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A report on the EMT/Paramedics Working in the Emergency Department Survey

Prepared for:
American College of
Emergency Physicians

Prepared by:
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BACKGROUND AND OBJECTIVES

Founded in 1968, the American College of Emergency Physicians (ACEP) exists to support quality emergency medical care and to promote the interests of emergency physicians. ACEP is the oldest and largest national medical specialty organization representing physicians who practice emergency medicine. With more than 19,600 members, the College is the leading continuing education source for emergency physicians and the primary information resource on developments in the specialty. The College continually monitors trends in the health care environment and analyzes issues affecting emergency physicians and their patients.

In April of 1999, management at ACEP commissioned Syndics Research Corporation to conduct a series of surveys to assess educational and communication needs of EMS, physician assistants, and nurse practitioners working in the Emergency Department (ED). Specific objectives of these surveys are to:

- Identify the training and utilization of non-physician ED staff;
- Identify the issues and needs pertaining to the clinical and practice management environments in which these professionals practice;
- Identify the preferences for educational and communication vehicles to meet the needs of these professionals;
- Address other important issues associated with these professionals.

This report is a summary of the findings from the EMS Survey. Reports for the Physicians Assistant and Nurse Practitioner Surveys will be presented under separate cover.

METHODOLOGY

Data Collection:

To build a database of EMTs/paramedics working in the emergency department of U.S. hospitals, letters were mailed to 4,378 Medical Directors. The list of Medical Directors was provided by ACEP. The letters asked the Medical Directors to return the names and addresses of all EMTs/paramedics working in the emergency departments of their hospitals. In total, 1,377 Medical Directors responded, which equates to a response rate of 29%. Of those, 278 provided the names and addresses of at least one EMT/paramedic working in their emergency department, suggesting that 20% of U.S. hospitals employ EMT/paramedics in the emergency department.

From those hospitals that responded with names and addresses, a total of 997 EMTs/paramedics were identified. Self-administered questionnaires were then mailed to each. The questionnaires were mailed in May of 1999 and a total of 323 completed questionnaires were returned within the time frame of the study. This equates to a 32% response rate among this segment.

A total sample of 323 completed surveys provides results that can be projected to the total population under study with a margin of error of $\pm 5.6\%$ at the 95% confidence level.

With the help of management at ACEP, Syndics Research designed the surveys for this study. The completed questionnaires were returned to Syndics using business-reply envelopes. The data from the questionnaires were entered and processed by the staff of Syndics Research.

Analysis & Reporting:

A complete set of computer tabulations will be delivered under separate cover. These tabulations show the frequency and percentage of response to each question included in the survey. All percentages are based on the actual number of responses to a given question, and do not include "no answers" in the calculations. Where applicable, means, standard deviations, and p-values are also provided.

EXECUTIVE SUMMARY

- ✧ Overall, the sample of people who participated in the study is skewed toward paramedics (56%) versus EMTs (35%).
- ✧ Most paramedics/technicians (74%) are employed in community hospitals (48% non-teaching and 26% teaching), and practice in a variety of geographic settings including large metropolitan areas, medium-sized cities, and small towns.
- ✧ While paramedics/technicians have been working in the ED for a relatively short period of time (63% = five years or less), they spend an average of thirty hours each week in the ED with their primary responsibility being patient care. Almost all paramedics/technicians are allowed to perform basic/intermediate level ED skills and about half are allowed to perform advanced ED level skills and administer medication.
- ✧ While more than two-thirds of paramedics/technicians (68%) are certified/registered, only 39% are licensed. Certification is more common among paramedics/technicians who practice in less populated areas, but the incidence of licensed paramedics/technicians is higher in more populated geographic areas.
- ✧ Membership in professional associations seems to be somewhat limited, as three of ten paramedics/technicians are members of a State EMT Association and 18% are members of a National EMT Association. In addition, there is some indication that membership in State EMT Associations may decline over time.
- ✧ JEMS and EMS Magazine are the top publications for paramedics/technicians, as a majority of respondents (79% and 63%) have read these publications during the past year. Moreover, a large segment of paramedics/technicians have read half of the issues of JEMS (42%) and EMS Magazine (37%) during the past year.
- ✧ Usage of Journal of Emergency Nursing, Annals of Emergency Medicine, and Prehospital Emergency Care is not common, as about three of four paramedics/technicians have not read any of these publications during the past year.
- ✧ Most paramedics/technicians (83%) have received training related to working in the ED (other than training required by certification/licensing). Nurses (89%) are the most common provider of this training, followed by physicians (49%). Physician training is more common in facilities that have a smaller volume of ED patients.
- ✧ Paramedics/technicians have limited input into the learning materials used for ED training, as 76% note that their supervisor is responsible for selecting training materials.

EXECUTIVE SUMMARY

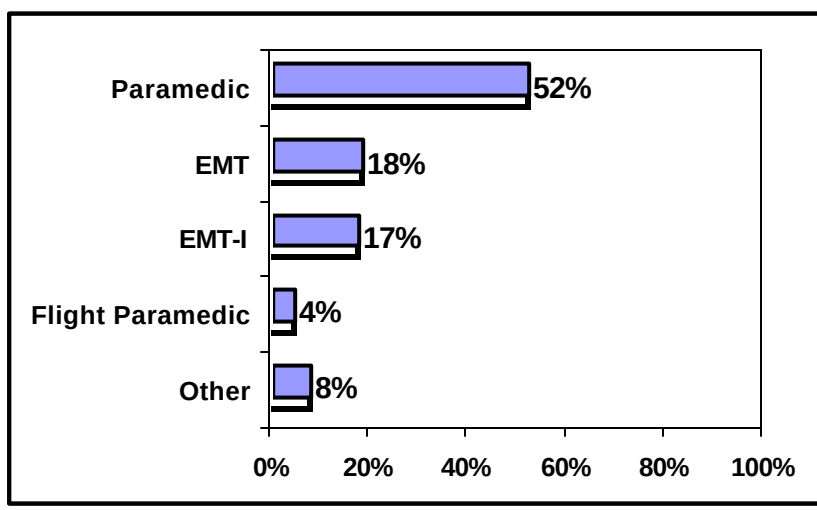
- ✦ Employers paid for 100% of the educational materials regarding ED training for about six of ten respondents, and 31% paid a portion of these costs themselves (average of 45% of the cost paid by employees).
- ✦ Most paramedics/technicians (82%) work in hospitals that require CE/in-service training for specific issues. The most common issues where training is required include ACLS safety, hazardous materials, and restraints.
- ✦ While paramedics/technicians are open to a variety of formats for receiving current information about what is happening in the EMS environment, professional courses/meetings and profession journals are the top sources, followed by newsletters and the Internet. The Internet is a particularly appealing format for people who practice in large metro areas.
- ✦ In terms of interest in using learning materials/methods, paramedics/ technicians express the most interest in preceptorship/on the job and conferences/seminars, followed by in-service and magazines/journals.
- ✦ For clinical issues, pharmacology (critical care and comprehensive), comprehensive wound/injury treatment, and laceration repair are the most interesting topics to paramedics/technicians.
- ✦ Given that clinical care of patients is the key responsibility of paramedics/ technicians, it is not surprising that they are highly interested in receiving information about this topic area. To a lesser extent, paramedics/technicians express some interest in receiving information about state/local issues, national issues, and customer service.
- ✦ In conclusion, paramedics/technicians have a significant need for ED education/training. Professional associations do not appear to be meeting this need, as suggested by low association membership and limited readership of publications other than JEMS and EMS Magazine. The biggest areas of need/interest are clinical care of patients, pharmacology, laceration repair, and wound/injury treatment. Attractive formats for meeting these needs include conferences/meetings/seminars, journals/magazines, in-service, and preceptorship/on the job.

DETAILED FINDINGS

EMPLOYMENT

- One-half of study participants (52%) describe their job as a “Paramedic.” Other frequently mentioned job descriptions include EMT (18%) and EMT-I (17%).
- The most frequently mentioned titles are Paramedic (23%) and Emergency Department Technician (22%).
- On average, ED personnel spend approximately thirty hours a week working in the ED.

JOB DESCRIPTION



Base: 323 Respondents

TITLE

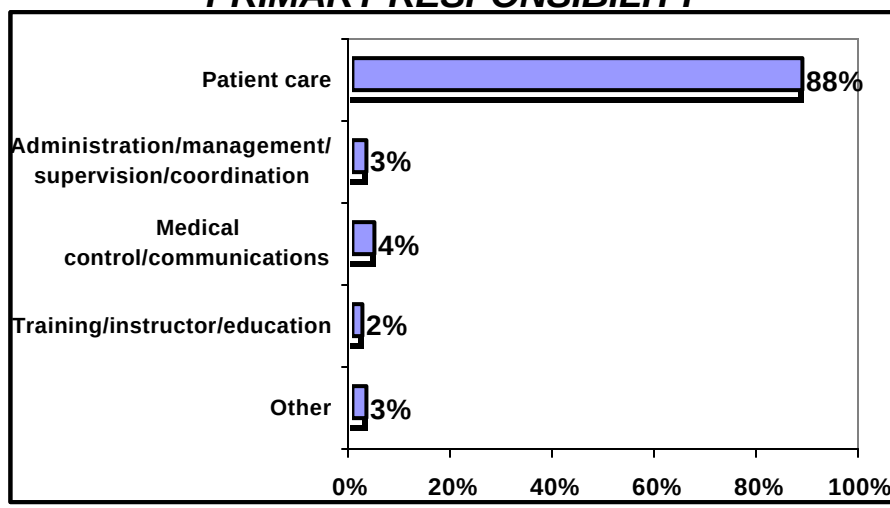
Title	Percent
Paramedic	23%
Emergency Department Technician	22%
EMT-I	5%
EMT	4%
EMT-P	4%
Flight paramedic	4%
NR EMT-P	3%
EMS Coordinator	2%
EMT-B	2%
MICT	1%
Critical Care Technician	1%
ED Paramedic	1%
PT Care Technician	1%
EMT-A	1%
Other	25%

Base: 323 Respondents

EMPLOYMENT

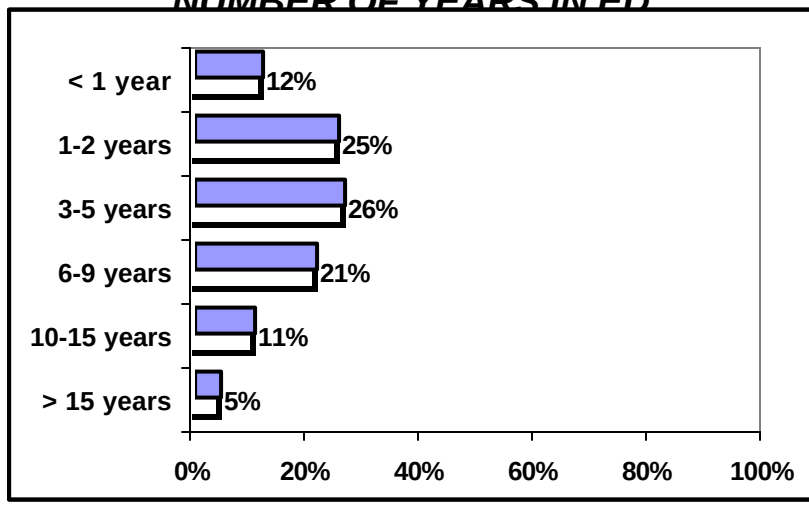
- Almost nine of ten paramedics/technicians (88%) note that their primary responsibility in the ED is patient care.
- More than six of ten ED paramedics/technicians (63%) have been working in the ED for five years or less.

PRIMARY RESPONSIBILITY



Base: 323 Respondents

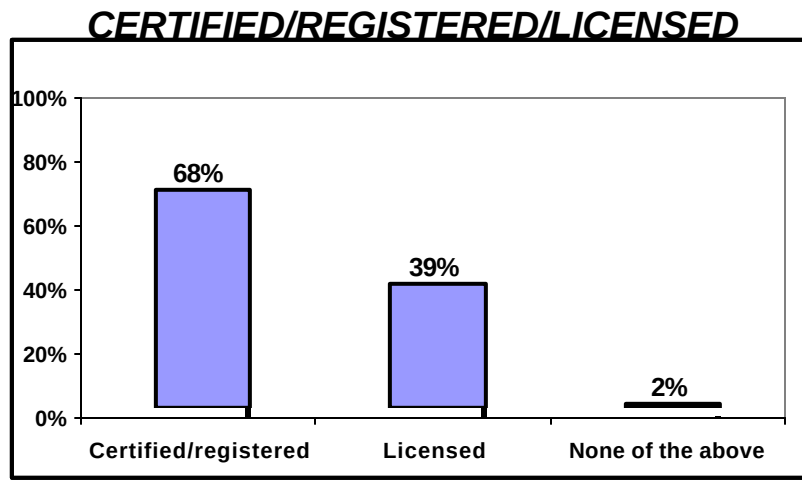
NUMBER OF YEARS IN ED



Base: 323 Respondents

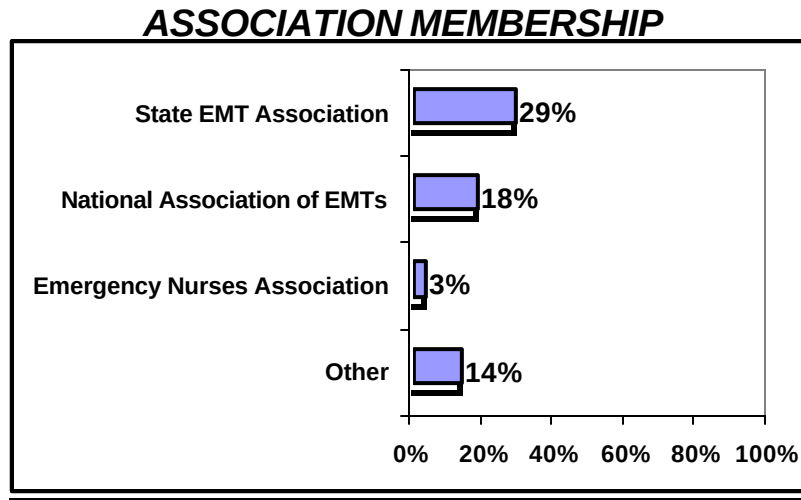
PROFESSIONAL

- About seven of ten paramedics/technicians (68%) are certified/registered, and 39% are licensed.
- Paramedics/technicians who practice in larger areas (from small town to metro area) are more likely to be licensed (from 30% to 49%). However, paramedics/technicians who practice in smaller areas (from metro area to small town) are more likely to be certified/registered (from 58% to 79%).
- Paramedics/technicians who have more than six years of experience (45%) are more likely than people with less experience (35%) to be licensed.



Base: 323 Respondents

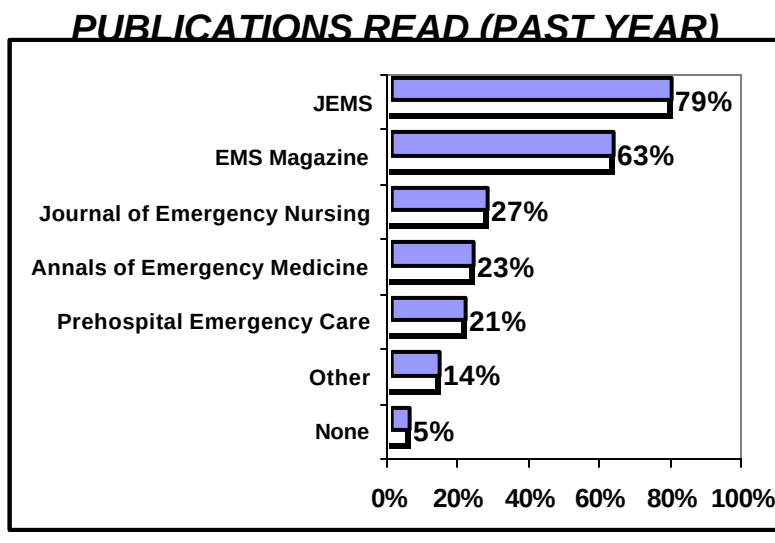
- About three of ten paramedics/technicians (29%) belong to a State EMT Association, and 18% belong to a National EMT Association.
- Paramedics/technicians with less than three years of experience (37%) are more likely than their counterparts (24%) to be a member of a State EMT Association.



Base: 323 Respondents

PROFESSIONAL

- A majority of paramedics/technicians have read JEMS (79%) or EMS Magazine (63%) during the past year. More than two of ten people have read Journal of Emergency Nursing (27%), Annals of Emergency Medicine (23%) or Prehospital Emergency Care (21%) during the past year.
- Paramedics/technicians who practice in facilities with a larger ED volume (from < 10K to 35K+), are more likely to note that they have read Prehospital Emergency Care during the past year (from 15% to 28%). On the other hand, people who practice in facilities with a smaller volume (from 35K+ to < 10K), are more likely to note they read EMS Magazine (from 51% to 74%) and Journal of Emergency Care (from 20% to 37%) during the past year.
- In terms of frequency of readership, EMS Magazine and JEMS are the top publications (59% and 53% of readers read at least half of the issues), followed by Prehospital Emergency Care (35% of readers have read at least half of the issues). Readers of Annals of Emergency Medicine and Journal of Emergency Nursing do not read the publications on a frequent basis (59% and 55% read less than one-fourth of the issues).



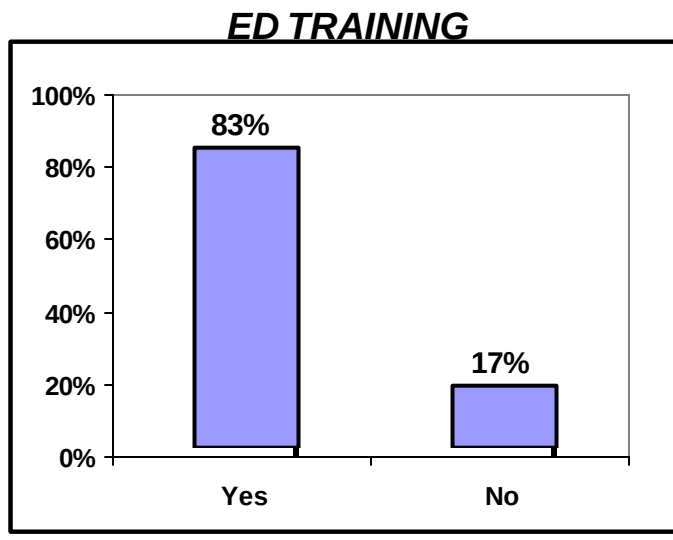
FREQUENCY OF READING PUBLICATIONS

<u>Publications</u>	<u>All Issues</u>	<u>50%</u>	<u>25%-49%</u>	<u>≤ 25%</u>
JEMS	28%	25%	23%	24%
EMS Magazine	27%	32%	15%	26%
Prehospital Emergency Care	13%	22%	19%	45%
Journal of Emergency Nursing	12%	7%	26%	55%
Annals of Emergency Medicine	7%	12%	23%	59%
Other	50%	24%	10%	17%

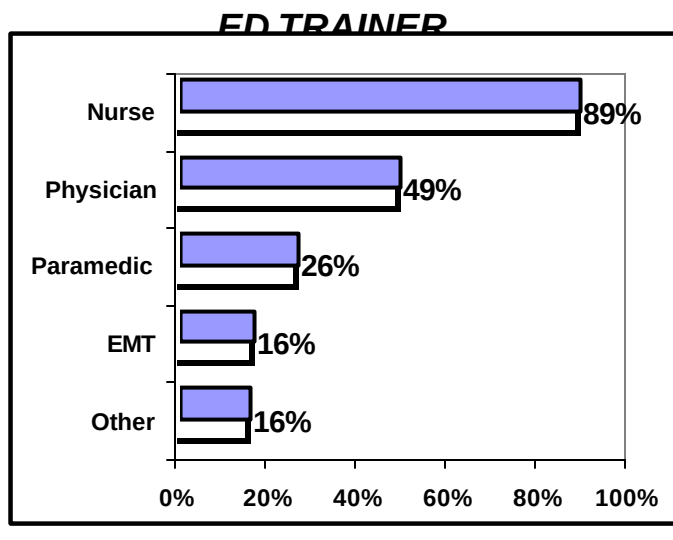
Base: Read Particular Publication During Past Year

PROFESSIONAL

- Other than training for certification/licensing, eight of ten paramedics/technicians (83%) have had training related to working in the ED.
- Most paramedics/technicians (89%) have received training from nurses, and 49% have received training from physicians.
- Paramedics/technicians who practice in facilities with a smaller ED volume (from 20K+ to < 10K), are more likely to note that they have received training from a physician (from 46% to 64%).



Base: 323 Respondents

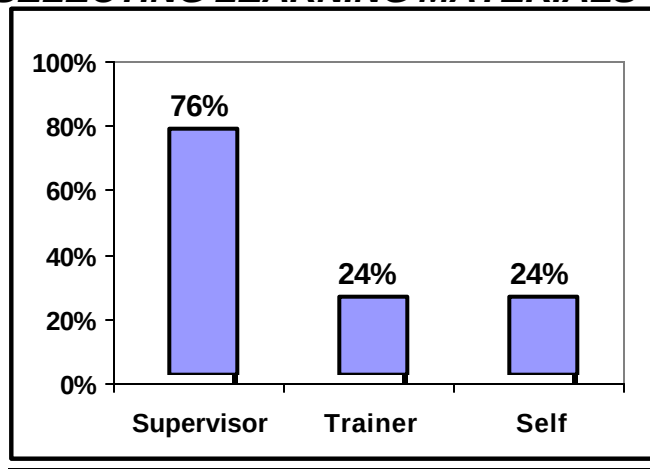


Base: 262 Respondents Received Additional Training

EDUCATIONAL INTERESTS

- Three of four paramedics/technicians (76%) note that their supervisor is responsible for deciding which learning materials are used for ED training.
- Supervisors responsible for selecting learning materials used in the ED include Nurse Manager/Supervisor (14%), ED Director (10%), ED Manager/Supervisor (9%), ED Nurse Manager (8%), and Registered Nurse (8%).
- Registered Nurse (21%) is the top trainer responsible for selecting learning materials used in the ED.

INDIVIDUAL RESPONSIBLE FOR SELECTING LEARNING MATERIALS



Base: 262 Respondents Participated in ED Training Other Than Certification

SUPERVISOR TITLES

Supervisor Title	Percent
Nurse manager/Supervisor	14%
ED Director	10%
ED Manager/Supervisor	9%
ED Nurse Manager	8%
Registered Nurse	8%
Physician	4%
Charge Nurse	3%
ED Nurse Director	2%
ER Supervisor	2%
Clinical Nurse/Coordinator/Manager	2%
Medical Director	2%
Clinical Director	2%
Lead EMT	2%
Nurse Administrator	2%
PT Care Director/Supervisor	2%
Other	19%

Base: 200 Respondents Mentioned Supervisor Responsible for Learning Materials

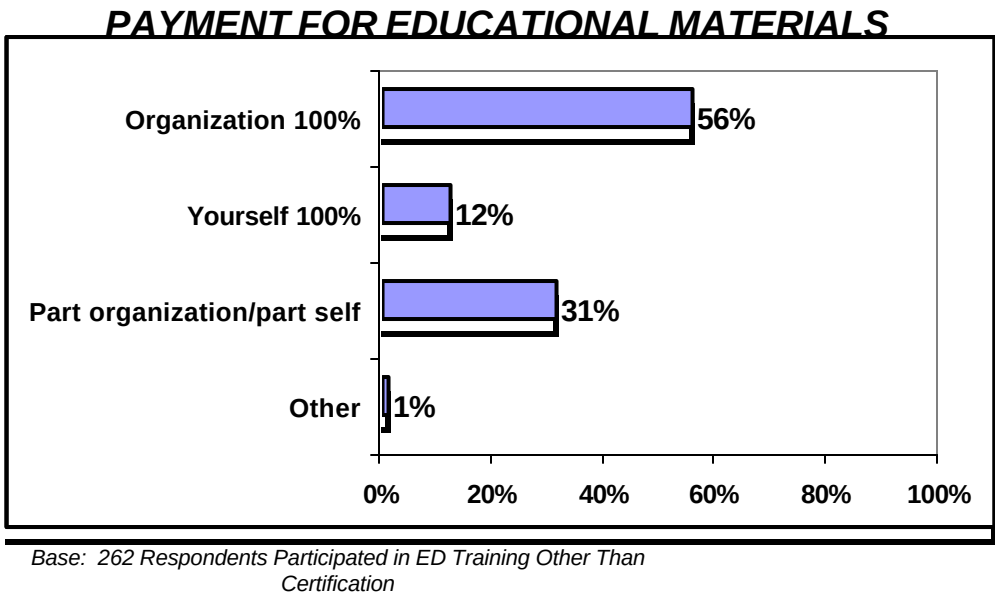
TRAINER TITLES

Trainer Title	Percent
Registered Nurse	21%
Staff educator	8%
ED Nurse Manager	6%
ED Educator	3%
EMT-P	3%
Nurse Manager/Supervisor	3%
ED Supervisor	3%
Inservice Coordinator/Educator	3%
Education Coordinator	3%
EMS Coordinator/Supervisor	3%
Nurse Educator	3%
ED Education Coordinator	2%
Other	21%

Base: 63 Respondents Mentioned Trainer Responsible for Learning Materials

EDUCATIONAL INTERESTS

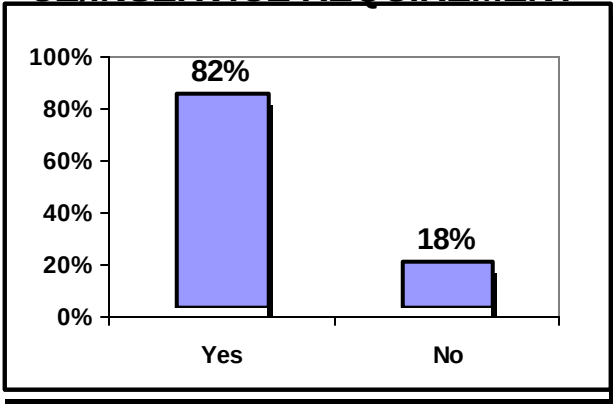
- More than one-half of paramedics/technicians (56%) note that their organization paid 100% of the cost of learning materials used in the ED over the past two years.
- About one-third of paramedics/technicians (31%) note that their organization pays part of the cost of educational materials.
- Among people who share the cost of education materials with their organization, paramedics/technicians have paid an average of 45% of the total cost over the past two years.
- Paramedics/technicians who spend less than twenty hours in the ED (81%) are more likely than people who spend more time in the ED (47%) to note that their organization pays 100% of the cost of learning materials.



EDUCATIONAL INTERESTS

- Eight of ten paramedics/technicians (82%) note that their hospital requires CE/inservice for hospital specific issues.
- While paramedics/technicians mention a variety of topics required for CE/inservice, the most frequently mentioned topic is ACLS (16%), followed by safety (10%), hazardous materials (9%), and restraints (8%).

CE/INSERVICE REQUIREMENT



Base: 323 Respondents

TOPICS

Topics	Percent
ACLS	16%
Safety	10%
Hazardous materials	9%
Restraints	8%
Fire safety	7%
CPR	7%
PALS	7%
EKG	7%
All topics/issues	7%
Infection control	7%
Equipment	6%
Hospital policies/training	5%
IV therapy	4%
Blood borne path	4%
Procedures	4%
Pediatrics	3%
OSHA	3%
Splinting	3%
Sedation	3%
Glucometer	3%
Trauma	3%
Patient care	2%
JCAHO	2%
Blood draws	2%
Abuse	2%
Violence	2%
Skills	2%
Geriatrics	2%
Chest tube	2%
Disaster	2%
Lab	2%
Foleys	2%
Compliance	2%
Cardiac	2%
Customer service	2%
BLS	2%
Wound care	2%
BTLS	2%
Phlebotomy	2%
Sutures	2%
Lavage	2%
Codes	2%
Other	62%

Base: 262 Respondents From Hospitals Where CE/Inservice is Required

EDUCATIONAL INTERESTS

- Preceptorship/on the job (4.88) is the most preferred learning format, followed by conferences/ seminars (4.78), in-service (4.60), and magazines/journals (4.51).
- The least appealing learning methods are audio tapes (3.58) and home study (3.95).
- EMTs (5.12) are more likely than EMT-Is (4.88) or paramedics (4.60) to be interested in conferences/seminars.
- As the number of hours worked in the ED increases (from < 20 to 40+), paramedics/technicians are more likely to be interested in books (from 3.89 to 4.36) and video tapes (from 4.05 to 4.58).
- As ED experience decreases (from 6+ years to < 3 years), paramedics/technicians are more likely to be interested in home study (from 3.71 to 4.20) and magazines/journals (from 4.31 to 4.67).

INTEREST IN LEARNING METHODS

<u>Learning Materials/Methods</u>	<u>Mean</u>
Preceptorship/on the job	4.88
Conferences/seminars	4.78
In-service	4.60
Magazines/journals	4.51
Video tapes	4.38
Internet	4.23
Books	4.17
CD ROM	4.15
Home study	3.95
Audio tapes	3.58
Other	6.00

Base: 323 Respondents

Means based on a 6 point scale where "6 is very interested" and "1 is not at all interested."

EDUCATIONAL INTERESTS

- ✦ Critical care pharmacology (5.15) and comprehensive wound/injury treatment (5.07) are the most appealing topics, followed by comprehensive pharmacology (4.96) and laceration repair (4.95).
- ✦ The least appealing topics are management administration (3.60) and assist physician with documentation (3.82).
- ✦ Paramedics are more likely than EMTs to be interested in comprehensive pharmacology (5.15 versus 4.77), laceration repair (5.14 versus 4.72), and critical care pharmacology (5.32 versus 4.90).
- ✦ Paramedics/technicians who spend more than twenty hours in the ED are more likely than their counterparts to be interested in comprehensive pharmacology (5.06 versus 4.61), laceration repair (5.06 versus 4.59), and comprehensive wound/injury treatment (5.17 versus 4.79).
- ✦ Paramedics/technicians who practice in a community teaching hospital are more likely than those who work in a community non-teaching hospital to be interested in assisting physicians with documentation (4.24 versus 3.62), infectious diseases (4.74 versus 4.12), critical care pharmacology (5.40 versus 5.10), and comprehensive disease processes (4.57 versus 4.26).

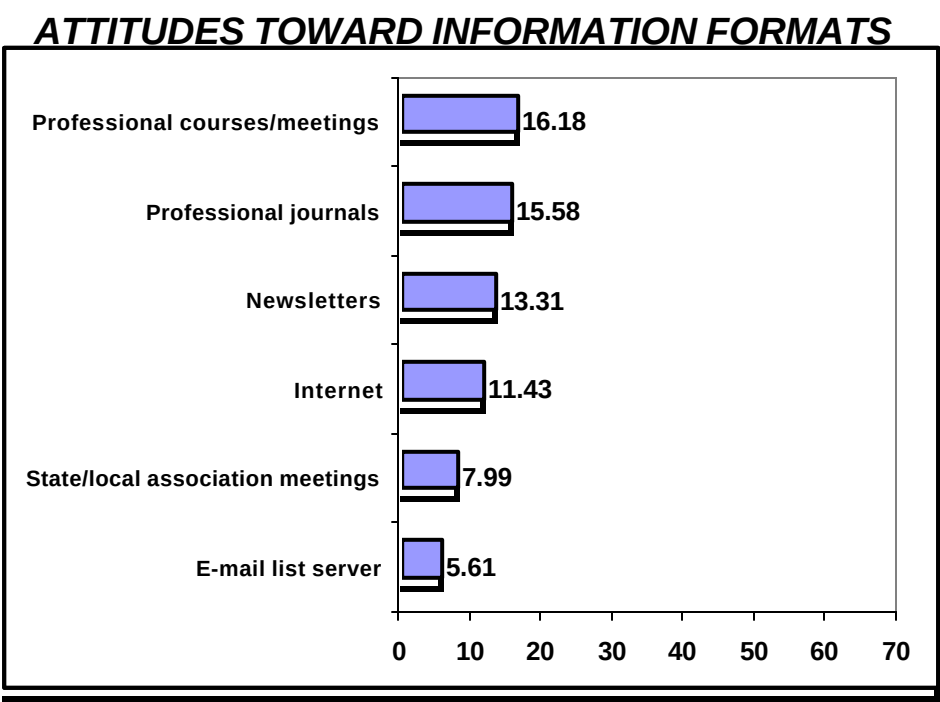
INTEREST IN TOPICS

<u>Topics</u>	<u>Mean</u>
Critical care pharmacology	5.15
Comprehensive wound/injury treatment	5.07
Comprehensive pharmacology	4.96
Laceration repair	4.95
Hospital triage	4.68
Hospital disaster management	4.46
Lab testing at bedside	4.38
Infectious diseases	4.30
Comprehensive disease processes	4.29
Assist physician with documentation	3.82
Management administration	3.60
Other	5.85

*Base: 323 Respondents
Means based on a 6 point scale where "6 is very interested" and "1 is not at all interested."*

EDUCATIONAL INTERESTS

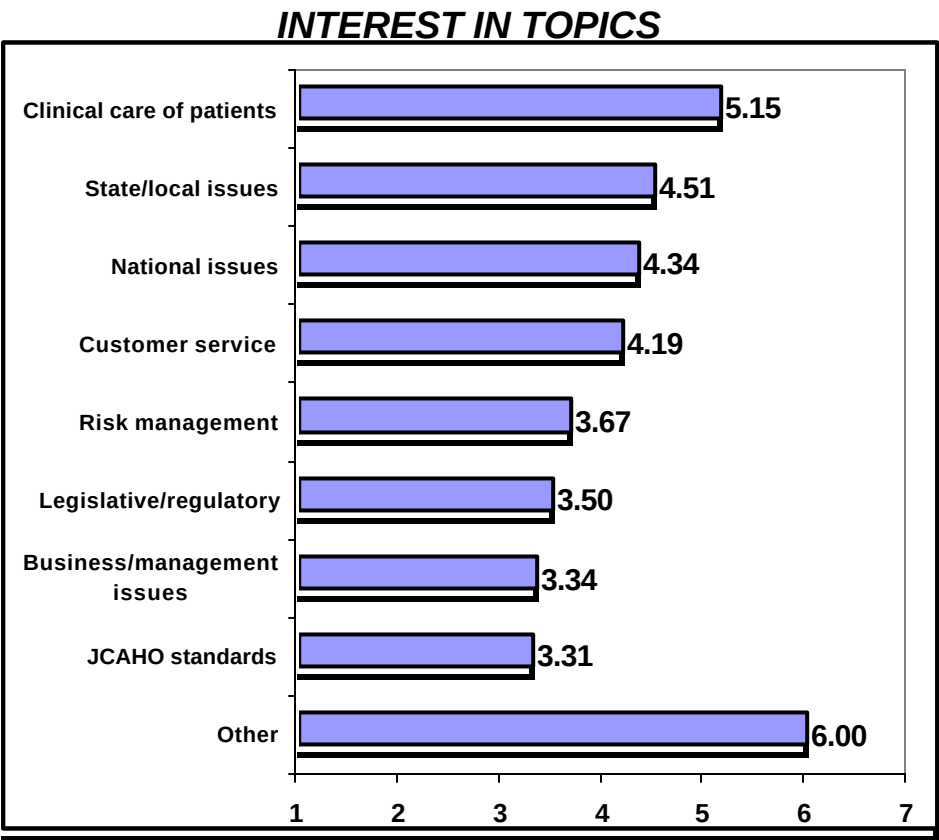
- Professional courses/meetings (16) and professional journals (16) are the top formats for receiving current information about what is happening in the EMS environment, followed by newsletters (13) and the Internet (11).
- Paramedics/technicians who practice in metro areas with more than 100,000 people (15) are more likely than people who practice in less populated areas (10) to attribute more value to receiving information via the Internet.



Base: 323 Respondents
Means based on allocating 70 points across factors

EDUCATIONAL INTERESTS

- Clinical care of patients (5.15) is the most appealing topic, followed by state/local issues (4.51), national issues (4.34), and customer service (4.19).
- There is limited interest in topics that relate to JCAHO standards (3.31), business/management issues (3.34), legislative/regulatory (3.50), and risk management (3.67).



Base: 323 Respondents
Means based on a 6 point scale where "6 is very interested" and "1 is not at all interested."

PRACTICE

- Paramedics/technicians are allowed to treat a variety of patients including wound care (86%), medical emergencies (79%), fractures/dislocations (76%), shock (75%), and head/chest/abdomen injuries (70%). In addition, more than six of ten paramedics/technicians are allowed to treat environmental emergencies (67%), triage (67%), pediatric emergencies (65%), neck injuries (65%), and industrial accidents (64%).
- Almost all paramedics/technicians are allowed to perform basic (94%) or intermediate (89%) level ED skills. In addition, about half of the paramedics are allowed to perform/administer ACLS drugs (51%), advanced ED level skills (50%), IM/Sub Q (48%), IV (46%), and oral medication (45%).

PATIENTS ALLOWED TO TREAT

<u>Patients</u>	<u>Percent</u>
Wound care	86%
Medical emergencies	79%
Fractures/dislocations	76%
Shock - recognition/care	75%
Injuries - head/chest/abdomen	70%
Environmental emergencies	67%
Triage	67%
Pediatric emergencies	65%
Neck injuries	65%
Industrial accidents	64%
Emergency childbirth	48%
Psychological aspects	44%
Neonatal care	32%
Child abuse	29%
Suturing	23%
Rape intervention care	17%
MSE	13%

Base: 323 Respondents

SKILLS ALLOWED TO PERFORM

<u>Skills</u>	<u>Percent</u>
Basic ED level skills	94%
Intermediate ED level skills	89%
Advanced ED level skills	50%
Medication administration - oral	45%
Medication administration - IM/Sub Q	48%
Medication administration - IV	46%
Medication administration - ACLS drugs	51%
Medication administration - Non-ACLS drugs	38%

Base: 323 Respondents

PRACTICE

- Paramedics/technicians note that an average of 29,119 (median = 20,000) people are treated each year in their ED.
- About one-half of the respondents (48%) work in a community based non-teaching hospital, and 26% work in a community based teaching hospital.
- In terms of the size of geographic area of practice, the proportion of respondents are relatively equally distributed across each geographic type.

TYPE OF HOSPITAL

<u>Type of Hospital</u>	<u>Percent</u>
Teaching	14%
Federal	2%
Community based teaching	26%
Community non-teaching	48%
University teaching	5%
Other	5%

Base: 323 Respondents

PRACTICE LOCATION

<u>Area</u>	<u>Percent</u>
Metro area with more than 100K population	26%
City with 50K to 100K population	22%
Town with 25K to 49,999 population	22%
Small town with less than 25K population	30%

Base: 323 Respondents

APPENDIX: QUESTIONNAIRE

Task Force on EMS and Mid-Level Providers

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