain airway, provide oxygen administration, CPR, hemorrhage control, shock treatment, care of poisoning and drug overdose, fracture immobilization, emergency childbirth and care of the newborn, control of psychiatric emergencies, wound management, use of EMS data forms, use of EMS communication equipment, contact lens removal and care, spinal immobilization, ability to give and receive (verbal and written) medical descriptions of patient conditions and care rendered, use of MAST, and the ability to assist with approved patient prescribed medications.

Hours of training: Curriculum must meet or exceed the Department of Transportation's National Standard Curriculum (NSC). The following hours meet the Arkansas minimum (160): didactic – 112; clinical – 24; field internship – 16 and extrication - 8.

Certification requirements: Must complete approved NSC course and be recommended by instructor. EMT-Ambulance applicant must pass National Registry of EMTs written and Arkansas state practical exam. Current CPT at healthcare provider level.

Recertification requirements: Basic EMT/EMT-Ambulance: Application, \$20 fee, current CPR and one of the following: NSC Basic EMT refresher course or 48 hours of approved continuing education.

➤ **EMT- Intermediate-** As of April 2006, there were 167 EMTs at the Intermediate level in Arkansas, accounting for approximately 3% of all certified EMTs in the state.

Skills include: All Basic skills plus placement of dual lumen airway devices (PTL/Combitube®), ventilatory support, D50W administration, intravenous access (IV) with normal saline and Ringer's solutions only.

Hours of training: Curriculum must meet or exceed the 1985 Intermediate Department of Transportation's National Standard Curriculum (NCS). The following hours meet the Arkansas minimum (115): didactic – 75; clinical – 24; field internship – 16.

Certification requirements: Must meet objectives of 1985 National Standard Curriculum- Intermediate and complete approved NSC Course, pass National Registry written and practical exam (successful completion of course includes being recommended by primary instructor and medical director of approved training program.) Must be certified at the EMT basic level prior to conducting field and clinical component of course and then must complete testing.

Recertification requirements: Application, \$20 fee, current CPR, skills verification from medical director of advanced life support service, and all of the following: NSC Basic EMT refresher course, 12 hours of continuing education at the intermediate level and 36 hours of continuing education.

➤ **Paramedic- As of April 2006, there were 1,554 EMT Paramedics in Arkansas, accounting for approximately 26% of all certified EMTs in at the state.**

Skills include: All Basic and Intermediate skills plus administration of IV fluids, ventilatory support, administration of approved drugs, nasogastric tube insertion and suction, monitoring of vital signs, mobile cardiac care consisting of ECG interpretation and monitoring, IV fluids and antiarrhythmia drugs and CPR including airway maintenance, defibrillation and endotracheal intubation. Paramedics cannot function as such unless working for a licensed Paramedic service, in a hospital emergency department, or as part of a response team within a hospital. They may work for an Intermediate service, but cannot perform any skills beyond the Intermediate level.

Hours of Training: Curriculum must meet or exceed the Department of Transportation's National Standard Curriculum of 1998. The following hours meet the Arkansas minimum (1200); didactic and laboratory- 600 hours, clinical- 300 hours, field internship, 300 hours.

Certification requirements: Must be certified at the EMT-Basic level and meet objectives of 1998 National Standard Curriculum- Paramedic and complete approved NSC Course, pass National Registry written and practical exam (successful completion of course includes being recommended by primary instructor and medical director of approved training program.) Current completion of CPR & ACLS courses.

Recertification requirements: Application, \$20 fee, current CPR, current ACLS, skills verification from medical director of ALS service, (NSC) Paramedic refresher course or 48 hours of continuing education that adheres to the NSC/Arkansas Paramedic refresher course modules and 24 hours of continuing education.

Once certified as a paramedic, an EMT can take the critical care course and become a CCCEMT/P.

➤ **CCCEMT/P - As of April 2006, there were 61 EMTs at the Critical Care level in Arkansas, accounting for approximately 4% of the Paramedics in the state and 1% of all certified EMTs.**

This course is an intense curriculum of lecture and lab training designed to prepare the experienced practitioner for the challenges of critical care during flight/ground transport. Critical Care course includes a comprehensive course overview; use of portable ventilators; oral, retrograde and nasal intubations; multi-system organ failures; X-Ray interpretation; hemodynamic monitoring; multiparameter monitoring;

implantable cardioverters and defibrillators; dialysis; high-risk OB and pediatric transports; and case scenarios. Candidates will receive lectures on rapid sequence intubation, intra-aortic balloon pump, and 12-lead ECG monitoring. Students are evaluated with an extensive written examination at the end of the course.

Prerequisite: The applicant must meet general admission requirements and have current recognition as an EMT-Paramedic and one year of experience is recommended.

Recognition: Successful completion of this course provides Critical Care EMT-Paramedic recognition of completion of additional 80 to 105 hours of continuing education hours. Course hours may vary slightly depending on training facility guidelines.

The last designation identified in the Career Survey is the EMT-Instructor.

➤ **EMT-Instructor – As of April 2006 there were 236 EMT instructors in Arkansas, accounting for approximately 4% of the EMTs in the state.**

Certification requirements:

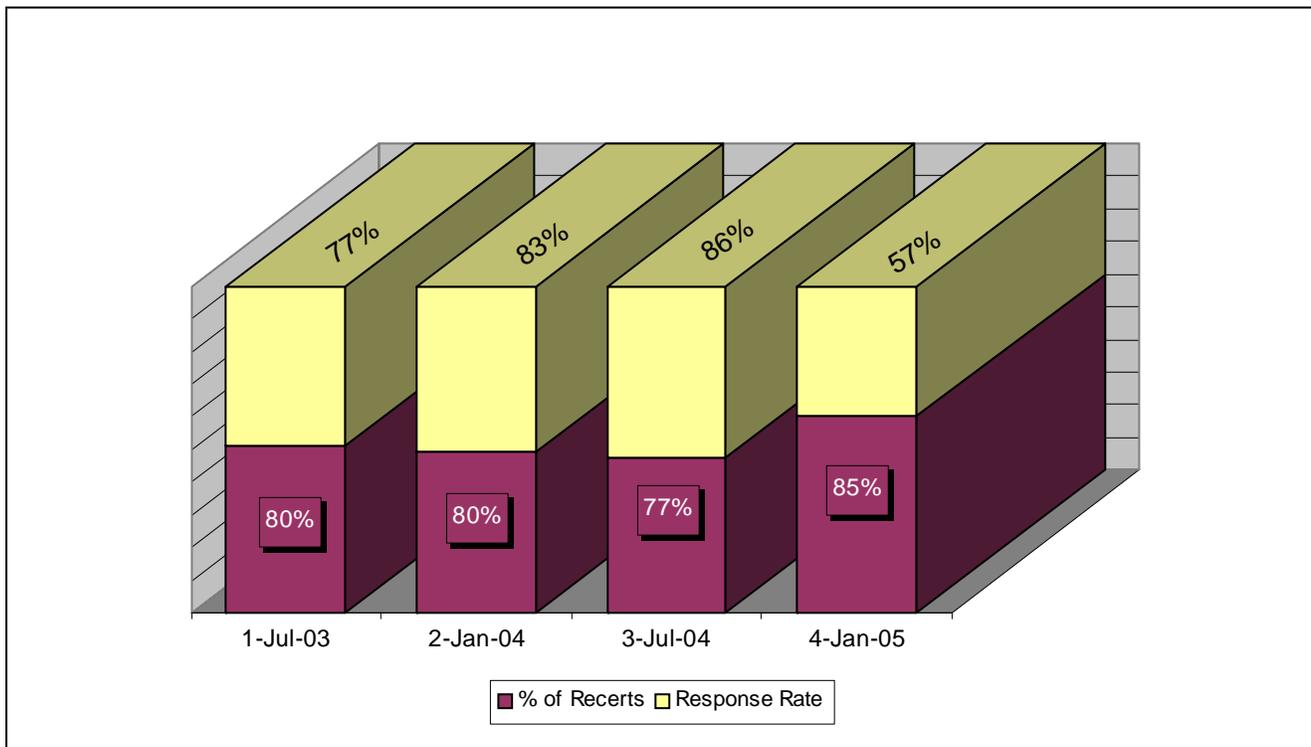
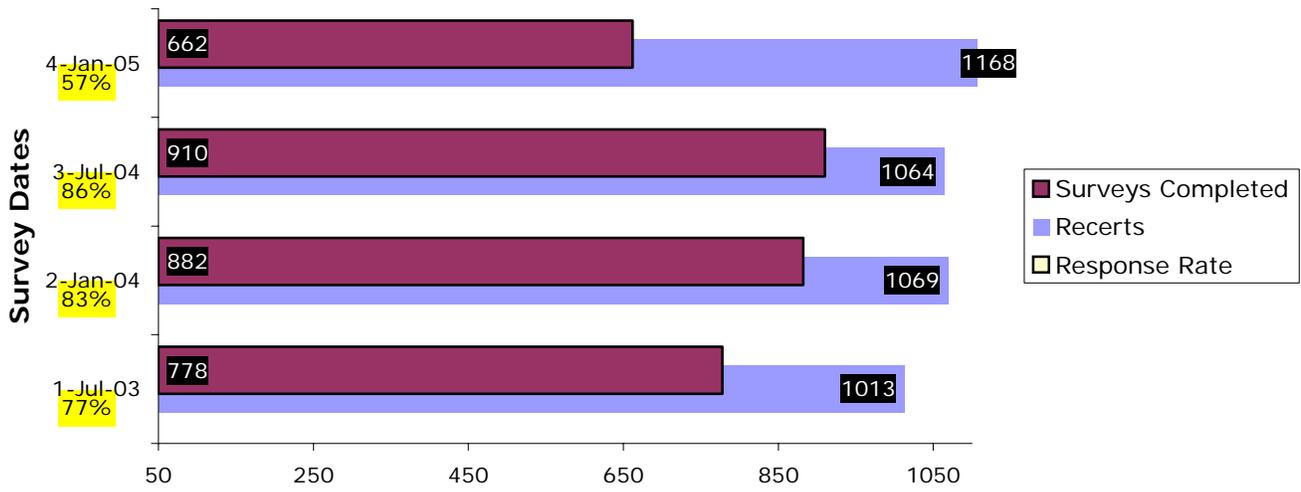
- Arkansas certification at the EMT-Ambulance, Intermediate or Paramedic level continuously for a two (2) year period.
- Successful completion of skills verification (those skills on which students test for certification) with a performance of 80% or above.
- Successful completion of a comprehensive end of course written exam with a minimum score of 80% or above.
- All requirements of CPR-Instructor training following either the American Heart Association or American Red Cross guidelines.
- Meets all requirements of the sponsoring training site and EMT-Instructor program for admission and course completion.

SURVEY FINDINGS

Several factors determine acceptable response rates. One is how the survey is actually administered. Since this survey was mailed along with four separate re-certification applications, a 50% response rate is considered adequate (**Punch, K. F. (2003). *Survey Research: The Basics*. London: Sage Publications Ltd.**).

Out of the 5,700 EMTs certified in the state, 4,313 elected to re-certify during the survey period. Of those, 3,232 (75%) responded to the survey. All EMTs up for re-certification were mailed the survey. As can be seen from the charts below, the lowest response rate was from the January 2005 survey and was still at 57%. Sixty percent (60%) is considered good, and 70% very good. Using these guidelines, findings from these surveys should be more than adequate to help shed light on the EMT in the field.

Response Rates for Recertifiers



Figures 1 & 2

Table 1: Respondents by Age

Q1 - Please place a checkmark beside the appropriate bracket indicating your age

AGE BRACKET	CURRENT SURVEY PERIOD				TOTAL
	1-Jan-03	2-Jan-04	3-Jul-04	4-Jan-05	& PCT
Not Given	<u>124</u>	<u>1</u>	<u>2</u>	<u>5</u>	132
% of All Survey Respondents	3.72%	0.03%	0.06%	0.00%	3.96%
% for Current Survey Period	14.06%	0.11%	0.30%	0.55%	
Age 18-25	<u>39</u>	<u>46</u>	<u>52</u>	<u>71</u>	208
% of All Survey Respondents	1.17%	1.38%	1.56%	2.13%	6.24%
% for Current Survey Period	4.42%	5.22%	7.85%	7.80%	
Age 26-35	<u>279</u>	<u>304</u>	<u>232</u>	<u>312</u>	1127
% of All Survey Respondents	8.36%	9.11%	6.95%	9.35%	33.78%
% for Current Survey Period	31.63%	34.47%	35.05%	34.29%	
Age 36 Plus	<u>440</u>	<u>531</u>	<u>376</u>	<u>522</u>	<u>1869</u>
% of All Survey Respondents	13.19%	15.92%	11.27%	15.65%	56.02%
% for Current Survey Period	49.89%	60.20%	56.80%	57.36%	
Total	<u>882</u>	<u>882</u>	<u>662</u>	<u>910</u>	<u>3336</u>
					100.00%

Respondent Age Brackets

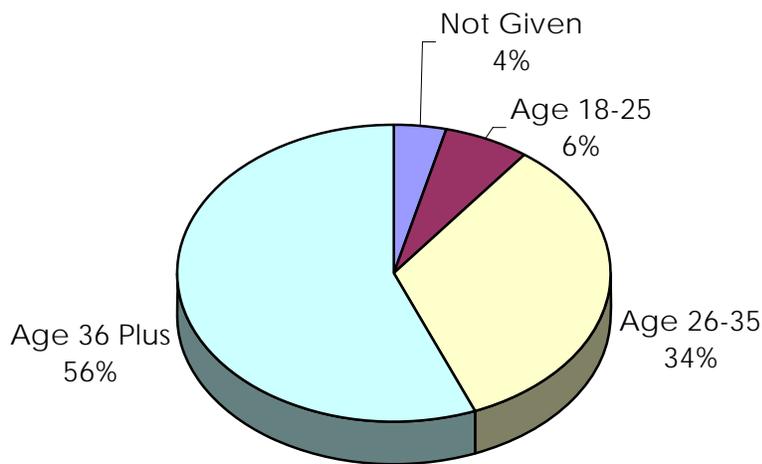


Figure 3

The actual reported age of EMTs from the CertScan certification program from the Section of EMS and Trauma Services corresponds well with the respondents' age distribution, which is:

- 6.6% at ages 18-25
- 32.4% at ages 26-35, and
- 61.0% at ages 36 and above.

**Although 35
may seem
young, the
physical
demands
placed upon
EMTs are
substantial.**

According to the U.S. Census Bureau, 7,918 people turn 60 each day in 2006. That amounts to 330 every hour

[http://www.census.gov/Press-](http://www.census.gov/Press-Release/www/releases/archives/facts_for_features_special_editions/006105.html)

[Release/www/releases/archives/facts_for_features_special_editions/006105.html](http://www.census.gov/Press-Release/www/releases/archives/facts_for_features_special_editions/006105.html) This increase in the aging population places more demand for full-time paid EMTs. The two challenges we face in Arkansas with age are 1) the fact that over half our current EMT workforce are over the age of 35 and 2) that the percentage of older Arkansans is increasing so rapidly.

Issue: In order to stay viable, the EMS field must attract younger recruits to replace those retiring from the system.

Q2 - Your current certification level

Table 2: Respondents by Certification

Levels of Certification (Percentages are for entire survey period)					
Level of Certification	Date of Survey				Total & %
	1-Jan-03	2-Jan-04	3-Jul-04	4-Jan-05	
Not Given %	148 4.44	41 1.23	19 0.57	56 1.68	264 7.91%
EMT/B %	588 17.63	459 13.76	470 14.09	507 15.2	2024 60.67%
EMT/I %	8 0.24	34 1.02	33 0.99	39 1.17	114 3.42%
EMT/P %	138 4.14	348 10.43	140 4.2	308 9.23	934 28%
Total %	882 26.44	882 26.44	662 19.84	910 27.28	3336 100%

Survey Respondents Certified as EMTs

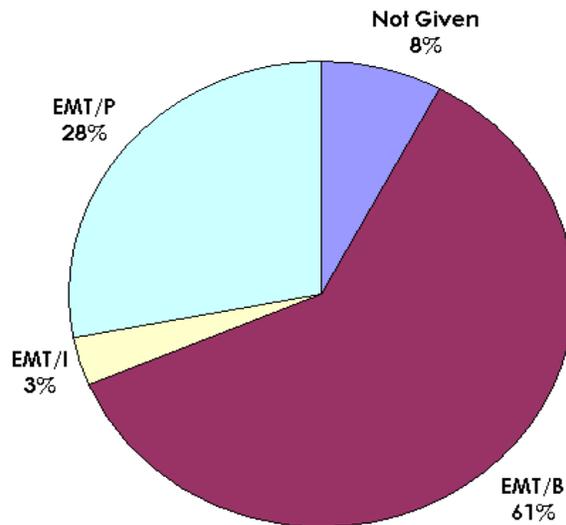


Figure 4

The majority of EMTs are certified at the basic level, which typically emphasizes emergency skills, such as managing respiratory emergencies, trauma, and cardiac emergencies. Of the 28% certified as paramedics, 8.24% sought critical care training. Respondents noted repeatedly that if they were going to spend additional hours in training, they might as well go into a field that has greater income incentives and job advancement opportunities.

**Table 3. Paramedics who participated in the survey
(Percentages are for entire survey period)**

Level of Paramedic	Date of Survey				Total
	1-Jan-03	2-Jan-04	3-Jul-04	4-Jan-05	
All Paramedics Responding to Survey	138	348	140	308	934
Number of EMT/Instructors	10	9	6	14	39
%	7.25%	2.59%	4.29%	4.55%	4.18%
Number of CCEMT/P	10	27	7	33	77
%	7.25%	7.76%	5.00%	10.71%	8.24%
Percent of Paramedics in Survey with advanced training	14.49%	10.34%	9.29%	15.26%	12.42%

Issue: As medical care becomes more technologically sophisticated, the need for more advanced training will become a necessity.

Approximately 24% of EMTs are not keeping their certifications current

Q3 - How many years have you been certified at your current level of certification?

In order to develop long-range educational programs for EMTs, it is not only necessary to understand what levels of certification the current workforce has achieved, but how long they have been at that level. As can be seen from this table,

over 30% of the respondents have been certified at the basic level for over ten years.

Table 4. Years of Certification by Date of Survey (Percentages are for entire survey period)

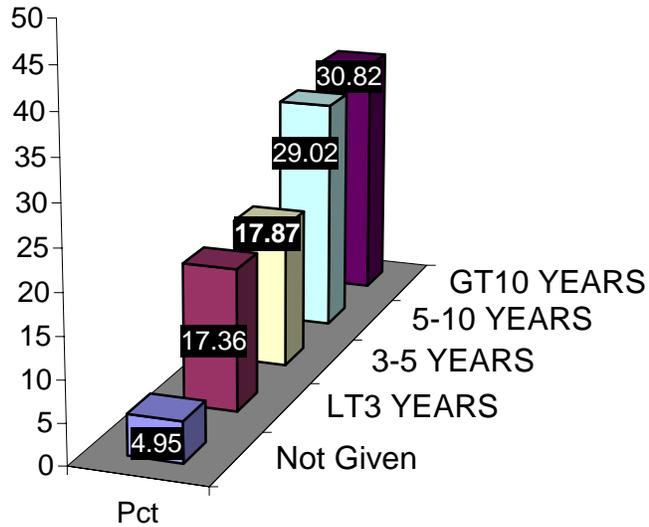
Years of Certification	Date of Survey				Total & %
	1-Jan-03	2-Jan-04	3-Jul-04	4-Jan-05	
Not Given %	127	20	6	12	165
	3.81	0.6	0.18	0.36	4.95%
Less Than 3 YEARS %	147	112	141	179	579
	4.41	3.36	4.23	5.37	17.36%
3-5 YEARS %	127	177	111	181	596
	3.81	5.31	3.33	5.43	17.87%
5-10 YEARS %	250	265	203	250	968
	7.49	7.94	6.09	7.49	29.02%
Greater Than 10 YEARS %	231	308	201	288	1028
	6.92	9.23	6.03	8.63	30.82%
Total %	882	882	662	910	3336
	26.11	26.11	19.81	27.28	100%

Almost 60% of the EMTs have been certified for at least five years.

Since most of those responding were certified as basic EMTs, this table suggests that more than half of them have elected not to increase their levels of certification.

Figure 5

How many years have you been certified at your current level of certification?



Issue: What incentives are needed to encourage EMTs to increase their levels of certification?

Q4 - Are you currently in school?

Table 5: Respondents by School Status

Status	Date of Survey (Percentages are for entire survey period)				Total %
	1-Jan-03	2-Jan-04	3-Jul-04	4-Jan-05	
Not Given	135	4	7	7	153
%	4.05	0.12	0.21	0.21	4.59%
YES	91	113	81	143	428
%	2.73	3.39	2.43	4.29	12.83%
NO	656	765	574	760	2755
%	19.66	22.93	17.21	22.78	82.58%
Total	882	882	662	910	3336
%	26.44	26.44	19.84	27.28	100%

Eighty-two percent of survey respondents were not currently in school. This is a real challenge for the future of those involved in EMS. As has already been shown, many hours are necessary for training, internships, and recertification. EMT-Basic certification trainees must participate in 160 hours of class, field & clinical internships, and related study time.

EMT Intermediate certification trainees must participate in an additional 115 hours of class, field & internship, and related study time.

EMT- Paramedic certification trainees must participate in an additional 1200 hours of class, field & clinical internships, and related study time. Critical Care Paramedics must take an additional 80-hour course.

"I would like to upgrade to intermediate if there were a class in NW part of state like NWACC"

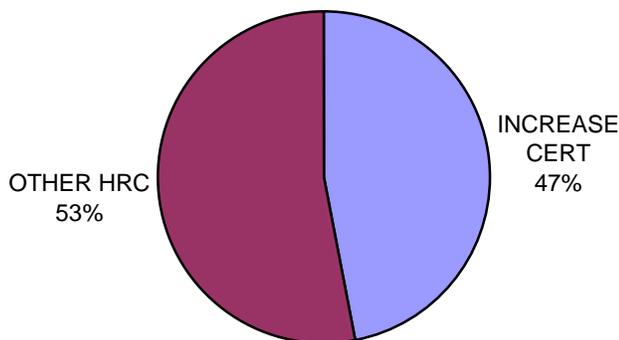
Survey respondents identified several obstacles to increasing their certification:

- ❖ Inconsistent work hours made attending classes difficult
- ❖ Excessive time away from family members
- ❖ Lack of accessible training facilities
- ❖ Lack of income to support career advancement

Q5 - If so, do you plan to either increase your level of certification or pursue another professional health related career in the next 5 years?

Figure 6

Plans for Respondents in School



Of the remaining 15% of respondents in school, the split was fairly even as to whether they would stay in the field or pursue another health related career.

6. Briefly explain your answers to question #5 (do you plan to either increase your level of certification or pursue another professional health related career in the next 5 years):

Fifty-six percent (56%) of all respondents cited lack of job advancement or income as reasons for not pursuing higher certification.

" Paramedics are very under paid, so I'm gonna go to nursing school, I can make \$6 more per hour as a LVN"

Data from the Bureau of Labor Statistics places Arkansas in the bottom quartile in average hourly income for EMTs in the nation

" Medic then RN, love EMS but I need better pay so I figure RN will keep me in medical field with better pay"

Of those in school (which is only 15% of all EMTs) 53% of them are opting to go into another health related

"small job market, low wages"

"RN school to make a better living for my family"

"Not so sure, pay scale for EMS is ridiculous, you can't make a living being an EMT"

"EMS is first love but due to low income I plan to get nursing degree to supplement income"

Three percent (3%) of respondents were not staying in the field because they did not have medical insurance

"I do not intend to increase my level because it will not pay me any more"

"due to lack of career options in EMS I intend train in another field."

Issue: Half of those moving to another career said they were going into nursing and money was a primary consideration.

Q7 – If you are NOT planning on increasing your level of EMS certification please indicate why by checking as many of the factors below that apply:

Table 6: Respondents' reasons for not increasing certification

Reasons Given For Not Increasing Certification	SURVEY DATE (Percentages are for entire survey period)				Totals	
	1-Jul-03	2-Jan-04	3-Jul-04	4-Jan-05	Count	Percent
R-10: No job advancement opportunity	141	117	91	129	478	26.67%
R-8: No income incentive	130	103	94	103	430	24.00%
R-6: Family dynamics	70	64	46	67	247	13.78%
R-4: Scheduling conflicts	58	63	56	55	232	12.95%
R-9: Few job opportunities	60	34	21	16	131	7.31%
R-1: Income factors	16	19	16	20	71	3.96%
R-3: Length of schooling	14	25	8	19	66	3.68%
R-5: Distance to class	14	8	15	19	56	3.13%
R-7: Difficulty of subject matter	10	11	8	16	45	2.51%
R-2: Cost associated with training	5	13	6	12	36	2.01%
Totals	518	457	361	456	1792	100.00

Lack of job advancement and income accounted for half of the reasons for not pursuing higher certification.

(An open-ended question was also added to the survey to allow EMTs the opportunity to provide their feedback about other reasons for not pursuing higher certification.)

Q7 – (If you are NOT planning on increasing your level of EMS certification please indicate why by checking as many of the factors below that apply): Answer: Other

Of the ones choosing to answer this question, approximately 34% were currently in another health related career. Another 13% cited distance to class, inadequate income, lack of job opportunities, and time away from family as barriers. As can be seen from Table 6., these responses could have been included in the first part of the question. Three percent were not going further because they did not have medical insurance. About 14% were happy where

they were. Almost 19% of respondents stated age as an issue – the same amount of time could be used to increase certification as to complete nursing school, but nurses on average earn three times as much. Another 12% were simply not interested in pursuing higher certification.

In order to keep and improve the state’s EMT workforce, we need to look at ways to encourage EMTs to stay in the pre-hospital emergency medical field. As can be seen from the following state-by-state table of incomes, this is a great challenge. Note: The income levels listed below do not differentiate between certification levels, but average all levels together.

Table 7: Income Levels by State - Data from the Bureau of Labor Statistics (2002)

1ST QUARTILE				2ND QUARTILE			
	Average hourly wage	Bottom 10%	Top 10%		Average hourly wage	Bottom 10%	Top 10%
District of Columbia	\$18.39	\$13.17	\$24.73	Illinois	\$13.72	\$7.17	\$24.89
Washington	\$17.55	\$8.20	\$28.95	New Mexico	\$13.54	\$8.73	\$19.19
Alaska	\$17.52	\$9.42	\$26.93	Minnesota	\$13.08	\$6.69	\$21.11
Maryland	\$16.29	\$9.68	\$24.85	Rhode Island	\$12.82	\$8.19	\$19.56
Oregon	\$15.88	\$7.63	\$23.99	Nevada	\$12.78	\$6.56	\$19.95
Hawaii	\$15.38	\$8.85	\$21.18	Missouri	\$12.75	\$7.38	\$21.74
Massachusetts	\$15.22	\$9.40	\$24.63	Idaho	\$12.66	\$6.21	\$20.42
New York	\$15.05	\$8.78	\$23.29	Florida	\$12.63	\$8.23	\$19.09
California	\$15.04	\$8.11	\$27.27	New Hampshire	\$12.51	\$8.24	\$19.04
New Jersey	\$14.58	\$9.50	\$21.70	North Carolina	\$12.39	\$8.54	\$16.92
Connecticut	\$14.56	\$9.45	\$20.21	Virginia	\$12.39	\$7.57	\$17.98
Colorado	\$14.31	\$9.31	\$21.50	Michigan	\$12.27	\$6.95	\$18.07
Delaware	\$14.19	\$8.88	\$20.87	Ohio	\$12.27	\$7.36	\$19.94
3RD QUARTILE				4TH QUARTILE			
	Average hourly wage	Bottom 10%	Top 10%		Average hourly wage	Bottom 10%	Top 10%
Tennessee	\$12.10	\$7.65	\$19.83	Maine	\$10.66	\$6.59	\$15.97
Louisiana	\$11.82	\$7.43	\$16.75	Arkansas	\$10.61	\$6.61	\$15.91
Georgia	\$11.80	\$7.59	\$16.91	Iowa	\$10.58	\$6.25	\$15.46
South Carolina	\$11.79	\$7.61	\$16.44	Vermont	\$10.53	\$6.96	\$15.42
Indiana	\$11.71	\$7.45	\$16.91	Alabama	\$10.35	\$7.05	\$14.11
Arizona	\$11.70	\$6.42	\$18.95	South Dakota	\$10.16	\$7.67	\$13.44
Mississippi	\$11.59	\$7.26	\$17.08	Kentucky	\$9.99	\$6.97	\$14.03
Texas	\$11.53	\$7.44	\$16.70	Kansas	\$9.94	\$6.07	\$15.80
Pennsylvania	\$11.40	\$7.52	\$16.52	Montana	\$9.73	\$6.28	\$14.32
Nebraska	\$11.29	\$6.54	\$18.95	Wyoming	\$9.19	\$5.79	\$14.91
Oklahoma	\$11.12	\$6.52	\$14.43	North Dakota	\$9.11	\$5.93	\$14.41
Wisconsin	\$11.01	\$6.48	\$17.46	West Virginia	\$9.03	\$5.88	\$13.34
Utah	\$10.84	\$6.49	\$15.19	Puerto Rico	\$7.43	\$5.71	\$10.45

Conclusions

Top Five Concerns

Employers (EMS Providers)

- 1) Financial/reimbursement needs
- 2) Recruiting & retention of EMS personnel
- 3) Training & upgrading EMS personnel
- 4) Equipment needs
- 5) Continuing education for EMS personnel

Employees (EMTs)

- No job advancement
- No income incentives
- Family dynamics
- Scheduling conflicts
- Few job opportunities

Several trends are occurring nationwide that are having a growing impact on emergency services delivery. According to the Bureau of Labor Statistics, competition is projected to become greater for jobs in local fire, police and rescue squad departments which means the opportunities will be best for those who have advanced certification (**Source:** <http://www.bls.gov/oco/ocos101.htm>) It also means that there may be even fewer EMTs available to replace those leaving the field.

Dual incomes and single parent families are becoming the norm. This means volunteers have less time available for public service, and a shift is occurring from the volunteer to the paid employee. This shift places a greater importance on salary.

The aftermath of 911 has also placed a demand on communities to be ready for emergencies of all kinds. Federal requirements demand increasing level of technology and training, but so do new and improved life-saving devices. EMTs are many times used instead of hospitals or doctors as the first medical service.

Add to all of this the aging society. According to the 2000 Census, 18% of the population of Arkansas was 60 or older – which makes Arkansas' elderly population the fifth highest in the U.S. With the baby boomers reaching 60 at all time highs, the need for trained EMTs will only increase.

The EMS community may need to seek funding to establish recruitment programs to attract Arkansans to the pre-hospital emergency medical field. They may also need to look at career advancement incentives as well as management training opportunities.

If Arkansas is going to keep up with the demand for emergency medical services, issues and insufficiencies identified in the EMS Needs Assessment and the EMS Career Survey must be addressed. Combined, they provide a starting point for understanding the top most pressing issues in pre-hospital emergency medicine.

APPENDIX A
EMS NEEDS ASSESSMENT SURVEY



**Arkansas Department of Health & Human Services
Section of Emergency Medical Services and Trauma Systems
Office of Rural Health and Primary Care
Emergency Medical Services (EMS) Career Survey**

The Section of EMS and Trauma Systems in cooperation with the Arkansas EMS Training Committee has developed this brief survey in an attempt to begin to gather information that can assist the Section of EMS & Trauma Systems and our training sites in long-range educational planning. Please take a few minutes and respond to the questions below. Your help with this process is greatly appreciated.

1. Please place a checkmark beside the appropriate bracket indicating your age:
 (18-25yrs) (26-35yrs) (greater than 35 yrs of age)

2. Your current certification level:
 (EMT/B) (EMT/I) (EMT/P)
 (CCEMT/P) (EMT-Instructor)

3. How many years have you been certified at your current level of certification?
 (less than 3 years) (3-5 yrs) (5-10 yrs) (more than 10 yrs)

4. Are you currently in school? Yes No

5. If so, do you plan to either increase your level of certification or pursue another professional health related career in the next 5 years? Out of 363 responses
 I intend to increase my level of certification
 I intend to pursue another health related career.

6. Briefly explain your answers to question #5:

7. If you are NOT planning on increasing your level of EMS certification please indicate why by checking as many of the factors below that apply:

- Income factors Difficulty of subject matter
- Cost of schooling No income incentive
- Length of schooling Few job opportunities
- Scheduling conflicts No job advancement opportunities
- Distance to class Pursue career in other allied health field
- Family dynamics Other (comment below)

Thank you for taking the time to complete this **EMS Career Survey**.

(Re-certification is not contingent upon your completing this survey.)

Please enclose with your re-certification materials or mail to:

David Taylor, Director
Section of EMS and Trauma Systems
4815 W. Markham, Slot #38
Little Rock, AR 72205
(501) 661-2178
E-mail: dtaylor@healthyarkansas.com

APPENDIX B
Resources Available To EMTs

Section of EMS & Trauma Systems <http://www.healthyarkansas.com/ems>
American Red Cross <http://www.redcross.org/>
American Heart Association <http://www.americanheart.org/>
Arkansas Ambulance Association <http://www.aaaintouch.com/>
Arkansas EMT Association <http://www.aemta.org/>
Arkansas State Police <http://www.asp.state.ar.us/>
Centers for Disease Control <http://www.cdc.gov/>
DHHS - Division of Health <http://www.healthyarkansas.com/>
Federal Emergency Management Agency <http://www.fema.gov/>
Environmental Protection Agency <http://www.epa.gov/>
Journal of EMS Magazine <http://www.jems.com/>
Medical Emergency Rescue and Global Information Network
<http://www.merginet.com/>
National Association of EMT's <http://www.naemt.org/>
National Fire and Rescue Magazine <http://www.nfrmag.com/>
National Flight Paramedics Association <http://www.flightparamedic.org/>
National Highway Traffic Safety Administration <http://www.nhtsa.gov/>
National Institute of Health <http://www.nih.gov/>
National Registry of EMT's http://www.nremt.org/about/nremt_news.asp
National Safety Council <http://www.nsc.org/>
Pre-Hospital Trauma Life Support (PHTLS) <http://www.naemt.org/PHTLS/>
Arkansas Department of Emergency Management (ADEM)
<http://www.adem.state.ar.us/>
National Council of EMS Officials <http://nasemso.org/>

APPENDIX C:
EMS GLOSSARY

Glossary

Advanced cardiac life support (ACLS)	Detailed medical protocol for the provision of lifesaving cardiac care in settings ranging from the pre-hospital environment to the hospital setting.
Automated external defibrillator (AED)	A small, computerized defibrillator that analyzes electrical signals from the heart to determine when ventricular fibrillation is taking place and then administers a shock to defibrillate the heart.
Airway	The system of the body that is involved in the exchange of oxygen and carbon dioxide. The general term "airway" includes the mouth and nose and goes all the way to the lungs and everything in between.
Appropriate Medical Oversight	The ultimate responsibility and authority for the <i>medical</i> actions of an EMS system provided by an EMS physician.
Basic Life Support (BLS)	Services provided by Emergency Medical Technicians referring to a level of training that does not involve any advanced medical procedures or administration of drugs. BLS providers can provide basic life saving and life sustaining interventions while transporting a patient to a hospital.
Cardiopulmonary resuscitation (CPR)	Noninvasive emergency lifesaving chest compressions and airway ventilations that sustains blood flow and breathing to a patient used to treat airway obstruction, respiratory arrest, or cardiac arrest until ALS procedures can be used to attempt to reverse the condition.
Communications	A means of communicating. The technology employed in transmitting messages. For purposes of this discussion, communications refers primarily to hardware, such as two-way radios, cellular phone or computers, that allow for two-way communications between EMS personnel and other appropriate parties such as hospital personnel, dispatch personnel and others.
Compensation	Payment to EMS personnel for services rendered.
Continuing Education	Ongoing medical education of EMS providers.

Defibrillate	To shock a fibrillating (chaotically beating) heart with specialized electrical current in an attempt to restore a normal rhythmic beat.
Emergency Medical Dispatch	Provision of prompt and accurate processing of calls for emergency medical assistance, performed by trained individuals using a medically approved dispatch protocol system and functioning under medical supervision.
Emergency Medical Services (EMS)	A multidisciplinary system that represents the combined efforts of several professionals and agencies to provide prehospital emergency care to the sick and injured.
Emergency Medical Services Needs Assessment	A nine-page, forty-one question survey instrument designed to determine the current needs of EMS service providers in the areas of equipment and supplies, staffing/personnel, grant assistance, emergency preparedness, and priority needs conducted in March 2004.
Emergency Medical Technician	A member of the emergency medical services team that provides out-of-facility emergency care; includes certification of EMT-Basic, EMT-Intermediate, and EMT-Paramedic progressively advancing levels of care.
Financing	The operational funding of an EMS system.
MAST	Military Anti-Shock Trousers – also known as PASG, pneumatic anti-shock garment.
Management Training	Training in management, budgeting, personnel, recruitment and other aspects of running an EMS organization for paid and volunteer EMS managers.
Quality Improvement/Assurance	A program to monitor, provide feedback and continually improve the quality of care being delivered by EMS personnel.
Recruitment/Retention	A system to acquire and retain EMS personnel within an EMS organization.
Transport Time	The time it takes EMS to get a patient from the scene of an injury or illness to a definitive care facility.

APPENDIX D:
EMS FREQUENCIES

The FREQ Procedure

AGE18_25				
AGE18_25	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3127	93.76	3127	93.76
1	208	6.24	3335	100

Frequency Missing = 1

AGE26_35				
AGE26_35	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2207	66.18	2207	66.18
1	1128	33.82	3335	100

Frequency Missing = 1

AGE_36P				
AGE_36P	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1465	43.94	1465	43.94
1	1869	56.06	3334	100

Frequency Missing = 2

EMT_B				
EMT_B	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1312	39.33	1312	39.33
1	2024	60.67	3336	100

EMT_I				
EMT_I	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3221	96.58	3221	96.58
1	114	3.42	3335	100

Frequency Missing = 1

EMT_P				
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EMT_P	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2400	71.99	2400	71.99
1	934	28.01	3334	100

Frequency Missing = 2

CCEMT_P				
CCEMT_P	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3248	97.39	3248	97.39
1	87	2.61	3335	100

Frequency Missing = 1

EMT_INSTR				
EMT_INSTR	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3237	97.09	3237	97.09
1	97	2.91	3334	100

Frequency Missing = 2

CERT_LT3				
CERT_LT3	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2755	82.58	2755	82.58
1	581	17.42	3336	100

CERT3_5				
CERT3_5	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2740	82.13	2740	82.13
1	596	17.87	3336	100

CERT5_10				
CERT5_10	Frequency	Percent	Cumulative Frequency	Cumulative Percent

0	2366	70.97	2366	70.97
1	968	29.03	3334	100

Frequency Missing = 2

CERT_GT10				
CERT_GT10	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2307	69.18	2307	69.18
1	1028	30.82	3335	100

Frequency Missing = 1

INSCHL_Y				
INSCHL_Y	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2905	87.16	2905	87.16
1	428	12.84	3333	100

Frequency Missing = 3

INSCHL_N				
INSCHL_N	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	581	17.42	581	17.42
1	2755	82.58	3336	100

INCRS_CERT				
INCRS_CERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2809	84.33	2809	84.33
1	522	15.67	3331	100

Frequency Missing = 5

OTHER_HRC				
OTHER_HRC	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2808	84.22	2808	84.22

1	526	15.78	3334	100
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Frequency Missing = 2

SURVEY DATE				
year	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1-Jan-03	882	26.44	882	26.44
2-Jan-04	882	26.44	1764	52.88
3-Jul-04	662	19.84	2426	72.72
4-Jan-05	910	27.28	3336	100

EMSAGE	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Not Given	132	3.96	132	3.96
Age 18-25	208	6.24	340	10.19
Age 26-35	1127	33.78	1467	43.97
Age 36 Plus	1869	56.03	3336	100

EMSCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Not Given	264	7.91	264	7.91
EMT/B	2024	60.67	2288	68.59
EMT/I	114	3.42	2402	72
EMT/P	934	28	3336	100

EMSADV	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3159	94.69	3159	94.69
CCEMT/P	80	2.4	3239	97.09
EMT/Instructor	97	2.91	3336	100

INSCHOOL	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Not Given	153	4.59	153	4.59
YES	428	12.83	581	17.42
NO	2755	82.58	3336	100

PLANS	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Not Given	2347	70.35	2347	70.35
INCREASE CERT	463	13.88	2810	84.23
OTHER HRC	526	15.77	3336	100

YRSCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Not Given	165	4.95	165	4.95
LT3 YEARS	579	17.36	744	22.3
3-5 YEARS	596	17.87	1340	40.17
5-10 YEARS	968	29.02	2308	69.18
GT10 YEARS	1028	30.82	3336	100