DOCUMENT RESUME

ED 093 889 SP 008 260

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TITLE A Task Analysis of Emergency Prehospital Care. Allied Health Professions Project.
INSTITUTION Educational Projects, Inc., Pittsburgh, Pa.
SPONS AGENCY Pennsylvania State Dept. of Public Instruction, Harrisburg. Bureau of Vocational, Technical, and Continuing Education.; Sarah Mellon Scaife Foundation, Pittsburgh, Pa.
REPORT NO AP-14-1021
PUB DATE Dec 73
NOTE 364p.; For related documents, see SP 008 256, 257, 259, and 261

EDRS PRICE MF-$0.75 HC-$17.40 PLUS POSTAGE
DESCRIPTORS Curriculum Development; *Emergency Squad Personnel; Health Occupations; Medical Services; *Professional Training; Surveys

ABSTRACT

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EDUCATIONAL PROJECTS, INC.

Pittsburgh, Pennsylvania

Allied Health Professions Project

A TASK ANALYSIS OF EMERGENCY PREHOSPITAL CARE

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December 1973

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ABSTRACT

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INTRODUCTION

Until recently, the emergency medical services system (EMSS) has not been recognized as an important component within the total health system of the United States. Previously, EMSS has been relegated to a secondary role both in receipt of funding and in concern about the improvement of its activities. However, the situation is changing. Professionals within the health delivery system, governmental officials and the general public are recognizing the importance of adequate emergency medical services to the total health delivery system. As a result of this recognition, much study has been undertaken in the past few years concerning those components of the emergency medical services system which must be improved and suggestions have been made as to how these improvements can be made. However, this is only a beginning. Much remains to be done.

As clearly stated in 1971 by Melvin K. Duval, M.D., Assistant Secretary for Health and Scientific Affairs, Department of Health, Education and Welfare, the major components of the EMSS are:

A. Prevention;

B. Occurrence;

C. Detection;

D. Notification;

E. Dispatch;

F. Treatment;

G. Transport;

H. Emergency room treatment;

I. Intensive care treatment;

J. Recuperation; and,

K. Rehabilitation.

Dr. Duval relates the above as links in a total chain. Each link is as important as the previous and following link and the breakdown of one single link in the chain may cause the failure of the total chain.

The three primary objectives of the EMSS are:

A. Resuscitation and maintenance of life;

B. Transportation of the patient; and,

C. Rapid diagnosis and treatment of the basic medical problems.

Diagnosis and treatment may be performed at the scene and continued while the patient is in transit to a definitive care facility. Two major factors which are important in the attainment of the three primary objectives are the quality of medical care available and delivered by medical and allied health personnel and the time frame within which this medical care is rendered. (Nahum, 1971)

Within the above system, there exists a subsystem which can be defined as emergency prehospital care. This subsystem begins with detection of an incident and ends with the transfer of a patient to an emergency room. The mechanism by which services of this subsystem can be delivered include the ambulance service, police department, fire department, family, friends or

acquaintances of the patient, or a "Good Samaritan" passing by. This study, the results of which are presented herein, is directed towards the delivery of emergency prehospital care by individuals working with ambulance services, police departments and fire departments whose primary duty it is to provide emergency care and transportation for the patient. Exhibit 1 presents a model job description for an ambulance attendant who has the major responsibility for patient care within the subsystem. (U. S. Department of Transportation, 1972)

The Status of Emergency Prehospital Care

The National Academy of Sciences, National Research Council, summarizes the deplorable state of the art in emergency care in its publication, "Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Services":

> Emergency medical service is one of the weakest links in the delivery of health care in the nation. Thousands of lives are lost through lack of systematic application of established principles of emergency care. Few at the site of accidental injury or sudden illness are trained in the fundamentals of restoration of breathing, control of hemorrhage, or splinting of fractures. The majority of ambulances in the United States are of the hearse, limousine, or station wagon type which are inadequate in space and equipment and are manned by individuals with inadequate training to provide essential life support. Pilot studies with better-equipped ambulance services indicate that thousands of lives can be saved and disability reduced.
>
> Many ambulances lack radio communication even with their own dispatchers. Communication rarely exists between ambulances and hospitals, so that most patients arrive at emergency departments without prior notification. Most emergency departments of the nation are not only lacking in facilities and personnel, but are overtaxed by millions of nonemergency cases for whom ancillary outpatient facilities should be provided, especially during evening hours and on weekends. In comparison with facilities for definitive care of illness, few

Centers of excellence for the care of the critically ill or injured exist. (N.A.S. - N.R.C., 1972)

Although the above conditions exist today, the situation is not hopeless. Fortunately, many are recognizing that emergency medical care must take a higher priority within the health care delivery system. Examples of the recognition (and perhaps causes of the recognition in the first place) are such things as the television program "Emergency," local newspaper articles on the subject (Pittsburgh Press, Pittsburgh Post-Gazette, Indiana Evening Gazette, Philadelphia Inquirer), the existence of five federally funded pilot projects for research within the emergency medical services system and the existence of a national peer registry for Emergency Medical Technicians (EMT). This recognition has resulted in a number of actions taking place. These include the establishment of many emergency medical councils whose major responsibility is to assure that a coordinated quality emergency medical services system exists within a local area. In addition, training of an ambulance attendant, upgrading of equipment and establishment of a communications network have begun in some areas. These programs appear to be harbingers of improvements and innovations to come within the emergency prehospital care system.

Emergency Prehospital Care Within Pennsylvania

Of the 1,018 ambulance services currently operating within the Commonwealth of Pennsylvania, 66% are volunteer ambulance groups, 27% are funeral directors and commercial firms, 6% are municipally operated and 1% operate out of hospitals. Approximately 20,000 individuals work on either a paid or

volunteer basis as ambulance attendants within Pennsylvania. Moreover, ambulance services within the Commonwealth operate 1,470 ambulances and 396 rescue vehicles, twenty-two percent (22%) of the ambulances being operated have direct two-way radio communication between vehicles and hospitals (Pennsylvania Department of Health, 1973).

Pennsylvania currently has no licensing requirements for either the ambulance services or the personnel providing patient care for the ambulance service. Bills are currently pending in the legislature which will require licensing of ambulance services and provide for training and certification of ambulance attendants. However, the passage of these bills could have a major negative effect on delivery of a emergency prehospital care within the Commonwealth. Only a small portion of those individuals serving as ambulance attendants have completed the emergency medical technician training program and only about one-fourth have completed the Pennsylvania Department of Health Ambulance Attendant Training course. Proposed legislation, if passed, will set a minimum training requirement of 40 hours effective one year after passage of the legislation. It can be seen that a large number of ambulance attendants will have to be trained relatively quickly. However, no training system currently exists within the Commonwealth of Pennsylvania. Training programs are now being operated by Emergency Medical Councils and the Division of the Emergency Medical Health Services of the Pennsylvania Department of Health. These programs are not funded at a level which can provide for the training need which will occur upon passage of the legislation.

Consequently, an alternative mechanism must be developed. One possible alternative toward which the present study is directed is the introduction of basic training for ambulance attendants into the community college and vocational technical school systems.

EXHIBIT 1

JOB DESCRIPTION EMERGENCY MEDICAL TECHNICIAN-AMBULANCE

Work Requirements

Responds to emergency calls to provide efficient and immediate care to the critically ill and injured, and transports the patient to a medical facility.

After receiving the call from the dispatcher, drives ambulance to address or location given, using the most expeditious route, depending on traffic and weather conditions. Observes traffic ordinances and regulations concerning emergency vehicle operation.

Upon arrival at the scene of accident or illness, parks the ambulance in a safe location to avoid an accident. In the absence of police, enlists the assistance of persons available to create a safe traffic environment, such as the placement of road flares, removal of debris, and redirection of traffic for the potection of the injured and those assisting in the care of the injured.

Determines the nature and extent of illness or injury and establishes priority for required emergency care. Renders emergency care, such as opening and maintaining an airway, giving positive pressure ventilation, cardiac resuscitation, controlling of hemorrhage, Treatment of shock, immobilization of fractures, bandaging, assisting in childbirth, management of mentally disturbed patients, and initial care of poison and burn patients. Administers drugs, including intravenous fluids, as directed by a physician.

Reassures patients and bystanders by working in a confident, efficient manner. Avoids mishandling and undue haste while working expeditiously. Searches for medical identification emblem as a clue in providing emergency care.

Where patients must be extricated from entrapment, assesses the extent of injury and gives all possible emergency care and protection to the entrapped patient and uses the prescribed techniques and appliances for removing the patient safely. Radios the dispatcher for additional help or special rescue and/or utility services, if needed. Provides light rescue service if the ambulance has not been accompanied by a specialized unit. After extrication, provides additional care in sorting the injured in accordance with standard emergency procedures.

Complies with regulations on the handling of the deceased, notifies authorities, and arranges for protection of property and evidence at scene.

Assists in lifting stretcher, placing in ambulance and seeing that patient and stretcher are secured and that emergency care, if necessary, is continued.

From the knowledge of the condition of the patient and the extent of injuries and the relative locations and staffing of emergency hospital facilities, determines the most appropriate facility to which the patient will be transported, unless otherwise directed by the dispatcher or a physician. Reports directly to the emergency department or control center the nature and extent of injuries, the number being transported, and the destination to assure prompt medical care on delivery. For serious cases, may ask for additional advice from the hospital physician or emergency department.

Constantly observes patient enroute to emergency facility, administers additional care as indicated or directed by physician.

Identifies diagnostic signs which may require radio communications with a medical facility for advice and for notification that special professional services and assistance be immediately available upon arrival at the medical facility.

Assists in lifting and carrying the patient out of the ambulance and into the emergency department.

Reports verbally and in writing his observation and care of patient at the emergency scene and in transit, to the emergency department staff for record and diagnostic purposes. Upon request, provides assistance to the emergency department staff.

After each trip, replaces used linens, blankets and other supplies, sends supplies for sterilization, makes careful check of all equipment so that the ambulance is ready for the next run. Maintains ambulance in efficient operating condition. Ensures that the ambulance is clean and washed and kept neat and in an orderly condition. In accordance with local or state regulations, decontaminates the interior of the vehicle after transport of victim with contagious infection or radiation exposure. Determines that vehicle is in proper operating condition by checking gas, oil, water in battery and radiator, and tire pressure. Maintains familiarity with specialized equipment items used by the ambulance service.

Note

Seniority and responsibility should be determined by the one responsible for employment and surveillance of personnel. Attendants and drivers should be equally trained in each other's duties and responsibilities so that they may function interchangeably or independently in caring for multiple casualties.

Education, Training & Experience

A high school education or equivalency qualification is considered minimal. Must be 18 years of age or older.

Minimum training shall be that prescribed in the basic training program for emergency medical technicians-ambulance of the Department of Transportation and the Public Health Service, or equivalency.

Has practical experience in the care and use of emergency equipment commonly accepted and employed, such as suction machines, oxygen delivery systems (installed and portable), backboards, fracture kits, emergency medical care kits, obstetrical kits, intravenous kits, stretchers of various types, light rescue tools and basic automobile machines. Has a basic understanding of sanitizing and disinfecting procedures. Has knowledge of safety and security measures.

Acquires, through critiques and conferences with emergency department personnel, constructive criticism of care rendered and instruction in advances in patient care and in new or improved equipment.

Acquires a thorough knowledge of the territory within his service area, and the traffic ordinances and laws concerning the emergency care and transportation of the sick and injured. Has necessary driver and professional licenses as required by law.

Special Characteristics

Aptitudes

Motor coordination in administering emergency care of the critically ill and injured, in lifting and carrying patients, and in driving the ambulance.

Manual dexterity and physical coordination in carrying, lifting, extricating, climbing, hoisting, and other similar maneuvers in a manner not detrimental to the patient, fellow workers, or self.

Facility to give and recieve verbal and written directions and instructions.

Interests and Temperaments

- A pleasant personality
- Leadership ability; firm, yet courteous
- Good judgment under stress
- Clean and neat in appearance
- Good moral character
- Emotional stability and psychological adaptability

Physical Demands

Normal good health.

Ability to lift and carry up to 100 pounds.

Visual color discrimination in examining patients and determining by appearance diagnostic signs that require immediate detection and proper action, as well as to distinguish traffic signs and lights.

Both far and near visual acuity necessary for driving and for examining the patient (correction by lenses permitted).

CURRENT TRAINING PROGRAMS FOR AMBULANCE ATTENDANTS

A number of training programs have been developed to train ambulance attendants, either for specific functions or for the overall performance of their job. The following is a brief discussion of some of those training programs which are presently being offered to train ambulance attendants.

1. American Red Cross

Perhaps the first training program to which an ambulance attendant is introduced is one which has been developed by the American Red Cross. This training program is divided into two sections: 1) the Standard Red Cross program and, 2) the Advanced Red Cross program. The standard section requires 10 classroom hours for completion while the advanced section requires 16 hours. Subjects covered in the standard course include treatment of wounds, treatment of shock, artificial respiration, treatment of poisoning, treatment of burns and ill effects of heat and cold, injuries to bones, joints and muscles. The advance course goes into more detail about the treatment of injury and illness. The standard course is designed primarily for the average citizen, whereas the advance course is geared toward training special interest groups such as policemen, firemen, rescue squad and ambulance crews.

2. Pennsylvania Department of Health

Pennsylvania's Department of Health conducts a 27-hour ambulance attendant training program. This program includes the same basic subjects as those covered by the American Red Cross courses with additional attention being given to the theory behind certain treatments and emphasis on the operation of an emergency vehicle and related equipment found in such a vehicle. Special attention is given to the area of emergency childbirth procedures and applicable Pennsylvania Motor Vehicle Code regulations.

3. United States Department of Transportation

The most generally accepted training program nationwide is the United States Department of Transportation's (DOT) 81-hour course entitled Basic Training Program for Emergency Medical Technician-Ambulance. This training program is the model training program upon which certification for the emergency medical technician is based. The program includes a 10-hour in-hospital training session which provides the EMT with the opportunity to observe various functions within the hospital. In addition to those items which are covered in the above training programs, the 81-hour course includes a unit on cardiopulmonary resuscitation (CPR).

4. Cardiopulmonary Resuscitation

The American Heart Association has developed a training program specifically for the purpose of instructing

students to perform cardiopulmonary resuscitation (CPR). This training program requires three class hours. The training program is directed not only to those who provide ambulance service but also toward nurses, physicians and the general population of the United States.

5. Grant/Murray

Messrs. Harvey Grant and Robert Murray have developed an alternative training program which is the equivalent of the U.S. Department of Transportation course. The same basic subject matter is covered in this program as in the Department of Transportation program. However, the emphasis of the training program developed by Grant and Murray is to provide students with the fundamental knowledge necessary to perform particular tasks required by their occupation. The required anatomical and physiological knowledge is introduced during the presentation of the specific task or group of tasks, as opposed to being introduced at the beginning of the course apart from the related task.

In addition to the above training courses, various other alternative courses have been developed by state agencies to serve as alternatives to the 81-hour DOT course. Among these courses are the Ohio Training Program, the South Carolina Hospital Association Training Program and the New Mexico Regional Medical Program Ambulance Training Course.

THE EPI ALLIED HEALTH PROFESSIONS PROJECT

The purpose of the EPI Allied Health Professions Project is to develop a job-related curriculum based upon the use of task analysis as a tool for gathering job-related data. The area of emergency prehospital care was chosen as one of the occupations to be studied in the EPI Allied Health Professions Project since it represented an emerging occupation. The job-related data which is gathered can be used to verify the curriculum content in the above training programs. This verification process involves determining those skills and knowledge which are required of an incumbent performing as an ambulance attendant and comparing the skills and knowledge to the subject area which is included in a given training program. This comparison will indicate whether the skills and knowledge which are required are being taught within the training program.

The procedure involved in the project is as follows:

1. A series of sentences were developed which define tasks/functions, or elements of tasks which an ambulance attendant must perform. These tasks were developed using observations of ambulance attendants performing on the job; opinions of recognized experts in the field; and existing task inventories for other allied health professions.

2. Background information questionnaires were developed to obtain specific characteristics of the ambulance service where the attendant works and to establish the

age, sex, education, training, etc. of the individuals responding to the survey.

3. The survey sites were chosen throughout the Commonwealth. The basis for choice in this survey was willingness to participate, a geographical representation throughout the state, and representation of both volunteer and paid ambulance services.

4. Completed responses to the task survey instrument were gathered, keypunched and tabulated using a series of computer programs.

5. Response tabulation was analyzed by utilizing post-hoc blocked groups to determine differences in performance frequency; performer-perceived difficulty of the task; the amount of supervision received while performing the task; the amount of co-worker involvement in performing the task and the location where the performer feels he was trained to perform the task. The results of this analysis of respondent data are presented within this report.

6. Those tasks which, in the opinion of experts, were thought to be necessary for adequate performance as an ambulance attendant are being analyzed in detail. This task analysis involves flow charting of the tasks and writing a detailed task description. The task description states each elemental step which is required to perform the task and also considers such things as

critical errors which can occur, tolerance levels for performance of a task element, and cues (indicators) as to the skills and knowledge which are required to perform the element and thus the task. See the report "Developing Job-Related Curricula Using Task Analysis," (EPI, October 1973).

7. The results of this task analysis can then be used to verify existing curriculum or to develop new curriculum.

THE SURVEY SITES

A total of twenty-nine (29) ambulance service units in the Commonwealth of Pennsylvania were surveyed. This survey took place during May and June of 1973. Appendix F presents the names and addresses of the units surveyed. A summary of the organizational data for the ambulance units surveyed is presented in Exhibit 2.

The services varied from urban independent ambulance services to rural volunteer fire department services. A total of 59% of the services surveyed were fire department services while 52% of the total were volunteer services.

Some of the services in the survey provide only emergency transportation from the site to the medical facility while others provide emergency medical care and definitive medical care. Not all of the services provided non-emergency transportation of convalescent patients (24%).

The average number of calls per year per unit was 1,470 with a range from a high of 8,201 to a low of 30. The low figure represents a service which had just started up at the time of the survey and thus, is a pro-rated number based upon their current level of service.

A two-way radio system was used by 48% of the services to advise the hospital of the pending arrival of a patient. A total of 35% used the two-way radio to advise hospital personnel of the care given to the patient at the scene and in transport. No information was provided to the hospital prior to arrival by 7%

of the sites surveyed.

By far, the most popular type of ambulance used by the services is the van type ambulance (42%). This fact seems to represent a noticeable change from the situation which existed a few years ago when most ambulance services used either the straight limousine or raised roof limousine. It would appear that at least in terms of vehicular equipment, ambulance services have become more sophisticated. This is based on the assumption that the vans represented in the survey are likely to meet the Department of Transportation standards for design.

A total of 41% of the ambulance services surveyed did not charge for ambulance service; 75% of the services charged $30 or less as a base. However, in some cases, services which do not charge request a donation from those using the service.

EXHIBIT 2

SUMMARY OF ORGANIZATIONAL DATA FOR AMBULANCE UNITS SURVEYED

	Number	Pct.
Units Surveyed	29	
Type of Organization		
Police Department	1	3
Fire Department	17	59
Other Municipal Services	0	0
Independent	8	28
Other	3	10
Tax Status		
Profit	3	10
Non-Profit	26	89
Source of Funds		
Local taxes	10	35
Private grants	2	7
Donation and fundraising	21	72
Fee for service	18	62
Federal or state funds	7	24
Subscription or membership	15	52
Base Charge		
None	12	41
Less than $5	1	3
$ 6 - $10	2	7
$11 - $20	2	7
$21 - $30	5	17
$31 - $40	2	7
$41 - $50	1	3
$51 or more	4	14
Location of ambulance		
Same location	25	86
Different location	4	14
Attendant Pay Status		
Volunteer	15	52
Paid	10	34
Paid and Volunteer	4	14
Manager		
Volunteer	15	52
Paid	13	45
No manager	1	3

EXHIBIT 2 (CONTINUED)

	Number	Pct.
Approximate population served		
Less than 5,000	4	14
5,000 - 9,999	6	21
10,000 - 24,999	7	24
25,000 - 49,999	5	17
50,000 - 99,999	6	21
100,000 - 149,999	0	
150,000 - 249,999	0	
250,000 or more	1	3
Radius of primary emergency response		
2 miles or less	2	7
3 - 4 miles	2	7
5 - 8 miles	11	38
9 - 15 miles	7	24
16 - 25 miles	6	21
26 - 50 miles	1	3
51 - 100 miles	0	0
101 miles or more	0	0
Radius of inter-hospital transfer of critically ill or injured patients		
2 miles or less	0	0
3 - 4 miles	5	17
5 - 8 miles	2	7
9 - 15 miles	3	10
16 - 25 miles	4	14
26 - 50 miles	5	17
51 - 100 miles	5	17
101 miles or more	5	17
Services provided by unit		
Emergency medical care	26	89
Definitive medical care, including defibrillation, IV and/or drug infusion	2	7
Emergency transportation from site to a medical facility	29	100
Emergency transportation between medical facilities	24	83
Non-emergency transportation of convalescent patients	22	76
Light rescue operations, using hand tools (e.g., jacks, bolt cutters, bars)	25	86
Extrication (e.g., from automobiles)	21	73
Average number of calls/year/unit	1,470	
Range highest	8,201	
lowest	30	

EXHIBIT 2 (CONTINUED)

Recordkeeping data		
Date of call	29	100
Place of patient pickup	29	100
Disposition of patient	27	93
Type of call	28	97
Care given to patient	26	89
Name of patient	29	100
Central dispatch or emergency operation center	13	45
Most frequently used method of advising the hospital of pending arrival of patient		
No information is provided	2	7
"Hot line" telephone	1	3
Normal telephone line	9	31
Two-way voice radio system	14	48
One-way voice radio system	1	3
Other	2	7
Most frequently used methods of advising hospital personnel of care given to the patient at the scene and in transport.		
No information is provided	1	3
"Hot line" telephone	1	3
Normal telephone line	1	3
Two-way voice radio system	10	35
One-way voice radio system	0	0
Verbal communication at hospital	17	59
Medical record with patient	6	21
Average number of attendants/unit	19	25
Type of ambulance used		
Straight limousine	1	1
Raised roof limousine	16	22
Van	31	42
Station wagon	6	8
Truck-mounted module	4	5
Travel-all truck	11	15
Hearse conversion	2	3
Heavy rescue truck	0	0
Other	2	3

CHARACTERISTICS OF THE RESPONDENTS

As a part of the survey, certain data were gathered concerning the characteristics of the respondents. Appendix A includes a reproduction of the questionnaire used to obtain respondent background information.

A summary of background data for all respondents as well as break-outs for EMT, attendant, paid, and volunteer categories of respondents is given in Exhibit 3. The total number of respondents in the survey was 209. Of these respondent, a great majority (60%) were in the ambulance attendant category. Another 25% are likely to be involved in patient care (crew chief and driver category).

The average age and average years of EMS experiences of the respondents seems to indicate that the survey group although relatively young (average age 29.8 years) were not new to the field of EMS (average years experience 4.8 years). Thus, it is likely that the results obtained in the survey are not affected by the responses of individuals possessing little experience and thus, performing few task because of the lack of experience.

The average number of trips per month for all respondents was 29.7, with those in the attendant category indicating a 28.5 trips per month. In the attendant category, this represented a range of from 200 trips per month to 2 trips per month. A large difference is found when comparing paid versus volunteer respondents in this category. The number of trips taken in a month by paid attendants exceeded the number of trips taken by

EXHIBIT 3

SUMMARY OF RESPONDENT BACKGROUND

		Total	EMT	Attendant	Paid	Volunteer	Attendant EMT	Attendant Non-EMT
1.	Respondents: Number	209	57	125	63	143	36	89
	Per Cent	100	27	60	30	68	17	43
2.	Sex: Per Cent Male	86	88	82	92	84	83	82
	Per Cent Female	13	12	17	8	15	17	17
3.	Average Age	29.8	27.6	27.2	31.2	29.0	26.1	27.7
4.	Average Years' EMS Experience	4.8	4.9	3.8	5.1	5.5	3.8	3.8
5.	Average Years Current Position	3.7	3.2	3.5	3.3	3.8	2.8	3.7
6.	Position Held (Pct. of Respondents)							
	Manager	7	12	0	13	4	0	0
	Shift Supervisor	4	4	0	10	2	0	0
	Crew Chief	10	11	0	8	10	0	0
	Driver	15	9	0	22	11	0	0
	Attendant	60	63	100	43	67	100	100
	Dispatcher	3	2	0	2	4	0	0
	Clerical	1	0	0	3	0	0	0
7.	Average Number Trips/ Month	23	47	22	55	13	38	39
8.	Reimbursement (Per Cent Respondents)							
	Volunteer	68	37	77	0	100	47	89
	Full-Time	23	44	12	78		25	7
	Part-Time	7	18	10	22		25	3
9.	Registry Held (Number)							
	EMT	57	57	36	35	22	36	0
	RN	1	0	0	0	1	0	1
	LPN	2	0	0	2	0	0	1
10.	Highest Academic Level (Per Cent Respondents)							
	Less than 8	0	0	0	0	1	0	0
	Less than high school	22	19	24	24	22	20	27
	High school diploma	36	32	37	30	38	33	38
	Associate degree	5	7	6	5	5	6	6
	Some college	23	30	22	29	22	33	16
	Bachelors degree	9	9	6	8	9	6	7
	Masters degree	1	0	1	2	1	0	1

EXHIBIT 3 (CONTINUED)

	Total	EMT	Attendant	Paid	Volunteer	Attendant EMT	Attendant Non-EMT
11. Occupational Training (Per Cent Respondent							
None	11	2	8	13	10	3	10
Standard Red Cross	77	81	78	78	76	83	75
Advanced Red Cross	73	75	78	59	79	81	76
Instructor Red Cross	24	33	18	35	20	19	18
CPR-Amer. Heart Assoc.	66	70	69	54	71	69	69
Extrication Training	33	49	30	41	29	44	25
Pa. Dept. of Health	29	33	28	24	31	33	26
D.O.T.-81 hour	20	65	22	38	13	67	3
Electrocardiography	10	26	6	25	3	17	2
Infusion of IV	8	25	5	21	2	14	1
Infusion of Drugs	7	23	5	19	2	14	1
Advanced-480 hour	3	12	2	10	0	8	0

volunteers by a factor of six (6). This difference is probably explained by two facts; in general volunteers will be on call fewer hours per month as a result of other full-time responsibilities which they carry; and in terms of the survey population at least, volunteers tend to service more rural locations with smaller populations therein yielding a fewer number of trips a month.

There appears to be no sufficient difference between the percentages of volunteer and paid personnel responding to the survey and that which appears to be characteristic of the Commonwealth of Pennsylvania. This fact along with the experience of the respondent helps to allow generalization from specific survey data obtained.

In terms of training received and registry obtained, it would appear that thirty-five percent (35%) of those individuals indicating that they held the EMT registry (27% of the total respondents) did not take the Department of Transportation 81-hour required course for registry. These individuals in all likelihood were covered under the "grandfather clause" of the EMT registry program. This clause allowed individuals with certain experience and past training to take the EMT registry test without taking the 81-hour course.

Approximately fifty-six percent (56%) of the paid respondents in the sample hold the EMT registry while fifteen percent (15%) of the volunteers indicated that they held the EMT registry. This should be expected given the fact that the EMT registry has been in existence only about three years and that paid attendants who

depend upon the job as a livelihood are more likely to have obtained the registry.

In terms of training received, eleven percent (11%) of the total respondents indicated that they had received no specific training for their job. Eighty percent (80%) of the respondents were trained at less than the EMT 81-hour level. If this data is generalizable to the Commonwealth of Pennsylvania, it points to a lack of sufficient training in the area of emergency prehospital care. A difference between the amount of training obtained by paid versus volunteers does appear to exist. This can probably be explained by the fact that the volunteer organizations in the sample, and likely volunteer organizations in general, are from rural areas which have not been offered the opportunity to take training programs. This difference in training does not likely represent a difference between paid and volunteers in their desire to obtain training. The response to the question concerning a willingness to enroll in training programs showed no significant difference between paid and volunteer attendants (See Exhibit 4).

The academic level data indicates that the general education of the respondents is relatively high (75% have obtained a high school diploma or higher). If this academic level response is generalizable to the Commonwealth, it would indicate that any training effort for ambulance attendants need not be simplified so as to provide training for less than high school educated students. The difference between paid and volunteer attendants in terms of general academic training does not appear to be

EXHIBIT 4

ANALYSIS OF EMT TRAINING INTERESTS

EPI/EMT SURVEY

RESPONDENTS	INDICATED TRAINING INTEREST		TRAINING COURSES																AVG. NO. MILES WILLING TO TRAVEL
			Standard		Advanced		Instructor		CPR		27-Hour		81-Hour		Advanced				
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
Volunteer	124	90	32	26	39	32	33	27	39	32	27	22	79	64	71	57			27
Paid (Full-time)	31	91	5	17	6	20	5	17	10	33	3	10	11	37	19	63			27
Paid (Part-time)	10	91	0	-	0	-	1	10	0	-	1	10	5	50	8	80			25
	165 *	91	37	84	45	27	39	24	49	30	31	19	95	58	98	60			26

*Total number of respondents was 192; 10 did not respond to this question in either way; 17 did not indicate specific courses of interest but did reflect a willingness to travel for additional training.

significant.

The following question was proposed to all respondents: If legislation were proposed that would require at least one EMT (trained at the 81-hour level) be on every ambulance call, how would you probably vote? In response to this question, eighty percent (80%) of all respondents indicated that they would vote for the legislation while only eighteen percent (18%) indicated that they would vote against such legislation. This response seems to indicate a feeling, at least on the part of the survey respondents, that such legislation is necessary in order to assure that better trained individuals be used in providing ambulance service in the Commonwealth of Pennsylvania.

RESPONSE TO TASK INVENTORY

General Description of Inventory

The purpose of the survey was to obtain information concerning the general limits of the duties performed by various types of personnel in ambulance services throughout the state. As has been previously mentioned, this data provides general information from which a complete task analysis can begin. It was with this purpose in mind that the task statements used on the inventory were structured. In general, statements were chosen in order that they might be representative of skills and knowledge which should be obtained by individuals prior to working in the field. As a result, certain duties which are performed by individuals in an ambulance service may not be included in the task inventory since they do not represent skills and knowledge which should be included in a training program.

Not all of the statements included in the inventory can be considered as tasks in the strict definition (EPI, June 1973). Many of the statements are much larger and include a number of tasks while others are, in reality, stages of a larger task. This was consciously done to gather specific information on the performance of duties by particular individuals. For example, the statement -- Sets standard types and quantity of emergency and medical equipment needed for unit operation -- probably involves more than one task. However, for the purposes of defining general limits to the job, this statement is appropriate. Further breakdown of the statement into its individual tasks can occur during the task description and task

analysis phase.

On the other hand, those statements which represent a part of a task generally indicate specific types of equipment and/or alternate procedures which may be used to perform the entire task. For example, Task 49 and 50 (Appendix B) indicate a use of a three-foot spine board or a six-foot spine board to immobilize a patient's spine. These statements are really alternate procedures using different equipment to perform the same task. However, the data gathered through the use of two separate statements indicates something about the type of equipment which is currently being used in an ambulance service.

However, having stated the above, the term "task" will be used to describe the statements in the inventory even though in many cases it is inappropriate. This is done for efficiency and clarity of the document.

The inventory itself was used to gather data on the frequency of performance of the "task", the amount of supervision received, the co-worker involvement in the "task", the difficulty as perceived by the performer and the location where the performer felt he was trained to perform the "task" (see Appendix A for a sample page from the survey form). Performance data, gathered in terms of frequency of performance of the "task" by the respondent, provides useful information concerning the relative importance of the "task" in relation to other "tasks" performed by the respondents. Also, this data gives an insight into the need for retraining for those critical care "tasks" which are performed relatively infrequently by the respondent.

In the areas of supervision received and co-worker involvement, data is gathered which is useful in determining under what circumstances the respondent must perform the "task" (i.e., does he perform the "task" alone without supervision or does he perform the "task" with a co-worker and with close supervision). This information is particularly useful when one considers "tasks" such as performing CPR or starting an IV. If these must be done alone, they require additional skill that performing them with a co-worker would not require. Also, those "tasks" which are performed with little or no supervision require a decision-making skill and an ability to handle unsuspected conditions which are not required on the part of the performer if he is closely supervised. Thus, this information can be of value in designing training programs.

The purpose of gathering data on difficulty of the "task", as perceived by the respondent, is to obtain information on the relative level of skill practice required in training. However, the question, as interpreted by the respondent, in many cases seemed to mean to them that the "task" was strenuous or required thought processes beyond a normal automatic reaction to a situation. Thus, the response to difficulty of the "task" is subject to different interpretations.

Data was also gathered concerning where the respondents felt they obtained the training to perform the "task". Although this data relates only to the respondent's preception, and thus can be misinterpreted, the purpose of this data was to determine whether the individual felt his occupational training provided him with

the necessary tools to accomplish the required duties of the job.

In all cases above, the data listed are particularly meaningful for some "tasks" while not as meaningful for other "tasks". This must be considered when interpreting the response to any particular statement.

The general functional areas represented in the questionnaire include basic first aid, basic emergency medical technician aid, advanced emergency medical technician aid, transportation, extrication, and administration. The first three functional areas involved specific patient care activities while the areas of transportation and extrication are concerned with the more mechanical aspects of getting to the patient and getting the patient to a definitive care facility. The functional area of administration involves administrative, clerical and support functions necssary for the operation of an ambulance service.

Discussion of Response to Survey

A tabulation for all of the respondents in the survey, including their response to each of the questions related to each "task", is given in Appendix B. Those individuals who did not respond to a particular statement were not included in the percentage responding; thus, the percentage indicated for a "task" statement is generally less than 100%.

Certain selections for particular types of respondents were made and the data grouped according to these selections. The results of these groupings will be presented in the following discussions in terms of each group's response to the various functional categories. The basic subgroups for which selections were made are as follows:

A. All respondents in the survey;

B. Respondents holding emergency medical technician certificates;

C. Respondents who indicated their position as an ambulance attendant;

D. Respondents who indicated that they were paid for their work;

E. Respondents who indicated that they were volunteers;

F. Ambulance attendants who hold an EMT certification;

G. Ambulance attendants who do not hold an EMT certification.

The tabulation for each of these groups can be found in Appendix B.

Patient Care - The Basic First Aid Function

Exhibit 5 presents a summary of the pecentage of respondents of each subgroup who indicated performing each of the "tasks" contained in the basic first aid functional area. The data obtained in response to the "tasks" included in this functional category generally is as might be expected. Tasks such as treating snake bites (Tasks 67 and 68), using an S-tube airway (Task 73) and administering Holger-Neilson method of resuscitation (Task 79) are performed by only a small percentage of the respondents. In most cases, this response pattern can be explained by the fact that cases encountered requiring the method indicated in the statement are likely to be few or, as in the case of the use of a tourniquet (Task 59) much better methods are usually available.

On the other hand those "tasks" where a large percentage of the respondents indicated performance include such "tasks" as applying a dressing to control hemorrhage (Task 60), elevating the head and shoulders of a patient who is having difficulty breathing (Task 69), apply bandage to secure dressing to wound (Task 61), and applying direct pressure to control a hemorrhage (bleeding) (Task 57). These work units are in response to situations which are likely to arise quite often in the emergency

COMPARISON OF TASK PERFORMANCE

PER CENT OF RESPONDENTS PERFORMING TASK

BASIC FIRST AID

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant			
					Paid	Volunteer	EMT	Non-EMT
47.	Use sandbags to immobilize patient's cervical spine (neck).	56	67	54	63	53	56	54
53.	Use a traction splint to treat a lower extremity fracture.	45	79	42	67	36	72	30
55.	Use a padded board splint to immobilize a fracture.	45	61	43	51	43	50	40
56.	Use a sling to immobilize a fractured arm or clavicle.	66	81	58	81	60	72	52
57.	Apply direct pressure to control hemorrhage (bleeding).	80	86	78	90	76	81	78
58.	Apply digital pressure to control hemorrhage.	56	72	51	70	51	64	46
59.	Apply tourniquet to control hemorrhage.	11	11	7	14	9	3	9
60.	Apply dressing to control hemorrhage.	78	86	75	89	74	81	73
61.	Apply bandage to secure dressing to wound.	85	89	85	86	85	86	84
62.	Apply bandages to immobilize a fracture (e.g., ribs).	62	77	58	67	60	75	52

EXHIBIT 5 (CONTINUED)

BASIC FIRST AID--Continued

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant: Paid	Attendant: Volunteer	Attendant: EMT	Attendant: Non-EMT
63.	Apply a sterile dressing to treat a burn.	64	75	59	75	60	72	54
67.	Use a constricting band to treat a snakebite.	9	16	7	10	9	14	4
68.	Make an incision over fang marks and suck out snake venom.	6	11	4	5	7	8	2
69.	Elevate the head and shoulders of a patient who is having difficulty in breathing.	82	89	81	95	77	86	79
73.	Use an S-tube airway adjunct to perform IPPV.	25	30	23	22	26	22	24
79.	Administer Holger-Neilson (back pressure-arm lift) method of resuscitation to ventilate patient.	7	9	5	13	4	3	6
82.	Maintain body temperature and elevate lower extremities to treat patient for shock.	79	91	80	86	77	92	75
83.	Treat a conscious patient who has ingested a poison.	40	70	38	51	36	67	27
89.	Use warm water (100-105 degrees F.) to treat frostbite.	8	12	8	6	8	11	7
91.	Use cold pack to treat injury to soft tissue.	41	49	46	35	44	53	44

Task		All Respondents	Emergency Medical Technician	Attendants	Paid	Volunteer	Attendant EMT	Attendant Non-EMT
98.	Operate a hydraulic lift (Hoyer) to move patient.	5	9	3	6	5	6	2
103.	Perform mouth-to-mouth method of IPPV.	43	53	40	46	43	56	34
104.	Perform mouth-to-nose method of IPPV.	15	33	13	19	13	33	4

treatment of a patient.

It is interesting that only about 50% of the respondents indicated that they used a traction splint to treat a lower extremity fracture (Task 53), use a padded board splint to immobilize a fracture (Task 55), treat a conscious patient who has ingested a poison (Task 83), use cold pack to treat soft tissue injuries (Task 91), and perform mouth-to-mouth method of IPPV (Task 103). It is suprising that this relatively small percentage of the respondents (particularly those in the attendant category) have found a need during the last year to perform these "tasks". Perhaps this is a result of the inclusion of volunteer ambulance attendants who take few calls and thus have little opportunity to perform even such basic patient care procedures. This result is significant and would seem to indicate that even basic skills need to be refreshed because of a lack of opportunity for practice in the normal job cycle.

It would appear that the respondents did not find any of the basic first aid "tasks" particularly difficult to perform. Also the responses seem to indicate that there is a tendency to perform these "tasks" alone with little or no supervision. In terms of training, the larger percentage of respondents indicated that they received the skills and knowledge necessary to perform the "task" from "on-the-job" or occupational training. However, in the basic tasks a significant percentage of the respondents indicated that they received the training from general education. In looking at the other functional categories, it would appear that the general education response resulted in some cases from

misunderstanding since a certain percentage of respondents in the EMT basic and EMT advanced categories of "tasks" responded that they received their training for the "tasks" in their general education, which is highly unlikely.

Patient Care - Basic Emergency Medical Technician Aid

The statements included in this category are those which would normally be included in an Emergency Medical Technician training course (81-hour level) but would not be included in a Basic or Advanced Red Cross First Aid course. Most of the "tasks" in this category involve the use of special equipment found in an ambulance. Exhibit 6 lists the percentage of respondents in the survey indicating performance of the "tasks" in this category.

The results of the response to this functional category is not suprising. In general the "tasks" in this category are performed by more than 50% of all respondents. For example, more than 50% of all respondents indicated that they performed CPR without life-support equipment (Task 99), performed CPR with the use of life-support equipment (Task 100) and operated a bag-valve unit to perform IPPV (Task 101).

It is of interest to note that only 61% of all attendants responding to the survey indicated using a sphygmomanometer and stethoscope to obtain patient blood pressure (Task 105). Since this is a basic piece of information which is gathered prior to treatment of most patients, the response may indicate that a significant percentage of the respondents in the attendant category are not gathering initial patient data. This is

EXHIBIT 6

COMPARISON OF TASK PERFORMANCE

PER CENT OF RESPONDENTS PERFORMING TASK

BASIC EMERGENCY MEDICAL TECHNICIAN AID

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant: Paid	Attendant: Volunteer	Attendant: EMT	Attendant: Non-EMT
44.	Use an emisis basin in treating nauseated patient.	68	89	73	76	66	89	66
45.	Use a urinal to provide the patient with an opportunity to urinate.	39	49	37	40	40	42	35
46.	Use a bedpan to provide the patient with an opportunity to defecate.	26	32	24	24	27	28	22
48.	Use a cervical collar to immobilize patient's neck.	67	86	65	79	62	81	58
49.	Use a 3-foot spine board to immobilize patient's spine to transport.	60	77	59	63	59	72	54
50.	Use a 6-foot spine board to immobilize patient's spine to transport.	48	65	43	48	49	53	39
51.	Use nasal cannula to administer oxygen.	49	67	50	60	44	67	43
52.	Use mask to administer oxygen.	88	95	90	89	88	92	89
54.	Use a pneumatic (air) splint to immobilize a closed fracture.	79	84	79	83	78	86	76
64.	Apply cold wet applications to treat a burn.	42	51	39	43	42	50	35
65.	Apply vaseline gauze or other non-porous material to seal a pneumothorax.	21	53	16	43	12	42	5

EXHIBIT 6 (CONTINUED)

BASIC EMERGENCY MEDICAL TECHNICIAN AID--Continued

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant			
					Paid	Volunteer	EMT	Non-EMT
66.	Use a bulk dressing to immobilize an impaled object.	27	56	22	41	22	50	11
70.	Use an oropharangeal airway to maintain a patent (open) airway.	63	84	62	84	55	81	54
71.	Use an oxygen demand valve to administer oxygen.	66	81	62	84	59	78	56
72.	Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV).	47	63	41	68	38	61	33
75.	Administer oxygen through a mask.	88	93	88	90	87	92	87
76.	Administer oxygen through a nasal cannula.	41	58	41	56	34	58	34
77.	Administer oxygen through an oxygen catheter.	13	23	10	17	11	17	7
78.	Administer oxygen through an incubator system.	18	30	12	33	11	25	7
81.	Operate an oxygen-powered, manually triggered, mechanical ventilation device.	40	67	35	60	31	58	26
84.	Operate vehicle mounted suction to remove fluids from patient's airway.	58	82	55	67	55	78	46
85.	Operate portable suction unit to remove fluids from patient's airway.	55	70	49	62	52	67	42

EXHIBIT 6 (CONTINUED)

BASIC EMERGENCY MEDICAL TECHNICIAN AID--Continued

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant			
					Paid	Volunteer	EMT	Non-EMT
87.	Administer sugar or sugar product to treat patient in insulin shock.	25	39	24	33	22	28	22
88.	Use cold applications to lower patient's body temperature.	23	32	21	19	24	25	19
90.	Use a flashlight to examine the pupillary reaction of a patient.	67	82	66	73	64	81	61
92.	Maintain drainage tubing without suction (e.g., urinary catheter).	13	23	11	24	8	22	7
93.	Perform an emergency childbirth delivery.	25	47	21	40	19	42	12
96.	Use restraint straps to control a combative patient.	60	74	58	73	55	78	49
99.	Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment.	57	74	55	60	57	75	47
100.	Perform CPR with the use of life-support equipment.	55	74	52	73	48	69	45
101.	Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV).	51	72	49	60	48	67	42
102.	Use a bag-valve mask unit to perform IPPV.	19	51	18	40	10	47	7

EXHIBIT 6 (CONTINUED)

BASIC EMERGENCY MEDICAL TECHNICIAN AID--Continued

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant			
					Paid	Volunteer	EMT	Non-EMT
105.	Use a sphygmomanometer and stethoscope to obtain a patient's blood pressure.	56	82	61	60	55	92	48
106.	Place fingers on patient's wrist to count radial pulse.	78	89	84	79	78	92	81
115.	Operate a two-way voice communication radio.	94	96	94	94	94	97	92
125.	Instruct patient's family how to care for patient at home.	11	18	10	17	8	17	8

modified somewhat by the fact that 84% of the respondents indicated that they had taken a patient's radial pulse (number 106). However, in both cases, a large number of those indicating performance, indicated a frequency of once a week or less. The same type of result was obtained in response to the use of a flashlight to examine pupilary reaction (number 90). The above results may be a result of the fact that many volunteers take few trips and thus, may only handle one true emergency case per week. However, the fact that more than 30% of the respondents in the attendant category indicated never performing any of these "tasks" is certainly of interest.

It was suprising that more than 25% of all respondents indicated that they performed the "tasks" related to CPR (numbers 99 and 100) without assistance. This would indicate that a training program should assure that the individual is trained to perform CPR alone rather than with one individual doing compressions while the other provides the resuscitation using either life support equiment or the mouth-to-mouth method of IPPV.

Those "tasks" which were felt to be difficult by the respondents included the CPR "tasks" (number 99 and 100), controlling a combative patient with restraint straps (number 96) and performing emergency child birth (number 93). It is likely that this response to difficulty is not as a result of a felt need on the part of the respondents for more training, but is a result of the physicial exertion and pressure under which the performer must perform.

Patient Care - Advanced Emergency Medical Technician Aid

The statements included in this category represent "tasks" which normally are expected to be included in an advanced Emergency Medical Technician training program. They involve such things as infusion of IV fluids (Tasks 107 and 108), administration of drugs (Tasks 109, 110 and 111), defibrillation (Task 112), electrocardiograph (Task 113) and telemetry (Task 114).

Only a very small percentage of the respondents indicated performing any of these "tasks". This was expected since the state of the art of ambulance services in Pennsylvania is not such that these "tasks" would normally be performed. The fact that any of the "tasks" were performed is probably a result of the response of one ambulance service included in the survey. This service was one of the few, if not the only ambulance service in Pennsylvania, providing such patient care services during the time of the survey.

It is worthwhile to note that only one of the tasks was rated difficult by any of the respondents -- Use an endotracheal tube to maintain an open airway (Task 74). This seems to indicate that those who have been trained at this level do not feel that the particular "tasks" involved are difficult to perform.

COMPARISON OF TASK PERFORMANCE

PER CENT OF RESPONDENTS PERFORMING TASK

ADVANCED EMERGENCY MEDICAL TECHNICIAN AID

Task		All Respondents	Emergency Medical Technician	Attendants	Paid	Volunteer	Attendant EMT	Attendant Non-EMT
74.	Use an endotracheal tube to maintain an open airway.	11	23	9	16	10	17	6
86.	Administer patient's insulin to treat a patient in a diabetic coma.	4	5	5	2	6	6	4
107.	Assemble intravenous fluid administration equipment.	11	26	10	24	5	22	6
108.	Perform a venipuncture to administer intravenous fluids.	4	9	2	10	2	3	2
109.	Use a syringe to administer intravenous medications into the I.V. tubing.	3	9	2	6	2	3	1
110.	Use a syringe to administer intravenous medications.	2	4	1	3	1	0	1
111.	Use a syringe to administer intramuscular medications.	1	2	1	2	1	0	1
112.	Operate a defibrillator to administer empirical defibrillation.	6	16	5	16	1	14	1
113.	Operate an electrocardiograph scope and recorder to observe patient's cardiac activity.	15	37	14	33	7	33	7

Task		All Respondents	Emergency Medical Technician	Attendants	Paid	Volunteer	Attendant	
							EMT	Non-EMT
114.	Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG).	11	30	10	27	3	28	2

Transportation

The "tasks" in this category are concerned with moving a patient either within an ambulance or to and from an ambulance using a stretcher, wheelchair, etc. Exhibit 8 provides a summary of the response by subgroups for this category.

In terms of patient movement to and from the ambulance, the large percentage of the respondents indicated that a variable position (Task 130) or orthopedic (Task 129) stretcher was used as opposed to the rubberized canvas stretcher (Tasks 131 and 132). Only about 50% of the respondents indicated that they drive an emergency medical vehicle (Tasks 136 and 137). Nine individuals in the survey indicated that they had used a watercraft to transport a patient (Task 139), while three individuals indicated the use of a fixed-wing aircraft and four individuals indicated use of a rotary-wing aircraft (helicopter) to transport a patient (Tasks 140 and 141).

None of the "tasks" in this grouping were percieved to be particularly difficult on the part of the respondents. However, a larger percentage of the respondents felt driving an emergency medical vehicle under emergency conditions was more difficult than under non-emergency conditions. Of those who used the various types of stretchers, the variable position stretcher (Task 130) seemed to be rated the easiest to use.

EXHIBIT 8

COMPARISON OF TASK PERFORMANCE

PER CENT OF RESPONDENTS PERFORMING TASK

TRANSPORTATION

Task	All Respondents	Emergency Medical Technician	Attendants	Attendant: Paid	Attendant: Volunteer	Attendant: EMT	Attendant: Non-EMT
129. Use an orthopedic stretcher to transport a patient.	73	79	71	83	69	81	67
130. Use a variable position stretcher to transport a patient.	78	86	78	86	76	86	75
131. Use a stretcher composed of rubberized canvas on an aluminum frame to transport a patient.	51	56	46	60	47	50	45
132. Use rubberized stretcher to suspend a patient from the ceiling of an ambulance.	32	37	28	32	32	33	26
133. Use a chair stretcher to transport a patient.	67	79	66	68	67	78	62
134. Use a chair to transport a patient.	52	67	44	75	43	61	37
135. Use a wheelchair to transport a patient.	28	33	26	30	27	33	24
136. Drive an emergency medical vehicle to transport a patient under non-emergency conditions.	58	70	48	73	52	67	40
137. Drive an emergency medical vehicle to transport a patient using emergency warning devices.	60	75	49	78	53	69	40

EXHIBIT 8 (CONTINUED)

TRANSPORTATION--Continued

Task	All Respondents	Emergency Medical Technician	Attendants	Paid	Volunteer	Attendant EMT	Attendant Non-EMT
139. Use a watercraft to transport a patient.	4	5	3	5	4	3	3
140. Use a fixed wing aircraft (airplane) to transport a patient.	1	5	1	3	1	3	0
141. Use a rotary wing aircraft (helicopter) to transport a patient.	2	5	2	2	2	6	0

Extrication

Four of the "tasks" were directly related to the extrication of an entrapped patient (Tasks 121, 122, 123 and 124). Only one of the "tasks" (Task 121) directly involves the actual extrication while the others are those activities which would go on in support of the extrication operation at an automobile accident. Exhibit 9 presents a summary of the response obtained for the function of extrication.

Less than two-thirds of the individuals in the ambulance attendant category indicated having extricated an entrapped patient or providing the support services to accomplish this. This result seems questionable and cannot be explained. Perhaps, there was some confusion concerning the meaning of extrication on the part of the respondents. It would seem that any individual who has been involved in ambulance service for a long period of time would have many occasions to be involved in the extrication of an individual from an automobile which has been involved in an accident.

Twenty percent (20%) of all respondents felt extrication was difficult to perform. This is expected since each extrication involves different circumstances in terms of the damage to the automobile, the location of the patient and the injuries to the patient.

The percentage of response to the extrication "task" is approximately equal to the response of those using a three-foot spine board (a typical method used for extricating a patient from

EXHIBIT 9

COMPARISON OF TASK PERFORMANCE
PER CENT OF RESPONDENTS PERFORMING TASK
EXTRICATION

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant			
					Paid	Volunteer	EMT	Non-EMT
121.	Extricate an entrapped patient.	65	77	62	75	62	78	55
122.	Direct traffic at scene of accident.	38	35	37	27	43	39	36
123.	Use highway flares to control traffic at accident scene.	47	49	46	35	52	56	43
124.	Use portable floodlights to illuminate work area.	52	60	52	43	56	64	47

an accident). It would be interesting to determine if this similarity in response is a result of causal factors or just a coincidence.

Administrative, Clerical and Support

A large number of the "tasks" included in the inventory were directly related to administrative, clerical and support services necessary to operate an ambulance service. Such things as determining type and quantity of various required supplies and equipment (Tasks 1, 4, 7, and 10) and maintaining records (Tasks 18, 19, 20, 21, 23, etc.) are included in this grouping. A summary of the response of all subgroups to this category is given in Exhibit 10.

It is interesting to note that a large percentage of respondents (even in the attendant category) indicated performing "tasks" within this category. This would seem to point out that all individuals get involved in the administrative and support functions necessary for operating an ambulance service and that a division of labor into operating and support is not prevalent. Since very little emphasis is placed on the functions within a basic training program, this information is useful.

A total of 81% of respondents (79% of the attendants) indicated that a special form to report an ambulance trip was used and completed (Task 27). Depending on the representativeness of this sample and on the amount of information contained in such a form, this would seem to indicate that the requirements of any legislation which includes reporting ambulance trips would not

EXHIBIT 10

COMPARISON OF TASK PERFORMANCE

PER CENT OF RESPONDENTS PERFORMING TASK

ADMINISTRATIVE/CLERICAL SUPPORT

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant: Paid	Attendant: Volunteer	Attendant: EMT	Attendant: Non-EMT
1.	Set standard type and quantity of emergency medical equipment needed for unit operation.	56	67	54	56	57	64	49
2.	Inventory type and quantity of emergency medical equipment to determine need for replacement, etc.	66	72	61	76	62	61	61
3.	Place emergency medical equipment in assigned location.	79	77	82	71	83	78	84
4.	Set standard type and quantity of emergency medical supplies needed for unit operation.	45	47	41	41	48	42	40
5.	Inventory type and quantity of emergency medical supplies to determine need for resupply.	61	63	58	68	59	58	57
6.	Place emergency medical supplies in assigned location.	77	79	82	71	80	83	81
7.	Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation.	9	21	7	11	7	11	6
8.	Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies.	12	32	10	22	8	22	4

EXHIBIT 10 (CONTINUED)

ADMINISTRATIVE/CLERICAL SUPPORT--Continued

Task	All Respondents	Emergency Medical Technician	Attendants	Paid	Volunteer	Attendant EMT	Attendant Non-EMT
9. Place drugs and I.V. fluids in assigned location.	14	37	14	27	8	33	6
10. Set standard type and amount of office supplies needed for unit operation	24	25	18	25	24	19	17
11. Inventory type and amount of office supplies to determine need for resupply or new supplies.	24	28	18	30	22	25	16
12. Place office supplies in assigned location.	27	30	22	30	26	25	20
13. Design emergency medical equipment such as a special splint or vehicle floor plan.	24	30	19	25	24	25	17
14. Examine physical facilities to determine need for expansion or construction.	20	21	14	16	22	11	16
15. Prepare budget for operation of unit.	16	14	10	14	17	6	11
16. Assign crew and vehicle to respond to ambulance call based upon the nature of the call.	45	51	31	51	43	39	28
17. Survey type and quantity of emergency medical equipment available for purchase.	30	26	22	22	34	17	25

EXHIBIT 10 (CONTINUED)

ADMINISTRATIVE/CLERICAL SUPPORT--Continued

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant			
					Paid	Volunteer	EMT	Non-EMT
18.	Maintain personnel records	22	25	15	21	22	19	13
19.	Prepare payroll for unit employees.	3	7	1	8	1	3	0
20.	Prepare financial report of unit operation.	11	12	4	13	10	6	3
21.	Examine record of service to patient to bill patient for service.	16	21	6	24	13	8	4
22.	Maintain accounting records.	8	11	1	10	8	3	0
23.	Maintain records of patients serviced.	36	35	26	35	38	28	26
24.	Operate a typewriter.	28	18	22	21	31	19	22
25.	Maintain records of maintenance performed on emergency medical equipment.	28	35	18	32	27	25	15
26.	Complete information required by special form to report accident.	43	46	37	37	46	39	36
27.	Complete information required by special form to report ambulance trip.	81	88	79	75	84	89	75
28.	Complete information required by special forms other than those listed above.	27	46	20	40	22	36	13
29.	Examine record of service to patient to determine charges to patient.	13	26	7	22	9	17	3

EXHIBIT 10 (CONTINUED)

ADMINISTRATIVE/CLERICAL SUPPORT--Continued

Task		All Respondents	Emergency Medical Technician	Attendants	Attendant: Paid	Attendant: Volunteer	Attendant: EMT	Attendant: Non-EMT
30.	Record analysis of ambulance trips to determine such things as type of service provided, etc.	29	37	21	35	27	28	18
31.	Create and maintain on-call roster of staff required to operate unit.	23	35	12	32	20	22	8
32.	Conduct meetings with hospital representative(s) to coordinate emergency medical services.	17	21	11	19	16	11	11
33.	Conduct meetings with unit personnel.	41	42	34	44	40	33	35
34.	Develop policies or procedures to provide guidelines for daily operation of the unit.	29	32	22	22	32	22	21
35.	Develop an on-the-job training program.	26	33	20	29	26	28	17
36.	Conduct interview to determine if applicant meets standards for employment.	11	18	5	16	9	6	4
37.	Administer test to determine if applicant meets standards for employment.	10	12	8	13	8	6	9
38.	Evaluate unit personnel to determine progress, raises, discipline and promotion.	15	25	6	21	13	8	6

EXHIBIT 10 (CONTINUED)

ADMINISTRATIVE/CLERICAL SUPPORT--Continued

Task	All Respondents	Emergency Medical Technician	Attendants	Paid	Volunteer	Attendant EMT	Attendant Non-EMT
39. Determine staff required to operate unit effectively in any specific time period.	21	26	10	24	20	11	9
40. Explain general hospital procedures to patient or family.	31	53	34	49	24	61	22
41. Inform patient's family of patient's general condition.	32	39	34	35	31	39	31
42. Inform patient's attending physician of patient's death.	23	32	17	37	17	28	12
43. Inform Coroner's office of patient's death.	31	33	21	41	26	22	20
116. Answer telephone to receive requests for ambulance service.	72	81	71	67	74	81	67
117. Perform minor mechanical maintenance on emergency medical equipment.	46	63	44	51	45	64	36
118. Perform building maintenance on physical facility.	40	46	37	35	43	47	33
119. Replace oxygen tank in vehicle.	71	79	70	78	70	78	66
120. Refill oxygen tanks with compressed oxygen.	30	23	26	17	36	19	28
126. Evaluate quality of training program.	20	25	13	21	20	19	10

EXHIBIT 10 (CONTINUED)

ADMINISTRATIVE/CLERICAL SUPPORT--Continued

Task	All Respondents	Emergency Medical Technician	Attendants	Attendant			
				Paid	Volunteer	EMT	Non-EMT
127. Conduct on-the-job training sessions.	33	40	26	32	33	39	21
128. Conduct formal classes to instruct individuals in emergency medical care techniques.	30	35	26	35	29	31	24

necessarily involve additional paperwork for most individuals.

Approximately one-third of the respondents indicated that they conducted formal classes to instruct individuals in emergency medical care techniques (Task 128) and conducted on the job training sessions (Task 127). Given the "state of the art" in training programs and the response of the individuals involved in the survey, it would appear that a large amount of training is received informally on the job within the ambulance services.

Few of the "tasks" included within this category were rated as being particularly difficult by those responding. In general, the tendency was to rate the "tasks" as easy to perform. The exceptions to this are: design emergency medical equipment (Task 13), examine physicial facilities to determine the need for expansion or construction (Task 14), preparing budget (Task 15), assigning crew and vehicle (Task 16) and surveying type and quantity of emergency medical equipment (Task 17). In general, the response to difficulty of these was moderate to difficult.

Some General Discussion Concerning the Responses Obtained

Most of the "tasks" showed a response frequency of once per week or less. A surprising percentage of the respondents particularly in the patient care area indicated performance of the "tasks" once per month or less. This data seems to indicate that there may be a need for refresher training for those individuals who have not had the opportunity to perform the "tasks" very frequently.

The data obtained in the area of supervision (i.e., the co-worker involvement and the amount of supervision received) and the data obtained in the training category does not generally seem to provide much useful information. The pattern of responses obtained seem to indicate some confusion concerning the amount of supervision received and where the training was obtained. Also, some of the responses to the amount of co-worker involvement seem to indicate that the respondent was confused. Thus, the data obtained in these areas is subject to much question. Anyone considering using such a method to obtain job-related data should take care in explaining to the respondents exactly what is desired in terms of supervision and co-worker involvement.

On the other hand, the data obtained concerning the perceived difficulty does seem to make sense when one considers the relative complexity and lack of standard situations within those "tasks" which were rated as difficult. The respondents seem to rank "tasks" as being difficult not because they involve many procedural steps with intricate procedures, but because either the situation causes mental or physicial pressure to be exerted upon the performer or the situation results in the need for ingenuity because of the various conditions which can exist.

An Analysis of Comparative Responses by Subgroups

Attendants - EMT vs. Non-Registered EMT

A test on proportions of two independent populations was performed to determine if a significant difference in response existed on each of the "tasks" performed by an Emergency Medical

Technician attendant and a non-registered Emergency Medical Technician attendant. Those "tasks" where a statistically significant difference in performance was found between subgroups (at the .05 level) are summarized in Exhibit 11.

The great majority of "tasks" listed in Exhibit 11 are those which would be found in an EMT training program but not in a basic first aid training program. This would seem to indicate the effect of training upon the performance of given "tasks" by ambulance attendants. In all cases, registered EMT attendants were more likely to perform these "tasks" than non-registered attendants (all direction indicators are positive).

It should be noted that the results can be interpreted only for each individual "task" and cannot be statistically grouped together to indicate a significant difference between EMT attendants and non-EMT attendants. That is to say one can look at the response of those performing CPR using life-support equipment (Task 100) and reach the conclusion that EMT attendants are more likely, in the population, to perform this "task" than non-registered attendants. On the other hand, one cannot look at all of the "tasks" included in Exhibit 11 and say that EMT attendants and non-registered EMT attendants are different (in a strict statistical sense).

The results of this analysis do seem to indicate that training efforts can provide a positive impact on the delivery of ambulance services. If one can generalize from the sample, then one would expect that additional training would for example increase the use of CPR in the emergency treatment of patients.

EXHIBIT 11

TASKS WITH SIGNIFICANT DIFFERENCE BETWEEN PERFORMANCE BY REGISTERED EMT ATTENDANTS AND NON-REGISTERED ATTENDANTS

Number	Task	Direction
27	Complete information required by special form to report ambulance trip (e.g., patient's condition, care rendered, time).	+
28	Complete information required by special forms other than those listed above.	+
40	Explain general hospital procedures to patient or family (e.g., admission, discharge, emergency room procedures).	+
42	Inform patient's attending physician of patient's death.	+
44	Use an emisis basin in treating nauseated patient.	+
48	Use a cervical collar to immobilize patient's neck.	+
49	Use a 3-foot spine board to immobilize patient's spine to transport.	+
51	Use nasal cannula to administer oxygen.	+
53	Use a traction splint to treat a lower extremity fracture.	+
56	Use a sling to immobilize a fractured arm or clavicle.	+
58	Apply digital pressure to control hemorrhage.	+
62	Apply bandages to immobilize a fracture (e.g., ribs).	+
63	Apply a sterile dressing to treat a burn.	+
65	Apply vaseline gauze or other non-porous material to seal a pneumothorax (sucking chest wound).	+
66	Use a bulk dressing to immobilize an impaled object.	+
70	Use an oropharangeal airway to maintain a patent (open) airway.	+
71	Use an oxygen demand valve to administer oxygen.	+
72	Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV).	+
76	Administer oxygen through a nasal cannula.	+
81	Operate an oxygen-powered, manually triggered, mechanical ventilation device (e.g., Elder demand valve).	+
82	Maintain body temperature and elevate lower extremities to treat patient for shock.	+
83	Treat a conscious patient who has ingested a poison.	+
84	Operate vehicle mounted suction to remove fluids from patient's airway.	+
85	Operate portable suction unit to remove fluids from patient's airway.	+
90	Use a flashlight to examine the pupillary reaction of a patient.	+
93	Perform an emergency childbirth delivery.	+
95	Place deceased patient in a shroud.	+
96	Use restraint straps to control a combative patient.	+
99	Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment.	+
100	Perform CPR with the use of life-support equipment.	+

EXHIBIT 11 (CONTINUED)

Number	Task	Direction
101	Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV).	+
102	Use a bag-valve mask unit to perform IPPV.	+
103	Perform mouth-to-mouth method of IPPV.	+
105	Use a sphygmomanometer (blood pressure cuff) and stethoscope to obtain a patient's blood pressure.	+
113	Operate an electrocardiograph (EKG and ECG) scope and recorder to observe patient's cardiac activity.	+
117	Perform minor mechanical maintenance on emergency medical equipment.	+
121	Extricate an entrapped patient.	+
124	Use portable floodlights to illuminate work area.	+
127	Conduct on-the-job training sessions.	+
133	Use a chair stretcher to transport a patient.	+
134	Use a chair to transport a patient.	+
136	Drive an emergency medical vehicle (ambulance) to transport a patient under non-emergency conditions.	+
137	Drive an emergency medical vehicle to transport a patient under emergency conditions using emergency warning devices (e.g., siren, 360 beacon light).	+

It should be pointed out here, however, that the basic assumption is that when CPR is used it is needed and that the increased use of CPR is a result of this need and not a result of the attendant desiring additional practice.

The differences obtained in this comparison are likely to be understated. The reason for this is the fact that the comparison was made between registered EMT attendants and non-registered EMT attendants and not between those who had obtained the equivalent of EMT training and those who had not. Thus, in the non-registered category a number of individuals were included who had taken the EMT course or its equivalent. The decision was made to make this comparison since those individuals who have taken the equivalent training but had not passed the registry have not indicated that they posess the skills and knowledge necessary to perform the tasks required for EMT registry. Thus, to include trained but non-registered attendants in the EMT group would have been to include with those whose skills and knowledge have been demonstrated (EMT registry test), a group of individuals for whom the level of skills and knowledge is unknown. However, it is likely that any of those who have had the training but have not taken the registry for one reason or another do perform the EMT I "tasks" adequately, thus, overstating the performance of the non-registered attendants in terms of the effect of training.

It is interesting to note, when looking at the background data of the respondents in these two categories (See Exhibit 3), that 50% of the respondents in the EMT attendant category are being paid,

while only 10% of the respondents in the non-registered EMT attendant category are being paid. In addition, as might be expected, the percentage of the respondents who have had the various training programs is higher for the EMT attendants than for the non-registered EMT attendants with the exception of the Red Cross and CPR training programs.

Paid vs. Volunteer

Responses to the survey by those indicating that they were volunteers vs. those indicating that they were paid (both full and part-time) were compared. This comparison was made over all respondents regardless of position held and type of registry held. Those "tasks" which yielded a significant difference in performance between the two groups are presented in Exhibit 12.

All but five of the "tasks" presented in Exhibit 12 show a positive significant difference between the performance by paid ambulance attendants and volunteer ambulance attendants. Again the same caution must be stated -- that the significant difference presented exists for "tasks" and does not represent a statistical difference between the two groups over all "tasks".

Many of the "tasks" included in Exhibit 12 are the same as those for which differences were found to exist between EMT attendants and non-EMT attendants. This probably explains much of the difference in performance between paid and volunteer respondents, since a much larger percentage of the paid category (56%) hold EMT registry than of the volunteer category (15%). Thus, the difference in performance of "tasks" is likely to be attributable

EXHIBIT 12

TASKS WITH SIGNIFICANT DIFFERENCE BETWEEN PERFORMANCE BY PAID AMBULANCE ATTENDANTS AND VOLUNTEER AMBULANCE ATTENDANTS

Number	Task	Direction
2	Inventory type and quantity of emergency medical equipment to determine need for replacement, resupply, or new equipment.	+
3	Place emergency medical equipment in assigned location.	-
8	Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies.	+
9	Place drugs and I.V. fluids in assigned location.	+
17	Survey type and quantity of emergency medical equipment available for purchase.	-
21	Examine record of service to patient to bill patient for service.	+
28	Complete information required by special forms other than those listed above.	+
29	Examine record of service to patient to determine charges to patient.	+
31	[illegible] in on-call roster of staff required to operate unit.	+
40	Explain [illegible] hospital procedures to patient or family (e.g., [illegible], emergency room procedures).	+
42	[illegible] attending physician of patient's death.	+
43	[illegible] of patient's death.	+
48	[illegible] to immobilize patient's neck.	+
51	[illegible] to administer oxygen.	+
53	[illegible] splint to treat a lower extremity fracture.	+
56	[illegible] to immobilize a fractured arm or clavicle.	+
57	Apply [illegible] pressure to control hemorrhage (bleeding).	+
58	Apply [illegible] pressure to control hemorrhage.	+
60	Apply [illegible] to control hemorrhage.	+
63	Apply a sterile dressing to treat a burn.	+
65	Apply vaseline gauze or other non-porous material to seal a pneumothorax (sucking chest wound).	+
66	Use a bulk dressing to immobilize an impaled object.	+
69	Elevate the head and shoulders of a patient who is having difficulty in breathing.	+
70	Use an oropharyngeal airway to maintain a patent (open) airway.	+
71	Use an oxygen demand valve to administer oxygen.	+
72	Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV).	+
76	Administer oxygen through a nasal cannula.	+
78	Administer oxygen through an incubator system.	+
81	Operate an oxygen-powered, manually triggered, mechanical ventilation device (e.g., Elder demand valve).	+
83	[illegible]	+
87	Administer [illegible] to treat patient in insulin shock.	+

EXHIBIT 12 (CONTINUED)

Number	Task	Direction
92	Maintain drainage tubing without suction (e.g., urinary catheter).	+
93	Perform an emergency childbirth delivery.	+
94	Place deceased patient in a disaster pouch.	+
96	Use restraint sheets to control a combative patient.	+
100	Perform CPR with the use of life-support equipment.	+
102	Use a bag-valve mask unit to perform IPPV.	+
107	Assemble intravenous fluid administration equipment.	+
113	Operate an electrocardiograph (EKG or ECG) scope and recorder to observe patient's cardiac activity.	+
114	Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG).	+
120	Refill oxygen tanks with compressed oxygen.	-
121	Extricate an entrapped patient.	+
122	Direct traffic at scene of accident.	-
123	Use hi-dway flares to control traffic at accident scene.	-
124	Use portable floodlights to illuminate work area.	+
125	Instruct patient's family how to care for patient at home (e.g., use of urinary catheter, dressing wounds).	+
129	Use an orthopedic stretcher to transport a patient.	+
131	Use a stretcher composed of rubberized canvas on an aluminum frame to transport a patient.	+
134	Use a chair to transport a patient.	+
136	Drive an emergency medical vehicle (ambulance) to transport a patient under non-emergency conditions.	+
137	Drive an emergency medical vehicle to transport a patient under emergency conditions using emergency warning devices (e.g., siren, 360 beacon light).	+

to the higher percentage of registered EMT respondents represented in the paid category. In addition, the average number of trips for paid personnel is significantly larger than the number of trips taken by volunteer personnel (55 per month vs. 13 per month). As has been mentioned previously, this difference in number of trips also has a major effect on the opportunities presented to perform the less frequently encountered tasks.

The difference between the two groups in terms of training indicates that in general, the paid personnel have been trained to a higher level than the volunteer personnel. Again, this is to be expected, since the volunteers must attend training in off-hours and are doing so on a volunteer basis. Also, many of the volunteer ambulance services are located in rural areas where accessibility to training has, in the past, been difficult if not impossible.

TEST FOR CONSISTENCY OF RESPONSE

It is desirable to obtain some estimate of consistency with which the inventory measures "tasks" performance by the respondents. In order to accomplish this, duplicate "tasks" were included in the instrument. The "tasks" which were duplicated were not duplicated word for word but were slightly changed. However, this change did not affect the content of the "task" and should not have produced ambiguity in the statement.

In order to perform this test for consistency, a significance test for the difference between two correlated proportions was used (Ferguson, 1947). Responses to the duplicated items were tabulated according to the number of respondents who indicated that they performed the first "task" and also indicated that they performed the second "task"; the number of individuals who indicated that they performed the first "task" but did not indicate performance of the duplicated "task"; the number of individuals who indicated performance of the duplicated "task" but did not indicate they performed the first "task"; and, the number of individuals who indicated performance of neither "task". The results of this response data using the test for significance was then calculated.

Task 51 (Use nasal cannula to administer oxygen) and Task 76 (Administer oxygen through a nasal cannula) were duplicates. The results of the test for significance yielded a Z value of 3.03. This indicates that the response to Task 76 was significantly different than the response to Task 51 (at the .01 level). However, it should be noted that, about eighty percent

(80%) of those individuals who indicated performing Task 51 also indicated that they performed Task 76 while ninety-seven percent (97%) of those who indicated they did not perform Task 51 also indicated they did not perform Task 76. Thus, even though a significant difference in response was obtained, it does appear that some consistency exists.

Task 52 (Use mask to administer oxygen) and Task 75 (Administer oxygen through a mask) were also duplicate "tasks". In comparing the response to these Tasks, no significant difference was found (Z value = 0). Only two percent (2%) of the respondents who indicated doing Task 52 did not indicate doing Task 75 while two percent (2%) of the respondents who indicated doing Task 75 did not indicate doing Task 52. Thus, the response to this "task" appears to be very consistent.

Task 101 (Operate a bag-valve unit to perform intermittent positive pressure ventilation (IPPV)) and Task 102 (Use a bag-valve mask to perform IPPV) yielded a Z value of 8.14 when the responses were compared. Thus, the results seem to indicate a significant difference between populations of respondents to these two "tasks". In looking at the response data, however, there does seem to be a consistency between those individuals who indicated doing Task 101 and who indicated that they never did Task 102. Approximately thirty-three percent (33%) of the respondents indicated that they did Task 101 and did not do Task 102 while only one percent (1%) of the respondents indicated that they did Task 102 and did not do Task 101. Perhaps this lack of consistency between responses to the two "tasks" can be explained

in two ways. First, it is possible that the fact that the two tasks were duplicated, one immediately after the other, yielded a never response to the second "task" consistently because the respondent thought the inclusion of the second "task" was an error. Possibly a second reason for this response is an ambiguity between the use of the words operate and use in the two "tasks". The respondents may have perceived a difference in these words and thus felt that they operated a bag-valve mask unit but did not use one.

The above results indicate a problem with the use of an inventory of "tasks" to determine "task" performance. This is particularly the case in the last group of "tasks" (Task 101 and 102). Any ambiguity in the use of words within the "task" (e.g., operate vs. use) can lead to confusion on the part of the respondent and thus an incorrect response. However, since the purpose of such a inventory is not to develop curriculum directly, but to provide initial data which can be used to define the limits of the job in the areas where curriculum development needs to take place, this inconsistency of response is not particularly disconcerting. On the other hand, if it was desired to use the data obtained from such a survey to directly develop curriculum content, as has been the case in some studies, such an inconsistency of response would create a problem.

These results then, seem to indicate that caution should be exercised when interpreting the results obtained from such an inventory of "tasks". A further study should be conducted to determine if comparable response patterns are obtained on the

total inventory by the same group of respondents. In addition, the results provide a rationale for very careful construction of task statements so as to remove any ambiguity.

The purpose of this study is to develop job-related curriculum and course content for training in the area of emergency prehospital care. The data presented in the preceding section provides useful information for accomplishing this goal. However, it does not provide information which can be translated directly into either curricula or course content. Additional analysis is required. For a complete discussion of how curricula and course content can be developed using task analysis, the reader is referred to the document "The Development of Job-Related Curricula Using Task Analysis" (EPI, 1973). The following discussion will briefly summarize the procedure which can be used to accomplish the goal.

In order to develop job-related curricula, it is necessary to determine the requirements of the job which must be met by the trained performer. These requirements can be stated in terms of the necessary skills and knowledge which the performer must possess to perform the individual tasks (work units) required of the job. Knowledge is defined as the what, where, when, how and why of a given action required by the performer. Skill is defined as the application of the knowledge to perform the given action.

The data obtained in the survey provides a general description of the work units which must be accomplished in providing emergency prehospital care. Useful information which is obtained from this survey includes:

A. The frequency of performance of given units of work by incumbents;

B. The perceived difficulty of the work units by the incumbent;

C. The relationship of the performer job function and the work units which he performs;

D. The level of supervision received while performing each of the work units; and,

E. The involvement of other performers (co-workers) in the performance of the given work units.

Using this data, it is possible to determine those work units which, based upon the frequency of performance and perceived difficulty by the performer, should be included and/or emphasized in a training program.

The first step in determining the skills and knowledge required of the job involves the development of a system flow of the job. Such a flow puts into perspective the major functions which must be accomplished in performing a given job. Appendix C provides a system flow for the emergency prehospital care area. This system flow provides an initial organization structure from which a task analysis can begin.

In order to undertake a task analysis, it is necessary to describe the individual tasks. For those tasks which, using the initial survey data (pre-task analysis phase), are to be included

in the training program, a description is generated. A strict definition of a task (EPI, 1973a) is used for those work units identified as being important for the curriculum. Each of the work units is either combined with other work units or broken down into additional work units which define the tasks required on the job. Each of these tasks is then described. The description involves an initial flow chart of the major activities or elements in the tasks. This flow chart is then translated into a detailed description of each element of the task. An example of task descriptions and a resulting training module are given in Appendix D and Appendix E.

The task descriptions are analyzed to determine the skills and knowledge which are required to perform these tasks. This analysis is accomplished by looking for cues (indicators) within each of the elements of the task. These cues include such things as:

A. critical errors;

B. critical but unsuspected conditions;

C. critical criteria or performance tolerance levels;

D. alternate steps;

. alternate materials, supplies and/or equipment;

. procedures or elements which may have to be repeated; and,

G. procedural steps which indicate a need for interpersonal relations.

Using these cues, the required skills and knowledge necessary to perform each element are noted. Tasks are then compared, using the noted skills and knowledge, to determine which tasks tend to group together for instructional purposes. These groupings can define the curriculum to be taught.

The task grouping can be further broken down into convenient instructional units. These instructional units include:

A. A didactic presentation of the required knowledge;

B. Practical exercises to impart the skills;

C. Presentation of critical errors and avoidance and recovery procedures;

D. Relevant task descriptions;

E. Behavioral objectives;

F. Related reading assignments;

G. Suggested teaching aids;

H. Pre- and post-test items

An example of a typical teaching unit is included in Appendix E of this report.

SOME FINAL COMMENTS

Need for a Training System

As is evident from the results of the responses from the survey, a substantial percentage of those individuals responsible for providing ambulance service in the Commonwealth of Pennsylvania do not have adequate training in emergency patient care procedures. In addition, that training which has been received by ambulance attendants, has been on a "hit-and-miss" basis. Training classes have been started up wherever facilities existed and funds were present to provide such training. In general, the funds which have been available for training have been provided by the United States Department of Transportation grants. These grants have not always been sufficient to provide the necessary materials and/or instructional quality needed for success. Instructors have been in short supply since there does not exist a pool of individuals who are qualified ambulance attendants (trained beyond Emergency Medical Technician Level I) and who have teaching skills.

This approach cannot begin to meet the demand for training which will exist should statewide legislation be passed concerning the level of required training for ambulance attendants. Thus, a more systematic procedure is needed.

In line with this, EPI is currently piloting EMT I training at a vocational school and a community college. It is felt that such institutions are strategically located throughout the state and provide a vehicle whereby training opportunities can be made

available to all ambulance attendants. The established educational institutions of the Commonwealth of Pennsylvania must assume the responsibility for this training effort as they have assumed the responsibility for training in other allied health professions.

In addition, it is imperative that a pool of instructors be developed throughout the state in order that properly qualified individuals will be available to conduct the basic Emergency Medical Technician training. Further research is necessary to determine at what level of competence, both in the emergency medical care field and the field of education, the instructor should be trained. A model training program should then be constructed and implemented to meet the expected demand for such instructors.

Training in Inaccessible Areas of the State

The results of the survey and discussions with individuals operating in rural areas indicate a need for a concentrated training effort to occur in the more rural areas of the state, i.e., in those areas where vocational training institutions are not present. Although there does seem to be a willingness on the part of both paid and volunteer ambulance attendants to travel large distances to receive training, it would be more efficient to take the training to them. In this way, all attendants within a given ambulance service can be trained at the same time and a working relationship between the ambulance attendant within the service and the local hospitals can be developed.

In order to accomplish this, a mobile training lab can be used to reach the inaccessible areas of the state. Such a mobile training lab would entail a fully equipped ambulance operated by a pair of trained instructors. This training lab could be scheduled to visit a particular ambulance service once per week for the time necessary to complete the initial training. This has an additional advantage of lowering the total equipment cost throughout the state since the ambulance could move equipment from one location to the other and therefore not necessitate the purchase of equipment for each individual training class. In addition, the ambulance used as a mobile training lab would familiarize those individuals in the rural areas with a properly equipped vehicle.

As a part of Phase Two of the current EMT I training program, EPI, in conjunction with Admiral Peary Vocational Technical School and Westmoreland County Community College, plan such a venture. The mobile training lab should be operating throughout the Commonwealth of Pennsylvania during fiscal year 1974-75.

Need for Refresher Training

The results of the survey indicate that there is a large range in the number of trips per month answered by various categories of attendants. It is also evident from looking at the "task" performance data that many ambulance attendants have little or no opportunity to perform some of the critical patient care tasks necessary in providing ambulance service. Thus, if an attendant has received the training in these tasks and does not have an opportunity to maintain the skills and knowledge which he

originally acquired, either on his own or through experience, he is likely to lose these skills and knowledge. This is particularly the case in volunteer ambulance services in rural areas where an attendant may be involved in only ten calls per month.

In response to this fact, it becomes desirable to provide refresher training for ambulance attendants on a scheduled basis in order that they might have practice in maintaining their skills and knowledge. Tests on critical patient care tasks could be given to all members of an ambulance service and special training for those members requiring such training could be provided. Such a system is probably best implemented within the structure of the mobile training lab concept.

Phase II of the above-mentioned project includes the development of a refresher training module. This refresher module should be implemented during fiscal year 1974-75.

A Career Ladder for the EMT

There has been much interest in providing the Emergency Medical Technician with advanced training, perhaps even to the associate degree level. However, the current "state of the art" in Pennsylvania is such that most ambulance attendants are volunteer and the demand for advanced training does not involve salaried positions. However, there may be other occupations which are related to emergency prehospital care which can provide salaried positions and act as a career ladder. These positions must be identified and the structure of training for them developed.

EPI is currently working on developing such a demand study within Allegheny County. This demand study will determine where the advanced EMT might find salaried employment. The study will also attempt to define these areas in terms of the skills and knowledge which would be necessary for the advanced EMT to obtain employment.

Citizen Training

In most cases, the first person to reach the site of an emergency is not a trained ambulance attendant. Even with the fast response of ambulance services in most areas, the time between the arrival of a citizen and that of the ambulance can be critical. It is desirable that all citizens within the Commonwealth of Pennsylvania be able to provide basic emergency medical care treatment for a patient in the interim between detection and arrival of the ambulance. Such training could be provided as a normal part of the high school curriculum within the health program. Currently, American Red Cross First Aid Training is given. This training program is being revised to provide more up-to-date training. It is desirable that an effort be made to introduce either the revised American Red Cross training program (if adequate) or a similar citizen program within all secondary schools and community colleges in the Commonwealth of Pennsylvania.

CONCLUSION

The "state of the art" in Emergency Medical Technician training is rapidly changing within the Commonwealth of Pennsylvania.

What exists today, will not exist in the future. What is necessary to upgrade the emergency medical care system within the state is a systematic approach to all levels. Ambulance attendants must be trained to act as an arm of the hospital within the community. Hospital personnel must be able to continue the level of service given to the patient upon arrival. Citizens must be trained to provide the initial care necessary before the ambulance arrives. If such a total system is developed, it is likely that its impact will save many lives which would otherwise be lost. As is evident from the preceding discussion, much effort is currently under way to approach the problems in a systematic manner. These efforts should result in better trained ambulance personnel which should have a positive effect on the delivery of emergency prehospital care within the Commonwealth of Pennsylvania.

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APPENDIX A

QUESTIONNAIRE

Personal Background Information

1. Age ____

2. Sex
   Male ___ 01
   Female ___ 02

3. Total years experience in EMS ____

4. Position held (primary title only)
   Owner ___ 01
   Manager ___ 02
   Shift Supervisor ___ 03
   Crew Chief ___ 04
   Driver ___ 05
   Attendant ___ 06
   Dispatcher ___ 07
   Clerical ___ 08

5. Number of ambulance trips per month ____

6. Years in this position ____

7. Type of personal reimbursement
   Non paid volunteer ___ 01
   Full paid position ___ 02
   Partial paid position ___ 03

8. If this is a full paid position, in what area were you previously employed?
   Health Services ___ 01
   Military ___ 02
   None ___ 03
   Other ___ 04

9. Number of individuals you supervise directly ____

10. If you are paid, on what basis?
    Salary ___ 01
    Hourly ___ 02
    Per Call ___ 03
    Other ___ 04

11. If part time or voluntary, in what area are you presently employed?
    Health Services ___ 01
    Manufacturing ___ 02
    Service Industry ___ 03
    Education ___ 04
    Military ___ 05
    Student ___ 06
    Retired ___ 07
    None ___ 08
    Other ___ 09

12. Registries held
    EMT ___
    CITT ___
    RN ___
    LPN ___
    ARIT ___
    Other ___

13. If you are not a registered EMT, will you be taking the registry examination within the next year?
    Yes ___ 01
    No ___ 02

14. Highest academic level achieved
    Less than 8 ___ 01
    9 ___ 02
    10 ___ 03
    11 ___ 04
    12 ___ 05
    High School Diploma or equiv. ___ 06
    Associate Degree ___ 07
    Some College with no degree ___ 08
    Bachelors Degree ___ 09
    Masters Degree ___ 10
    Ph.D. ___ 11

15. Training received
    None ___
    Standard Red Cross ___
    Advanced Red Cross ___
    Instructor Red Cross ___
    CPR American Heart Association ___
    Extrication Training ___
    Pa. Dept. of Health Emergency Ambulance Attendant Course; 27 Hour ___
    40 Hour ___
    81 Hour U.S. Dept. of Transportation course or equivalent (EMT Training) ___
    Electrocardiography Training ___
    Infusion of I.V. Fluids Training ___
    Infusion of Drugs Training ___
    Advanced Medical Technician; 480 hrs. ___
    Other Specify: _____ ___

16. If you were offered the following courses, in which would you enroll? How many are available in your area?

	Would Enroll	Are Available
Standard Red Cross	___	___
Advanced Red Cross	___	___
Instructor Red Cross	___	___
CPR American Heart Association	___	___
Pa. Dept. of Health Emergency Ambulance Attendant Course; 27 Hour	___	___
40 Hour	___	___
81 Hour U.S. Dept. of Transp. Course or equivalent (EMT)	___	___
Electrocardiography Training	___	___
Infusion of I.V. Fluids	___	___
Infusion of Drugs	___	___
Advanced Medical Technician; 480 Hours	___	___

17. How many miles would you be willing to travel for training? ____

18. If legislation were proposed that would require at least one EMT (trained at the 80 hour level) be on every ambulance call, how would you probably vote?
    For such legislation ___ 01
    Against such legislation ___ 02

ORGANIZATION

1. Is your ambulance unit

Profit	___ 01
Non-profit	___ 02

2. What type of ambulance service is your organization?

Police Department	___ 01
Fire Department	___ 02
Funeral Home	___ 03
Hospital	___ 04
Other municipal service	___ 05
Independent	___ 06
Other	___ 07

3. From which source(s) does your ambulance unit receive operating funds? Check all applicable.

Local tax support	___
Private grants	___
Donations and fund raising	___
Fee for services rendered	___
Federal or state funds	___
Subscription or membership fees	___
Other source(s)	___

4. What is your usual base charge for ambulance service?

No charge	___ 01
Less than $5	___ 02
$6 to $10	___ 03
$11 to $20	___ 04
$21 to $30	___ 05
$31 to $40	___ 06
$41 to $50	___ 07
$51 or more	___ 08

5. Are all of your ambulances in the same location for dispatching?

Yes	___ 01
No	___ 02

6. Are your ambulance attendants

Volunteer	___ 01
Paid	___ 02
Paid and volunteer	___ 03

7. Is the manager or director of the ambulance unit

Volunteer	___ 01
Paid	___ 02
No manager appointed	___ 03

8. What is the approximate population served by your unit?

Under 5,000	___ 01
5,000 to 9,999	___ 02
10,000 to 24,999	___ 03
25,000 to 49,999	___ 04
50,000 to 99,999	___ 05
100,000 to 149,999	___ 06
150,000 to 249,999	___ 07
250,000 or more	___ 08

9. What is the radius from the location of your ambulances to which you provide primary emergency response?

2 miles or less	___ 01
3 miles to 4 miles	___ 02
5 miles to 8 miles	___ 03
9 miles to 15 miles	___ 04
16 miles to 25 miles	___ 05
26 miles to 50 miles	___ 06
51 miles to 100 miles	___ 07
101 miles or more	___ 08

10. What is the radius to which you provide inter-hospital transfer of critically ill or injured patients?

2 miles or less	___ 01
3 miles to 4 miles	___ 02
5 miles to 8 miles	___ 03
9 miles to 15 miles	___ 04
16 miles to 25 miles	___ 05
26 miles to 50 miles	___ 06
51 miles to 100 miles	___ 07
101 miles or more	___ 08

11. What services are provided by your ambulance unit? Check all applicable.

Emergency medical care	___
Definitive medical care, including defibrillation, IV and/or drug infusion	___
Emergency transportation from site to a medical facility	___
Emergency transportation between medical facilities	___
Non-emergency transportation of convalescent patients	___
Light rescue operations, using hand tools (e.g., jacks, bolt cutters, bars)	___
Extrication (e.g., from automobiles)	___

12. What are the total number of ambulance calls made by your unit in 1972?

(List number) _____

13. Which of the following are included in your record keeping system?

Date of the call	___
Place of patient pick-up	___
Disposition of patient	___
Type of call	___
Care given to patient	___
Name of patient	___

14. Do you provide ambulance service 24 hours per day, 7 days per week?

Yes, we provide service to all calls if we have equipment available	___ 01
No, we refuse certain emergency calls that we do not wish to take	___ 02
No, we refer certain calls to other units in our area	___ 03
Unknown	___ 04

COMMUNICATIONS

15. Is there an emergency operations center or central dispatcher for your area?

Yes	___	01
No	___	02
Unknown	___	03

If you answered yes, give name and address of dispatching organization.

_____

_____

16. What is your most frequently used method of advising the hospital of the pending arrival of a patient?

No information is provided	___	01
"Hot line" telephone	___	02
Normal telephone line	___	03
Two-way voice radio system	___	04
One-way voice radio system	___	05
Combination of telephone lines	___	06
Other	___	07

17. What are the most frequently used methods of advising hospital personnel of care given to the patient at the scene and in transport? Check all applicable.

No information is provided	___
"Hot line" telephone	___
Normal telephone line	___
Two-way voice radio system	___
One-way voice radio system	___
Verbal communication at hospital	___
Medical record with patient	___

TRAINING

18. How many patient care attendants are there in your unit or organization?

(list number) ___

19. What are the minimal training standards in your organization and which do you sponsor?

No minimal requirements ___

	Minimal	Sponsor
Standard Red Cross	___	___
Advanced Red Cross	___	___
Instructor Red Cross	___	___
CPR American Heart Assn.	___	___
Pa. Dept. of Health Ambulance Attendant Course; 27 Hours	___	___
40 Hours	___	___
81 Hour Dept. of Transp. Course or equivalent (EMT)	___	___
Electrocardiography	___	___
Infusion of IV Fluids	___	___
Infusion of Drugs	___	___
Advanced Medical Tech.; 480 Hours	___	___

20. How many attendants are registered with the national registry for EMT-A?

(list number) ___

EQUIPMENT

21. How many ambulances does your unit operate? Indicate type of each number.

Straight limousine	___
Raised roof limousine (e.g.,high boy)	___
Van	___
Station wagon	___
Truck mounted module	___
Travel-all truck	___
Hearse conversion or "combination"	___
Amphibious vehicle	___
Watercraft	___
Helicopter	___
Airplane	___
Other: Please specify _____	___

_____

22. How are calls relayed from the dispatcher to the emergency response vehicle personnel?

Normal telephone lines	___
"Hot line" telephone	___
One-way voice radio (home monitor)	___
Two-way voice radio system	___
Verbal face-to-face communication	___
Other: Specify _____	___

_____

_____

STAFFING

23. How many of the personnel in your organization fill each of the job titles listed below, specify number of each type.

Job Title	Full Time	Part Time	Volunteer
Owner	___	___	___
Manager	___	___	___
Shift Supervisor	___	___	___
Crew Chief	___	___	___
Driver	___	___	___
Attendant	___	___	___
Dispatcher	___	___	___
Clerical	___	___	___

EMERGENCY MEDICAL TECHNICIAN — Page 1

INSTRUCTIONS: Read each task and circle the appropriate number to show your answer in each category.

	FREQUENCY: How often do you perform this task?					SUPERVISION: Is another individual usually involved?			SUPERVISION: How much supervision received?			DIFFICULTY: How difficult is this task?			TRAINING: How were skills and knowledge received?			
	Several Times a Day	Once a Day or Several Times a Week	Once a Week or Several Times a Month	Once a Month or Less	Never	You Assist	You are Assisted	Equal Involvement	Close Supervision	General Direction	No Supervision	Easy	Moderate	Difficult	General Education	On-the-Job-Training	Occupational Internship	Experience
1 Set standard type and quantity of emergency medical equipment needed for unit operation	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
2 Inventory type and quantity of emergency medical equipment to determine need for replacement, resupply, or new equipment	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
3 Place emergency medical equipment in assigned location	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
4 Set standard type and quantity of emergency medical supplies needed for unit operation	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
5 Inventory type and quantity of emergency medical supplies to determine need for resupply or new supplies	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
6 Place emergency medical supplies in assigned location	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
7 Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
8 Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
9 Place drugs and I.V. fluids in assigned location	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4
10 Set standard type and amount of office supplies needed for unit operation	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4

APPENDIX B

DATA RESPONSE

TOTAL RESPONSES

PCT OF NUMBER RESPONDING

ALL RESPONDENTS

TASK RESPONSES
PCT OF NUMBER RESPONDING

'ATION! ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 ! ALL

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
1 Set standard type and quantity of emergency medical equipment needed for unit operation	7	16	18	15	41	56	11	12	28	10	24	15	29	23	1	17	19	14	11
2 Inventory type and quantity of emergency medical equipment to determine need for replacement,etc	6	14	25	21	31	66	13	15	30	9	26	22	40	20	1	11	28	8	20
3 Place emergency medical equipment in assigned location	14	21	28	16	18	79	14	17	43	12	27	32	52	22	0	11	34	10	22
4 Set standard type and quantity of emergency medical supplies needed for unit operation	5	10	16	15	48	45	11	10	20	10	17	12	24	15	1	7	20	9	13
5 Inventory type and quantity of emergency medical supplies to determine need for resupply	3	15	21	22	34	61	13	13	29	9	25	19	33	21	1	7	27	9	18
6 Place emergency medical supplies in assigned location	11	22	25	18	19	77	16	14	39	9	28	30	56	15	0	13	33	6	23
7 Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation	1	1	3	3	86	9	1	2	5	3	2	2	2	5	1	1	4	5	3
8 Inventory type and quantity of drugs and I.V. fluids to determine need ror resupply or new supplies	1	4	4	3	81	12	1	4	6	4	2	4	3	7	0	1	5	4	3
9 Place drugs and I.V. fluids in assigned location	1	2	5	5	80	14	4	3	7	3	5	5	9	5	0	2	6	4	5
10 Set standard type and amount of office supplies needed for unit operation	3	3	7	11	72	24	6	8	6	4	7	10	11	10	1	8	7	3	9
11 Inventory type and amount of office supplies to determine need for resupply or new supplies	2	4	7	11	73	24	7	7	7	1	10	8	14	8	0	5	9	3	9
12 Place office supplies in assigned location	2	5	8	11	70	27	7	6	11	2	10	11	21	5	0	7	8	3	12

TASK RESPONSES
PCT OF NUMBER RESPONDING

'ATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFH	1	2	3	1	2	3	1	2	3	1	2	3	4
13	Design emergency medical equipment such as a special splint or vehicle floor plan	0	0	3	21	71	24	6	5	10	7	9	6	5	13	4	6	7	4	7
14	Examine physical facilities to determine need for expansion or construction	1	1	1	17	75	20	4	4	10	1	8	6	4	10	3	5	4	2	8
15	Prepare budget for operation of unit	1	0	2	13	81	16	4	5	3	4	3	6	2	5	6	7	2	1	6
16	Assign crew and vehicle to respond to ambulance call based upon the nature of the call	10	9	13	13	53	45	12	12	11	6	14	20	19	20	3	6	17	6	16
17	Survey type and quantity of emergency medical equipment available for purchase	0	2	4	23	66	30	7	9	10	6	9	9	9	12	3	6	5	3	13
18	Maintain personnel records	3	3	3	11	75	22	3	6	6	3	5	8	9	9	0	4	6	3	8
19	Prepare payroll for unit employees	0	0	2	1	92	3	0	1	0	0	0	3	1	1	0	1	2	1	2
20	Prepare financial report of unit operation	0	0	2	8	85	11	1	6	1	0	4	5	4	5	1	4	2	2	5
21	Examine record of service to patient to bill patient for service	3	2	5	5	81	16	3	4	6	1	4	8	8	6	1	5	8	2	3
22	Maintain accounting records	1	1	4	1	87	8	1	3	1	0	1	6	2	4	0	4	3	0	3
23	Maintain records of patients serviced	10	10	9	8	59	36	7	10	12	4	10	18	20	12	0	6	15	7	9
24	Operate a typewriter	5	2	8	12	68	28	4	5	7	0	4	18	16	8	0	2	2	5	9

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
25	Maintain records of maintenance performed on emergency medical equipment	3	4	9	12	68	28	6	8	10	5	11	7	12	12	0	5	11	3	6
26	Complete information required by special form to report accident	3	9	14	16	55	43	8	11	15	3	14	20	22	16	0	5	14	5	14
27	Complete information required by special form to report ambulance trip	21	22	25	13	17	81	13	16	38	9	27	38	52	23	1	12	34	11	17
28	Complete information required by special forms other than those listed above	4	7	8	8	67	27	6	4	11	4	7	11	12	10	0	4	12	4	5
29	Examine record of service to patient to determine charges to patient	3	2	5	2	84	13	3	2	4	0	4	5	6	4	0	1	5	2	5
30	Record analysis of ambulance trips to determine such things as type of service provided, etc.	9	7	5	9	68	29	6	11	9	1	14	10	11	14	1	4	13	4	8
31	Create and maintain on-call roster of staff required to operate unit	4	4	9	7	73	23	4	8	6	2	9	9	11	8	2	3	11	3	8
32	Conduct meetings with hospital representative(s) to coordinate emergency medical services	0	0	2	14	80	17	3	4	6	2	5	6	4	7	3	4	4	4	6
33	Conduct meetings with unit personnel	1	2	14	24	56	41	7	12	14	4	16	13	15	18	2	8	11	5	11
34	Develop policies or procedures to provide guidelines for daily operation of the unit	1	5	6	17	67	29	8	10	7	3	13	8	7	16	2	6	9	7	7
35	Develop and on-the-job training program	1	4	9	12	70	26	8	11	5	6	11	6	5	15	3	6	8	5	8
36	Conduct interview to determine if applicant meets standards for employment	0	1	2	8	86	11	2	6	0	2	2	4	4	5	1	2	3	3	4

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK	FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
	1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
37 Administer test to determine if applicant meets standards for employment	0	1	1	8	87	10	0	6	1	1	3	3	2	5	1	2	1	4	2
38 Evaluate unit personnel to determine progress, raises, discipline and promotion	1	0	3	10	81	15	2	5	4	3	4	3	3	5	3	3	4	2	4
39 Determine staff required to operate unit effectively in any specific time period	3	3	4	11	76	21	2	7	5	4	7	5	5	11	1	2	5	3	8
40 Explain general hospital procedures to patient or family	6	6	10	9	66	31	4	7	14	0	10	18	16	13	1	6	7	5	14
41 Inform patient's family of patient's general condition	5	6	6	15	66	32	5	8	13	1	10	19	11	16	4	5	9	6	15
42 Inform patient's attending physician of patient's death	1	3	4	14	75	23	3	5	10	1	8	10	5	11	5	2	8	7	8
43 Inform Coroner's office of patient's death	3	3	5	20	67	31	5	4	15	5	8	11	14	10	3	4	10	8	10
44 Use an emisis basin in treating nauseated patient	3	8	18	40	29	68	15	14	27	1	14	46	42	18	4	11	27	15	17
45 Use a urinal to provide the patient with an opportunity to urinate	1	3	5	30	59	39	9	16	14	2	7	25	22	11	2	7	15	10	9
46 Use a bedpan to provide the patient with an opportunity to defecate	0	3	2	20	73	26	7	6	10	0	6	15	12	7	3	6	11	8	7
47 Use sandbags to immobilize patient's cervical spine (neck)	2	2	11	41	43	56	13	17	22	8	20	23	19	30	4	12	16	20	11
48 Use a cervical collar to immobilize patient's neck	2	4	12	49	32	67	12	25	24	11	22	27	19	37	7	14	22	25	10

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIONI ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
49 Use a 3-foot spine board to immobilize patient's spine to transport	2	4	13	41	39	60	10	24	21	13	21	22	11	35	10	13	21	21	10
50 Use a 6-foot spine board to immobilize patient's spine to transport	1	3	10	34	50	48	9	18	17	10	16	19	11	29	6	10	15	20	8
51 Use nasal cannula to administer oxygen	4	7	11	27	49	49	10	13	16	5	14	25	34	13	ø	12	17	20	4
52 Use mask to administer oxygen	7	16	35	30	11	88	22	23	30	12	27	42	64	20	ø	19	33	27	6
53 Use a traction splint to treat a lower extremity fracture	1	3	14	26	51	45	6	16	20	6	14	22	16	26	1	14	18	20	4
54 Use a pneumatic (air) splint to immobilize a closed fracture	3	6	29	42	19	79	14	31	30	11	27	36	38	36	1	20	27	27	7
55 Use a padded board splint to immobilize a fracture	1	3	9	32	53	45	8	16	18	6	16	20	18	23	2	15	15	20	4
56 Use a sling to immobilize a fractured arm or clavicle	2	1	10	52	33	66	11	21	29	6	21	34	28	31	3	18	24	24	4
57 Apply direct pressure to control hemmorrhage (bleeding)	4	6	26	43	19	80	14	20	35	10	22	42	38	34	3	22	23	27	9
58 Apply digital pressure to control hemorrhage	1	3	10	42	41	56	10	15	23	9	14	29	22	29	3	18	14	26	5
59 Apply tourniquet to control hemorrhage	0	0	1	10	88	11	1	2	5	1	1	5	3	5	1	8	4	12	2
60 Apply dressing to control hemorrhage	3	6	26	43	21	78	18	22	29	10	23	39	38	35	1	20	23	29	10

TASK RESPONSES
PCT OF NUMBER RESPONDING

POPULATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
61	Apply bandage to secure dressing to wound	6	10	31	39	14	85	18	23	33	11	31	38	51	32	0	21	28	27	9
62	Apply bandages to immobilize a fracture (e.g., ribs)	1	4	14	43	36	62	12	19	26	11	19	29	28	30	1	20	16	27	5
63	Apply a sterile dressing to treat a burn	2	2	5	55	34	64	10	24	22	11	18	31	19	42	1	21	18	29	4
64	Apply cold wet applications to treat a burn	0	1	4	36	56	42	9	13	15	7	13	17	18	22	0	14	14	20	3
65	Apply vaseline gauze or other non-porous material to seal a pneumothorax	0	0	2	19	78	21	4	5	9	4	4	10	7	11	3	10	8	20	3
66	Use a bulk dressing to immobilize an impaled object	0	0	1	25	71	27	5	9	9	4	6	13	6	13	6	11	11	22	2
67	Use a constricting band to treat a snakebite	0	0	0	8	89	9	1	3	3	2	3	3	4	4	1	10	4	16	1
68	Make an incision over fang marks and suck out snake venom	0	0	0	5	92	6	1	3	1	1	1	3	3	2	0	8	4	14	0
69	Elevate the head and shoulders of a patient who is having difficulty in breathing	6	13	31	32	16	82	18	22	30	8	27	39	48	29	0	19	26	26	10
70	Use an oropharangeal airway to maintain a patent (open) airway	1	4	19	39	35	63	12	17	23	10	17	31	23	33	3	17	20	26	6
71	Use an oxygen demand valve to administer oxygen	4	7	23	32	32	66	15	19	22	7	22	32	38	25	1	16	22	26	6
72	Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV)	2	5	14	26	50	47	8	15	16	5	15	23	20	22	3	13	13	22	7

TASK RESPONSES
PCT OF NUMBER RESPONDING

JPATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
73 Use an S-tube airway adjunct to perform IPPV	1	1	4	18	72	25	3	9	7	2	7	11	8	14	1	10	8	15	2
74 Use an endotracheal tube to maintain an open airway	0	1	1	9	85	11	1	4	4	1	3	6	2	7	1	3	7	10	2
75 Administer oxygen through a mask	8	13	33	33	11	88	21	21	30	10	28	42	54	29	1	21	30	29	7
76 Administer oxygen through a nasal cannula	3	7	10	22	56	41	8	10	13	2	10	23	25	14	0	10	17	18	2
77 Administer oxygen through an oxygen catheter	1	1	2	9	84	13	1	6	4	1	5	6	5	7	0	5	4	12	0
78 Administer oxygen through an incubator system	0	1	2	15	80	18	3	6	5	2	5	8	9	7	0	2	8	10	3
79 Administer Holger-Neilson (back pressure-arm lift) method of resuscitation to ventilate patient	0	0	0	7	91	7	3	1	2	2	2	1	1	3	1	6	6	11	1
80 Operate pressure-cycled, oxygen-powered automatic mechanical resuscitator to perform IPPV	1	2	2	21	72	26	5	9	6	4	8	11	8	13	2	8	9	11	4
81 Operate an oxygen-powered, manually triggered, mechanical ventilation device	3	4	12	20	56	40	6	13	15	4	12	20	21	17	0	7	16	19	3
82 Maintain body temperature and elevate lower extremities to treat patient for shock	2	7	24	46	19	79	13	25	32	12	27	34	44	30	2	16	28	28	8
83 Treat a conscious patient who has ingested a posion	0	1	2	36	56	40	6	12	16	6	11	20	11	24	4	14	13	22	3
84 Operate vehicle mounted suction to remove fluids from patient's airway	0	5	14	40	39	58	10	18	21	8	14	31	17	35	4	14	22	21	7

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
85	Operate portable suction unit to remove fluids from patient's airway	0	3	9	42	43	55	9	18	20	8	13	26	15	32	5	12	22	22	5
86	Administer patient's insulin to treat a patient in a diabetic coma	0	0	0	4	93	4	1	1	1	1	0	1	0	3	0	2	2	6	0
87	Administer sugar or sugar product to treat patient in insulin shock	0	0	2	22	71	25	6	9	8	3	9	10	12	12	0	7	11	15	3
88	Use cold applications to lower patient's body temperature	0	0	2	20	75	23	5	9	6	3	7	10	10	11	0	10	9	17	1
89	Use warm water (100-105° F) to treat frostbite	0	0	0	7	90	8	3	3	1	1	1	4	3	4	0	7	3	13	0
90	Use a flashlight to examine the pupillary reaction of a patient	3	9	17	38	32	67	11	15	24	7	16	38	43	21	0	15	22	26	7
91	Use cold pack to treat injury to soft tissue	0	3	8	30	55	41	8	11	14	4	11	23	27	11	0	13	16	16	3
92	Maintain drainage tubing without suction (e.g., urinary catheter)	0	1	3	9	84	13	1	4	2	0	3	7	7	5	0	3	6	8	1
93	Perform an emergency childbirth delivery	0	0	0	24	72	25	5	9	9	6	5	11	4	10	10	10	13	19	3
94	Place deceased patient in a disaster pouch	0	1	3	31	62	35	6	12	14	2	13	14	14	12	5	7	14	11	8
95	Place deceased patient in a shroud	0	1	3	18	74	22	3	7	10	1	10	10	10	10	2	5	9	7	7
96	Use restraint straps to control a combative patient	0	0	9	50	38	60	12	22	21	11	22	22	8	22	28	11	29	18	10

OCCUPATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
97	Use a geiger counter to detect radiation level	0	0	0	2	94	3	0	0	1	1	0	1	1	0	1	2	2	6	1
98	Operate a hydraulic lift (Hoyer) to move patient	0	1	1	3	92	5	0	1	2	0	1	2	2	2	1	2	4	6	1
99	Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment	0	1	11	45	40	57	10	18	27	10	16	27	8	32	16	14	21	25	5
100	Perform CPR with the use of life-support equipment	1	2	11	41	42	55	9	15	28	10	13	28	9	30	14	13	21	24	4
101	Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV)	0	2	11	38	45	51	7	13	25	6	16	27	15	32	3	12	20	23	4
102	Use a bag-valve mask unit to perform IPPV	0	2	5	11	78	19	2	3	10	3	5	8	5	11	1	4	10	17	2
103	Perform mouth-to-mouth method of IPPV	0	0	3	39	54	43	6	11	17	6	11	22	11	24	5	14	17	22	3
104	Perform mouth-to-nose method of IPPV	0	0	0	14	82	15	1	2	7	2	3	7	3	8	1	8	9	16	1
105	Use a sphygmomanometer and stethoscope to obtain a patient's blood pressure	4	10	17	24	42	56	6	14	21	3	12	37	33	18	2	12	18	25	4
106	Place fingers on patient's wrist to count radial pulse	6	16	23	33	19	78	8	20	28	7	19	44	45	26	2	19	24	27	7
107	Assemble intravenous fluid administration equipment	0	0	1	8	86	11	4	2	2	2	4	3	5	4	0	2	2	8	2
108	Perform a venipuncture to administer intravenous fluids	0	1	0	2	92	4	1	2	0	0	2	1	2	2	0	1	1	5	1

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
109	Use a syringe to administer intravenous medications into the I.V. tubing	0	1	0	2	93	3	1	2	0	1	1	1	1	2	0	1	1	4	0
110	Use a syringe to administer intravenous medications	0	1	0	1	94	2	0	1	0	0	0	1	1	0	0	1	1	3	0
111	Use a syringe to administer intramuscular medications	0	0	0	1	97	1	0	0	0	0	0	0	1	0	0	1	0	3	0
112	Operate a defibrillator to administer empirical defibrillation	0	0	1	4	92	6	1	2	2	1	2	2	1	4	0	1	2	5	0
113	Operate an electrocardiograph scope and recorder to observe patient's cardiac activity	1	2	6	5	83	15	2	6	4	2	5	7	5	9	0	2	4	10	2
114	Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG)	0	2	4	5	86	11	2	4	4	2	3	5	2	8	0	1	3	8	1
115	Operate a two-way voice communication radio	30	21	25	18	4	94	10	15	45	6	18	60	77	10	1	17	39	12	20
116	Answer telephone to receive requests for ambulance service	11	14	21	26	25	72	9	15	28	6	12	45	51	13	1	14	28	7	18
117	Perform minor mechanical maintenance on emergency medical equipment	4	6	14	22	50	46	7	14	17	5	13	22	21	21	0	11	15	6	12
118	Perform building maintenance on physical facility	5	7	9	19	56	40	5	11	16	2	11	22	24	10	0	11	12	3	11
119	Replace oxygen tank in vehicle	2	7	22	40	27	71	11	16	32	6	19	41	55	11	0	13	30	11	18
120	Refill oxygen tanks with compressed oxygen	2	3	9	16	67	30	4	8	12	4	5	18	22	5	0	6	13	5	7

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 / ALL

TASK	FREQUENCY 2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
121 Extricate an entrapped patient	0	1	12	51	31	65	12	19	28	12	26	21	5	36	20	13	26	20	7
122 Direct traffic at scene of accident	0	3	7	28	56	38	10	8	12	1	17	16	19	15	1	10	15	5	11
123 Use highway flares to control traffic at accident scene	1	3	12	31	49	47	8	11	16	2	18	21	30	11	2	11	20	6	13
124 Use portable floodlights to illuminate work area	0	2	8	41	44	52	8	12	20	2	21	23	34	13	0	12	21	9	11
125 Instruct patient's family how to care for patient at home	0	0	2	8	85	11	1	3	2	0	3	4	5	3	0	3	3	5	1
126 Evaluate quality of training program	0	2	2	15	75	20	2	11	5	3	9	5	2	13	3	4	7	5	5
127 Conduct on-the-job training sessions	2	4	8	19	63	33	6	14	8	6	11	11	9	20	2	10	9	6	6
128 Conduct formal classes to instruct individuals in emergency medical care techniques	0	3	7	19	65	30	5	13	7	5	9	12	8	18	2	9	8	9	3
129 Use an orthopedic stretcher to transport a patient	2	8	21	43	24	73	13	22	33	7	27	33	32	35	1	16	28	24	5
130 Use a variable position stretcher to transport a patient	12	13	25	27	18	78	12	23	35	8	26	37	44	27	1	16	31	19	10
131 Use a stretcher composed of rubberized canvas on an aluminum frame to transport a patient	6	5	13	26	45	51	8	16	22	3	19	25	28	20	0	10	23	15	7
132 Use rubberized stretcher to suspend a patient from the ceiling of an ambulance	1	1	3	27	65	32	5	10	11	2	11	14	13	13	1	6	18	8	5

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: ALL RESPONDENTS TOTAL RESPONSE 209 PCT OF TOT 100 730927

GROUP 1 : ALL

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
133	Use a chair stretcher to transport a patient	4	5	13	44	29	67	13	19	29	6	24	30	32	30	2	13	27	17	10
134	Use a chair to transport a patient	1	3	10	39	44	52	6	15	24	4	19	22	24	22	2	10	22	14	10
135	Use a wheelchair to transport a patient	1	1	3	22	67	28	3	8	10	1	8	15	17	8	0	11	11	9	4
136	Drive an emergency medical vehicle to transport a patient under non-emergency conditions	12	8	18	21	37	58	5	16	19	5	15	32	36	18	0	12	22	12	12
137	Drive an emergency medical vehicle to transport a patient using emergency warning devices	11	13	20	17	35	60	5	16	21	6	14	35	28	28	2	12	21	13	12
138	Operate a fire control device (fire extinguisher) to extinguish a fire	0	4	10	38	44	51	7	12	15	7	19	20	29	18	0	15	16	11	13
139	Use a watercraft to transport a patient	0	0	1	3	92	4	0	2	2	0	2	2	3	1	0	3	1	5	1
142	Use a fixed wing aircraft (airplane) to transport a patient	0	0	0	1	95	1	0	0	0	0	0	1	0	0	0	1	1	1	0
141	Use a rotary wing aircraft (helicopter) to transport a patient	0	0	0	1	95	2	0	0	1	0	0	1	0	1	0	1	1	1	0

TOTAL RESPONSES

PCT OF NUMBER RESPONDING

EMERGENCY MEDICAL TECHNICIAN

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 : 12 1 E0

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
1 Set standard type and quantity of emergency medical equipment needed for unit operation.	7	28	18	14	33	67	12	19	30	5	28	25	39	25	0	5	19	21	19
2 Inventory type and quantity of emergency medical equipment to determine need for replacement, etc.	9	25	21	18	25	72	18	16	26	11	30	23	40	25	0	5	30	9	26
3 Place emergency medical equipment in assigned location	23	30	14	11	21	77	16	18	35	12	25	33	49	21	0	5	37	14	19
4 Set standard type and quantity of emergency medical supplies needed for unit operation	7	12	11	18	46	47	14	12	16	9	18	18	25	18	0	4	21	12	14
5 Inventory type and quantity of emergency medical supplies to determine need for resupply	5	28	12	18	35	63	14	12	25	9	28	16	40	14	0	4	30	11	18
6 Place emergency medical supplies in assigned location	25	33	11	11	19	79	12	19	37	9	30	28	56	14	0	9	35	5	26
7 Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation	5	2	5	9	74	21	4	5	11	7	5	5	5	11	4	0	9	14	2
8 Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies	2	9	14	7	61	32	0	12	16	9	7	11	11	16	0	0	14	12	5
9 Place drugs and I.V. fluids in assigned location	5	4	16	12	58	37	7	7	21	7	16	11	23	12	0	2	16	11	12
10 Set standard type and amount of office supplies needed for unit operation	4	7	5	9	70	25	4	7	9	5	7	7	11	12	0	7	7	7	5
11 Inventory type and amount of office supplies to determine need for resupply or new supplies	5	7	9	7	72	28	7	7	7	4	5	9	18	7	0	4	12	5	9
12 Place office supplies in assigned location	4	7	9	11	68	30	7	5	14	2	7	11	21	5	0	2	11	4	12

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 : 12 1 EQ

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
13 Design emergency medical equipment such as a special splint or vehicle floor plan	0	0	2	28	67	30	9	5	14	7	11	7	11	12	5	4	14	7	5
14 Examine physical facilities to determine need for expansion or construction	2	0	0	19	75	21	4	5	11	0	5	11	7	4	7	5	5	2	9
15 Prepare budget for operation of unit	0	0	2	12	82	14	7	4	2	4	2	5	2	4	7	9	2	0	5
16 Assign crew and vehicle to respond to ambulance call based upon the nature of the call	19	5	19	7	49	51	11	14	12	4	18	23	21	21	4	2	16	11	19
17 Survey type and quantity of emergency medical equipment available for purchase	0	7	5	14	67	26	5	11	7	0	7	12	12	11	0	4	5	2	14
18 Maintain personnel records	5	4	7	9	74	25	2	9	7	2	4	9	12	7	0	4	7	0	11
19 Prepare payroll for unit employees	0	2	5	0	91	7	0	5	0	0	0	5	2	2	2	2	4	0	4
22 Prepare financial report of unit operation	0	2	5	5	88	12	2	7	0	0	2	5	4	5	2	2	4	2	7
21 Examine record of service to patient to bill patient for service	9	4	2	7	77	21	4	5	9	4	5	9	16	4	0	5	12	2	4
22 Maintain accounting records	0	2	7	2	88	11	2	5	0	0	2	4	2	4	2	5	2	0	4
23 Maintain records of patients serviced	12	12	7	4	61	35	4	11	12	7	5	18	21	11	0	2	16	7	7
24 Operate a typewriter	4	2	2	11	81	18	2	0	7	0	2	7	11	2	0	7	0	0	7

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 1 12 1 EQ

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
25 Maintain records of maintenance performed on emergency medical equipment	7	7	7	14	60	35	4	5	19	7	12	11	19	12	0	0	21	2	9
26 Complete information required by special form to report accident	5	16	12	12	53	46	7	12	19	4	11	25	19	19	2	2	11	7	21
27 Complete information required by special form to report ambulance trip	44	26	16	2	12	88	12	14	44	11	32	37	47	33	0	9	40	16	18
28 Complete information required by special forms other than those listed above	11	16	11	9	51	46	7	7	23	4	14	21	26	11	0	9	18	5	11
29 Examine record of service to patient to determine charges to patient	9	4	7	7	72	26	5	5	9	0	11	9	14	7	0	4	9	2	7
30 Record analysis of ambulance trips to determine such things as type of service provided, etc.	12	7	5	12	61	37	4	16	12	0	18	11	12	19	2	4	16	2	9
31 Create and maintain on-call roster of staff required to operate unit	7	12	12	4	63	35	5	12	11	4	14	12	12	18	5	2	18	4	11
32 Conduct meetings with hospital representative(s) to coordinate emergency medical services	2	0	5	14	77	21	2	4	11	4	7	5	5	9	2	9	7	0	7
33 Conduct meetings with unit personnel	0	5	23	14	58	42	4	18	14	0	12	21	21	10	2	9	9	5	18
34 Develop policies or procedures to provide guidelines for daily operation of the unit	2	16	5	9	68	32	5	14	11	4	11	12	9	18	2	7	11	9	4
35 Develop and on-the-job training program	2	5	12	14	65	33	4	18	11	7	9	11	5	19	5	4	12	7	12
36 Conduct interview to determine if applicant meets standards for employment	0	2	7	9	81	18	2	11	2	2	0	9	9	5	2	4	7	2	5

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 I 12 1 EC

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
37 Administer test to determine if applicant meets standards for employment	0	2	2	9	86	12	0	5	4	2	2	5	5	4	2	4	2	2	5
38 Evaluate unit personnel to determine progress, raises, discipline and promotion	4	0	7	14	74	25	0	14	5	4	4	11	5	11	7	5	7	5	5
39 Determine staff required to operate unit effectively in any specific time period	5	4	9	9	72	26	0	12	5	2	5	9	5	14	2	4	11	4	5
40 Explain general hospital procedures to patient or family	18	9	18	9	46	53	4	9	28	0	18	32	28	23	0	9	16	7	23
41 Inform patient's family of patient's general condition	12	14	5	7	61	39	2	9	19	0	12	21	18	14	5	2	11	7	19
42 Inform patient's attending physician of patient's death	4	4	9	16	68	32	4	7	16	0	11	16	14	14	4	2	12	9	11
43 Inform Coroner's office of patient's death	4	5	7	18	67	33	5	7	19	5	12	11	23	7	4	4	4	11	18
44 Use an emisis basin in treating nauseated patient	11	16	26	37	11	89	23	16	33	4	18	61	72	9	7	9	37	21	19
45 Use a urinal to provide the patient with an opportunity to urinate	2	9	5	33	51	49	14	9	19	2	5	37	39	5	2	2	25	9	12
46 Use a bedpan to provide the patient with an opportunity to defecate	2	9	4	18	68	32	9	5	12	0	5	21	21	5	2	4	16	7	7
47 Use sandbags to immobilize patient's cervical spine (neck)	2	4	21	40	33	67	12	14	33	7	21	32	33	25	5	5	16	32	12
48 Use a cervical collar to immobilize patient's neck	4	9	28	46	14	86	16	26	37	16	26	35	30	46	9	5	25	44	12

TION1 EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 1 12 1 EQ

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
49	Use a 3-foot spine board to immobilize patient's spine to transport	4	7	23	44	23	77	12	28	30	12	32	32	26	40	9	7	21	35	12
50	Use a 6-foot spine board to immobilize patient's spine to transport	2	5	23	35	35	65	11	23	26	14	21	26	26	33	4	7	16	28	12
51	Use nasal cannula to administer oxygen	7	18	18	25	32	67	16	11	25	4	16	40	51	14	0	7	26	33	4
52	Use mask to administer oxygen	14	28	35	18	5	95	23	21	35	9	23	56	68	23	0	7	39	35	12
53	Use a traction splint to treat a lower extremity fracture	4	9	28	39	21	79	11	19	42	5	23	44	30	44	4	9	26	37	7
54	Use a pneumatic (air) splint to immobilize a closed fracture	5	11	33	35	16	84	12	23	44	7	25	49	47	33	0	7	30	35	12
55	Use a padded board splint to immobilize a fracture	2	7	19	33	39	61	5	21	30	5	19	32	28	28	4	7	14	32	9
56	Use a sling to immobilize a fractured arm or clavicle	2	4	25	51	19	81	11	16	46	9	12	54	37	37	7	7	28	35	11
57	Apply direct pressure to control hemmorrhage (bleeding)	5	12	39	30	14	86	12	16	46	9	16	56	42	40	2	11	28	35	14
58	Apply digital pressure to control hemorrhage	2	7	14	49	28	72	7	16	40	5	12	44	28	40	2	7	21	33	11
59	Apply tourniquet to control hemorrhage	0	0	2	9	89	11	0	4	7	0	4	5	5	4	2	0	4	16	2
60	Apply dressing to control hemorrhage	5	16	32	33	14	86	12	19	39	5	19	51	39	42	2	9	30	35	14

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 : 12 1 EC

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
61 Apply bandage to secure dressing to wound	12	19	35	23	11	89	14	16	46	11	18	56	60	26	2	11	30	37	11
62 Apply bandages to immobilize a fracture (e.g., ribs)	4	9	23	42	23	77	9	19	42	9	18	46	37	37	2	9	28	35	9
63 Apply a sterile dressing to treat a burn	2	5	11	58	25	75	5	21	40	9	18	44	25	49	0	9	25	40	5
64 Apply cold wet applications to treat a burn	0	2	11	39	47	51	5	14	28	5	12	30	19	30	0	4	10	26	5
65 Apply vaseline gauze or other non-porous material to seal a pneumothorax	2	0	5	46	47	53	5	12	26	9	7	32	14	28	9	5	18	33	9
66 Use a bulk dressing to immobilize an impaled object	0	2	4	51	44	56	5	18	28	5	14	32	12	26	16	5	19	35	5
67 Use a constricting band to treat a snakebite	2	0	2	12	84	16	0	5	7	2	4	9	7	5	2	2	7	14	2
68 Make an incision over fang marks and suck out snake venom	2	0	2	7	89	11	0	5	4	2	2	7	7	4	0	2	5	12	2
69 Elevate the head and shoulders of a patient who is having difficulty in breathing	12	28	28	21	11	89	19	14	40	5	23	54	60	26	0	9	32	33	12
70 Use an oropharangeal airway to maintain a patent (open) airway	2	14	32	37	14	84	14	14	42	9	21	49	37	46	0	9	30	35	12
71 Use an oxygen demand valve to administer oxygen	7	19	30	25	19	81	14	21	30	11	23	42	42	35	2	4	35	35	9
72 Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV)	0	14	26	23	35	63	9	19	21	7	23	25	21	33	7	7	23	25	12

TASK RESPONSES
PCT OF NUMBER RESPONDING

C TION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 : 12 1 EQ

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
73 Use an S-tube airway adjunct to perform IPPV	0	5	5	19	67	30	4	9	11	2	7	16	12	16	2	4	12	23	4
74 Use an endotracheal tube to maintain an open airway	0	4	5	14	75	23	2	7	12	4	7	12	7	9	7	0	14	9	5
75 Administer oxygen through a mask	14	30	30	19	7	93	16	14	44	9	25	54	63	26	0	11	35	39	7
76 Administer oxygen through a nasal cannula	4	16	18	21	40	58	7	11	23	0	18	37	33	23	0	5	26	32	2
77 Administer oxygen through an oxygen catheter	4	4	4	12	77	23	2	9	9	4	7	12	9	12	0	2	11	18	0
78 Administer oxygen through an incubator system	0	4	5	21	70	30	4	11	11	5	11	11	16	11	2	2	21	14	0
79 Administer Holger-Neilson (back pressure-arm lift) method of resuscitation to ventilate patient	0	0	0	9	91	9	4	2	2	5	0	2	4	4	0	0	9	11	0
80 Operate pressure-cycled, oxygen-powered automatic mechanical resuscitator to perform IPPV	4	4	0	14	79	21	4	7	7	5	5	7	7	12	0	2	9	11	4
81 Operate an oxygen-powered, manually triggered, mechanical ventilation device	5	11	28	23	32	67	4	21	30	9	19	32	37	26	2	5	26	33	2
82 Maintain body temperature and elevate lower extremities to treat patient for shock	2	14	35	40	9	91	9	25	47	7	30	46	65	19	4	9	32	39	9
83 Treat a conscious patient who has ingested a posion	2	4	5	60	30	70	7	16	39	9	19	35	19	40	9	7	25	37	5
84 Operate vehicle mounted suction to remove fluids from patient's airway	0	12	33	37	18	82	9	21	37	5	19	51	28	46	7	5	33	35	9

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIONT EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 1 12 1 EC

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
85 Operate portable suction unit to remove fluids from patient's airway	2	5	21	42	30	70	9	16	35	7	12	40	21	39	7	4	30	32	7
86 Administer patient's insulin to treat a patient in a diabetic coma	0	0	2	4	93	5	0	4	2	0	0	4	2	4	0	0	5	2	0
87 Administer sugar or sugar product to treat patient in insulin shock	0	0	5	33	61	39	4	11	21	7	11	16	18	19	0	0	19	21	4
88 Use cold applications to lower patient's body temperature	0	2	4	26	68	32	4	14	11	4	7	16	12	18	0	2	14	16	2
89 Use warm water (100-105 F) to treat frostbite	0	0	2	11	88	12	4	7	2	4	0	7	4	9	0	0	9	11	0
92 Use a flashlight to examine the pupillary reaction of a patient	5	26	25	26	18	82	11	16	37	4	18	53	56	23	2	7	26	42	7
91 Use cold pack to treat injury to soft tissue	2	9	11	28	46	49	5	16	19	4	9	32	30	18	0	7	21	23	2
92 Maintain drainage tubing without suction (e.g., urinary catheter)	0	2	9	12	74	23	2	7	4	0	4	12	14	7	0	2	12	9	2
93 Perform an emergency childbirth delivery	0	0	2	46	51	47	4	12	26	4	12	25	7	25	14	4	25	23	4
94 Place deceased patient in a disaster pouch	0	2	9	26	61	37	0	11	21	0	9	19	23	7	4	2	16	12	9
95 Place deceased patient in a shroud	0	2	7	23	67	32	0	11	18	0	5	23	18	11	4	2	16	12	5
96 Use restraint straps to control a combative patient	0	2	16	56	25	74	9	21	39	11	28	28	11	35	26	4	35	26	12

TASK RESPONSES
PCT OF NUMBER RESPONDING

JPATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 : 12 1 EO

TASK	FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
	1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
97 Use a geiger counter to detect radiation level	0	0	2	2	95	4	0	0	2	0	0	2	0	2	0	0	2	5	0
98 Operate a hydraulic lift (Hoyer) to move patient	0	5	4	0	89	9	0	2	5	0	2	2	5	4	0	0	7	5	0
99 Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment	0	0	25	49	23	74	7	16	46	7	19	40	12	40	19	5	25	37	9
100 Perform CPR with the use of life-support equipment	0	4	25	46	23	74	5	14	49	11	16	39	16	39	18	4	28	37	9
101 Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV)	0	7	23	42	26	72	4	18	42	7	18	42	18	49	4	2	23	42	7
102 Use a bag-valve mask unit to perform IPPV	2	5	14	30	47	51	5	11	25	9	11	25	12	32	5	0	23	30	4
103 Perform mouth-to-mouth method of IPPV	0	0	9	44	46	53	5	12	23	5	12	30	12	32	5	0	23	26	5
104 Perform mouth-to-nose method of IPPV	0	0	2	32	65	33	4	5	18	5	5	19	7	19	2	0	16	19	2
105 Use a sphygmomanometer and stethoscope to obtain a patient's blood pressure	14	19	32	18	16	82	5	18	40	4	16	58	54	25	2	2	28	47	5
106 Place fingers on patient's wrist to count radial pulse	16	30	33	11	9	89	4	18	47	5	18	56	60	25	2	4	32	40	9
107 Assemble intravenous fluid administration equipment	2	2	5	18	72	26	7	7	7	7	11	5	11	12	2	0	7	19	4
108 Perform a venipuncture to administer intravenous fluids	0	4	2	4	89	9	2	5	0	0	5	2	2	7	0	0	4	11	0

TASK RESPONSES
PCT OF NUMBER RESPONDING

CUPATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 : 12 1 EC

TASK		FREQUENCY					PCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
109	Use a syringe to administer intravenous medications into the I.V. tubing	0	4	2	4	89	9	2	5	0	2	4	2	2	7	0	0	4	11	0
110	Use a syringe to administer intravenous medications	0	4	0	0	95	4	0	2	0	0	0	2	2	2	0	0	2	7	0
111	Use a syringe to administer intramuscular medications	0	2	0	0	98	2	0	2	0	0	0	2	2	0	0	0	2	5	0
112	Operate a defibrillator to administer empirical defibrillation	0	2	5	9	82	16	5	4	5	4	7	4	2	12	2	0	5	14	0
113	Operate an electrocardiograph scope and recorder to observe patient's cardiac activity	4	7	14	12	61	37	5	16	9	5	14	14	12	21	2	2	9	25	4
114	Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG)	2	7	11	11	65	30	5	11	11	9	9	11	7	21	2	0	7	21	4
115	Operate a two-way voice communication radio	53	23	18	4	2	96	9	12	53	5	18	67	79	12	2	7	42	21	23
116	Answer telephone to receive requests for ambulance service	16	26	25	14	18	81	11	14	35	4	16	54	60	16	2	9	30	16	23
117	Perform minor mechanical maintenance on emergency medical equipment	9	16	18	21	33	63	5	14	32	2	23	28	33	25	0	11	19	5	23
118	Perform building maintenance on physical facility	12	11	11	12	53	46	2	11	26	0	16	25	35	5	2	11	14	5	14
119	Replace oxygen tank in vehicle	2	12	28	37	19	79	12	14	44	4	23	47	63	14	0	4	33	14	26
120	Refill oxygen tanks with compressed oxygen	2	5	7	9	74	23	4	0	14	2	5	14	19	2	0	0	12	4	7

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 : 12 1 EQ

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
121	Extricate an entrapped patient	0	2	26	49	19	77	5	23	44	11	26	33	12	40	23	9	32	26	9
122	Direct traffic at scene of accident	0	2	9	25	60	35	5	7	16	2	11	19	21	11	2	5	12	7	9
123	Use highway flares to control traffic at accident scene	0	5	14	30	47	49	4	9	23	2	11	30	32	9	5	9	19	4	14
124	Use portable floodlights to illuminate work area	2	4	14	40	37	60	5	12	28	2	18	33	39	14	2	11	25	9	11
125	Instruct patient's family how to care for patient at home	0	2	5	11	79	18	4	5	2	0	4	9	11	5	0	4	4	11	2
126	Evaluate quality of training program	0	5	4	16	70	25	0	14	9	0	14	7	4	14	7	2	9	5	9
127	Conduct on-the-job training sessions	4	7	19	11	56	40	5	16	14	5	12	18	14	19	5	7	11	9	12
128	Conduct formal classes to instruct individuals in emergency medical care techniques	0	9	14	12	61	35	4	12	12	4	7	19	16	16	2	2	11	18	4
129	Use an orthopedic stretcher to transport a patient	5	16	25	33	18	79	11	16	46	7	26	39	39	33	2	4	37	32	5
130	Use a variable position stretcher to transport a patient	0	18	26	12	11	66	9	19	49	7	26	46	51	26	2	7	37	28	11
131	Use a stretcher composed of rubberized canvas on an aluminum frame to transport a patient	1	7	14	25	40	56	5	19	26	5	21	25	33	21	0	2	28	23	5
132	Use rubberized stretcher to suspend a patient from the ceiling of an ambulance	0	0	7	30	61	37	2	11	18	0	14	18	19	12	4	4	21	11	5

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: EMERGENCY MEDICAL TECHNICIANS TOTAL RESPONSE 57 PCT OF TOT 27 730927

GROUP 1 : 12 1 EC

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
133	Use a chair stretcher to transport a patient	11	5	28	35	19	79	9	18	46	5	25	42	44	32	0	5	30	25	14
134	Use a chair to transport a patient	2	5	21	39	30	67	7	12	39	5	23	30	37	25	0	5	25	23	14
135	Use a wheelchair to transport a patient	4	0	7	23	63	33	2	7	18	2	12	18	19	12	0	7	11	16	9
136	Drive an emergency medical vehicle to transport a patient under non-emergency conditions	26	12	21	11	26	70	7	14	26	7	21	35	40	26	0	9	30	18	14
137	Drive an emergency medical vehicle to transport a patient using emergency warning devices	25	18	26	7	21	75	9	12	30	11	19	37	32	37	2	11	28	19	14
138	Operate a fire control device (fire extinguisher) to extinguish a fire	0	7	11	30	51	47	7	7	23	7	14	18	30	14	0	9	16	12	11
139	Use a watercraft to transport a patient	0	0	2	4	93	5	0	4	2	0	2	4	4	2	0	0	4	4	2
140	Use a fixed wing aircraft (airplane) to transport a patient	0	0	2	4	93	5	0	2	2	0	0	4	2	2	0	0	4	0	0
141	Use a rotary wing aircraft (helicopter) to transport a patient	0	0	2	4	93	5	0	2	4	0	2	4	2	4	0	0	5	0	0

TOTAL RESPONSES

PCT OF NUMBER RESPONDING

ATTENDANTS

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 EC

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
1 Set standard type and quantity of emergency medical equipment needed for unit operation.	8	14	18	14	43	54	14	4	31	8	28	8	30	22	0	16	16	15	11
2 Inventory type and quantity of emergency medical equipment to determine need for replacement,etc.	6	14	20	20	35	61	12	10	31	7	27	18	38	18	0	13	24	8	16
3 Place emergency medical equipment in assigned location	13	24	30	15	15	82	16	14	46	12	33	29	54	23	0	13	34	10	22
4 Set standard type and quantity of emergency medical supplies needed for unit operation	6	6	14	14	51	41	13	5	20	10	18	6	20	15	1	6	18	10	11
5 Inventory type and quantity of emergency medical supplies to determine need for resupply	5	15	17	21	38	58	14	9	29	9	26	12	30	20	2	6	26	10	15
6 Place emergency medical supplies in assigned location	12	25	26	18	14	82	18	10	46	8	32	27	61	13	0	15	32	6	26
7 Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation	2	1	2	2	88	7	1	1	6	3	2	2	1	6	1	2	4	4	4
8 Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies	2	3	4	1	86	10	1	2	7	5	2	2	2	6	0	2	6	3	3
9 Place drugs and I.V. fluids in assigned location	2	2	6	4	82	14	5	0	9	3	6	5	9	5	0	2	6	4	6
10 Set standard type and amount of office supplies needed for unit operation	4	2	5	6	78	18	6	3	6	3	7	5	8	8	0	6	6	2	6
11 Inventory type and amount of office supplies to determine need for resupply or new supplies	3	4	4	7	80	18	9	2	4	2	7	5	10	6	0	4	7	2	5
12 Place office supplies in assigned location	2	4	6	10	76	22	10	2	7	2	9	7	15	6	0	5	9	2	9

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 00 - 730927

GROUP 2 1 4 3 EQ

TASK		FREQUENCY 1	2	3	4	5	TOT PRM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
13	Design emergency medical equipment such as a special splint or vehicle floor plan	1	0	2	16	77	19	6	2	8	6	7	3	3	11	3	4	7	2	6
14	Examine physical facilities to determine need for expansion or construction	0	1	0	14	81	14	5	2	7	2	6	2	2	8	2	4	4	2	6
15	Prepare budget for operation of unit	1	0	1	8	87	10	4	2	2	3	2	2	1	3	4	5	3	1	3
16	Assign crew and vehicle to respond to ambulance call based upon the nature of the call	4	2	10	14	67	31	7	6	10	2	12	13	15	10	3	2	13	6	12
17	Survey type and quantity of emergency medical equipment available for purchase	0	1	1	21	73	22	8	2	7	6	6	3	7	7	2	4	2	2	10
18	Maintain personnel records	2	1	3	9	82	15	4	2	4	2	4	3	6	4	0	2	6	2	5
19	Prepare payroll for unit employees	0	0	1	0	94	1	0	0	0	0	0	0	0	0	0	0	1	2	1
20	Prepare financial report of unit operation	0	1	1	2	92	4	0	2	0	1	0	2	2	0	1	0	2	2	3
21	Examine record of service to patient to bill patient for service	1	1	2	2	91	6	1	1	2	2	2	2	3	2	1	0	5	2	2
22	Maintain accounting records	0	0	1	0	94	1	0	0	0	0	0	0	0	0	0	1	2	1	0
23	Maintain records of patients serviced	6	6	6	3	70	26	6	6	10	5	9	10	17	6	0	5	12	6	6
24	Operate a typewriter	4	1	6	10	75	22	6	2	5	1	4	13	15	2	1	12	2	5	6

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 EC

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
37	Administer test to determine if applicant meets standards for employment	0	1	1	6	89	8	0	5	2	2	2	2	2	5	1	2	1	5	1
38	Evaluate unit personnel to determine progress, raises, discipline and promotion	0	0	2	5	90	6	1	1	2	2	2	1	0	2	2	2	3	2	0
39	Determine staff required to operate unit effectively in any specific time period	1	1	1	7	87	10	2	2	3	1	4	2	2	5	0	2	3	2	3
40	Explain general hospital procedures to patient or family	7	4	13	10	64	34	3	7	18	1	14	18	15	17	1	8	10	4	14
41	Inform patient's family of patient's general condition	4	6	8	16	64	34	7	5	16	0	11	21	11	18	4	7	10	5	14
42	Inform patient's attending physician of patient's death	1	4	2	10	81	17	3	2	7	0	6	7	3	8	2	2	6	6	5
43	Inform Coroner's office of patient's death	3	2	2	14	78	21	4	2	10	2	5	8	7	7	2	4	6	5	6
44	Use an emisis basin in treating nauseated patient	3	6	19	44	25	73	17	12	29	0	14	53	45	18	6	11	30	15	18
45	Use a urinal to provide the patient with an opportunity to urinate	1	3	5	28	62	37	10	10	12	2	6	25	21	9	3	6	14	9	8
46	Use a bedpan to provide the patient with an opportunity to defecate	0	3	2	18	75	24	8	4	9	1	6	14	11	6	3	7	8	8	6
47	Use sandbags to immobilize patient's cervical spine (neck)	2	1	11	40	45	54	14	16	20	8	18	23	16	31	4	15	14	20	9
48	Use a cervical collar to immobilize patient's neck	2	3	10	49	34	65	11	25	23	9	22	26	16	38	7	16	19	27	9

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 E0

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
25 Maintain records of maintenance performed on emergency medical equipment	2	4	6	6	78	18	6	2	7	4	7	3	9	6	0	3	10	2	2
26 Complete information required by special form to report accident	4	6	15	12	61	37	8	7	14	3	10	17	22	9	0	4	15	2	11
27 Complete information required by special form to report ambulance trip	18	19	26	16	19	79	12	16	35	8	28	34	54	18	1	12	33	12	15
28 Complete information required by special forms other than those listed above	2	4	8	6	76	20	7	2	6	3	8	5	10	6	0	4	9	4	2
29 Examine record of service to patient to determine charges to patient	2	0	3	2	90	7	1	1	2	0	3	2	2	2	0	0	5	2	1
32 Record analysis of ambulance trips to determine such things as type of service provided, etc.	8	3	4	6	76	21	3	9	6	1	11	5	10	8	0	2	11	2	6
31 Create and maintain on-call roster of staff required to operate unit	2	1	6	4	85	12	2	2	3	2	6	4	4	7	1	1	10	2	5
32 Conduct meetings with hospital representative(s) to coordinate emergency medical services	0	1	2	8	86	11	2	2	5	2	5	2	4	3	2	5	4	2	3
33 Conduct meetings with unit personnel	1	2	9	23	65	34	8	9	11	4	14	9	10	18	1	6	11	5	7
34 Develop policies or procedures to provide guidelines for daily operation of the unit	0	3	4	14	76	22	9	2	7	2	11	5	2	13	2	2	9	4	6
35 Develop and on-the-job training program	1	3	6	10	76	20	7	5	6	5	9	4	3	11	2	4	6	5	6
36 Conduct interview to determine if applicant meets standards for employment	0	1	1	3	92	5	1	2	1	2	1	1	2	2	0	2	2	2	1

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 4 6 EC

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
49	Use a 3-foot spine board to immobilize patient's spine to transport	2	2	10	44	40	59	13	20	22	11	22	21	10	35	9	18	16	24	10
50	Use a 6-foot spine board to immobilize patient's spine to transport	1	2	7	34	54	43	10	14	14	9	15	16	8	27	5	14	11	20	6
51	Use nasal cannula to administer oxygen	5	6	10	28	48	50	11	10	18	3	18	24	35	12	0	13	16	22	4
52	Use mask to administer oxygen	10	14	32	34	9	90	22	22	32	10	32	42	63	23	0	22	31	26	7
53	Use a traction splint to treat a lower extremity fracture	2	2	15	24	52	42	8	13	18	2	18	19	13	28	0	16	17	20	4
54	Use a pneumatic (air) splint to immobilize a closed fracture	3	5	28	43	19	79	16	26	34	9	29	37	39	36	2	22	23	27	7
55	Use a padded board splint to immobilize a fracture	2	2	9	30	54	43	10	17	14	3	21	16	17	22	2	19	12	20	2
56	Use a sling to immobilize a fractured arm or clavicle	2	1	12	42	40	58	11	17	22	3	20	30	23	26	2	22	18	22	2
57	Apply direct pressure to control hemmorrhage (bleeding)	6	5	23	44	21	78	16	18	34	7	23	42	34	37	3	24	20	26	9
58	Apply digital pressure to control hemorrhage	2	2	10	38	45	51	10	14	22	6	13	29	21	25	3	21	10	22	5
59	Apply tourniquet to control hemorrhage	0	0	0	7	90	7	1	1	3	0	1	3	1	3	0	10	2	10	1
60	Apply dressing to control hemorrhage	5	5	24	42	24	75	18	18	28	6	23	40	34	34	1	23	17	30	10

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 EQ

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
61	Apply bandage to secure dressing to wound	7	6	31	41	14	85	18	23	31	7	33	38	49	33	1	25	23	26	10
62	Apply bandages to immobilize a fracture (e.g., ribs)	1	2	14	42	39	58	14	14	26	7	18	30	26	29	2	23	12	26	3
63	Apply a sterile dressing to treat a burn	2	1	7	49	39	59	7	22	23	7	18	32	17	39	2	23	14	26	5
64	Apply cold wet applications to treat a burn	0	2	5	33	59	39	8	14	14	4	14	18	17	21	1	18	11	19	2
65	Apply vaseline gauze or other non-porous material to seal a pneumothorax	1	0	2	14	82	16	3	5	6	2	2	10	2	11	2	13	5	15	2
66	Use a bulk dressing to immobilize an impaled object	1	0	2	20	76	22	2	9	8	2	5	14	2	14	4	12	6	20	1
67	Use a constricting band to treat a snakebite	1	0	1	6	90	7	1	3	2	1	3	2	2	4	2	12	3	13	0
68	Make an incision over fang marks and suck out snake venom	1	0	1	2	94	4	1	2	1	1	0	2	1	3	0	10	2	10	0
69	Elevate the head and shoulders of a patient who is having difficulty in breathing	7	13	27	34	18	81	21	19	27	6	26	41	46	30	1	21	25	22	11
70	Use an oropharangeal airway to maintain a patent (open) airway	1	2	20	38	35	62	14	18	18	8	18	31	20	34	5	20	16	23	9
71	Use an oxygen demand valve to administer oxygen	6	5	19	33	35	62	15	17	18	6	21	31	34	26	2	18	18	24	6
72	Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV)	2	3	12	23	54	41	6	14	14	3	15	20	16	20	3	14	11	16	6

TASK RESPONSES
PCT OF NUMBER RESPONDING

IPATIONI ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 I 4 6 E?

TASK		FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
73	Use an S-tube airway adjunct to perform IPPV	2	0	5	17	74	23	5	8	5	2	7	10	6	15	0	13	8	13	2
74	Use an endotracheal tube to maintain an open airway	0	0	2	7	87	9	2	4	2	1	2	6	2	6	2	4	6	8	0
75	Administer oxygen through a mask	10	10	30	39	10	88	24	18	30	9	30	43	53	33	0	24	29	27	6
76	Administer oxygen through a nasal cannula	3	6	10	22	54	41	9	9	13	2	11	23	25	15	0	10	14	20	2
77	Administer oxygen through an oxygen catheter	1	2	2	6	86	10	1	6	2	1	5	3	3	6	1	6	2	10	0
78	Administer oxygen through an incubator system	0	0	1	11	85	12	3	3	4	2	5	3	6	5	1	1	7	6	2
79	Administer Holger-Neilson (back pressure-arm lift) method of resuscitation to ventilate patient	0	0	0	5	92	5	2	1	1	2	1	1	0	2	2	7	6	9	1
80	Operate pressure-cycled, oxygen-powered automatic mechanical resuscitator to perform IPPV	2	1	2	18	74	22	5	8	4	4	6	10	6	11	2	9	8	10	2
81	Operate an oxygen-powered, manually triggered, mechanical ventilation device	5	2	10	18	62	35	5	12	13	4	13	18	18	16	1	7	13	18	2
82	Maintain body temperature and elevate lower extremities to treat patient for shock	4	3	26	47	19	80	14	23	33	10	30	37	45	31	2	18	28	27	8
83	Treat a conscious patient who has ingested a posion	1	1	4	33	59	38	6	10	16	6	12	19	10	26	2	16	15	20	2
84	Operate vehicle mounted suction to remove fluids from patient's airway	2	3	15	37	42	55	11	17	18	7	14	30	14	34	5	16	22	22	6

TASK RESPONSES
PCT OF NUMBER RESPONDING

JPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 EC

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
85 Operate portable suction unit to remove fluids from patient's airway	1	2	9	37	50	49	7	15	19	6	11	26	12	30	5	13	19	21	5
86 Administer patient's insulin to treat a patient in a diabetic coma	0	0	1	4	93	5	1	2	2	0	1	2	0	4	0	3	2	5	1
87 Administer sugar or sugar product to treat patient in insulin shock	1	0	3	20	74	24	6	9	7	3	9	10	10	13	0	8	11	12	4
88 Use cold applications to lower patient's body temperature	1	0	2	18	78	21	4	9	4	2	6	11	9	10	0	12	10	14	2
89 Use warm water (100-105 F) to treat frostbite	0	0	1	7	90	8	2	3	1	1	2	5	2	5	0	9	3	12	0
90 Use a flashlight to examine the pupillary reaction of a patient	4	7	17	38	33	66	14	13	23	6	16	40	43	20	1	16	22	26	5
91 Use cold pack to treat injury to soft tissue	1	2	7	36	50	46	9	11	18	3	12	30	31	14	0	13	18	18	3
92 Maintain drainage tubing without suction (e.g., urinary catheter)	0	1	3	7	85	11	1	4	2	0	2	8	6	5	0	2	5	8	2
93 Perform an emergency childbirth delivery	0	0	1	20	76	21	6	8	6	6	4	11	2	10	10	10	14	16	2
94 Place deceased patient in a disaster pouch	0	1	2	27	67	30	6	8	13	2	13	13	11	13	3	7	11	8	9
95 Place deceased patient in a shroud	0	1	2	16	78	18	2	7	9	1	9	9	7	9	2	6	7	7	6
96 Use restraint straps to control a combative patient	1	0	7	50	40	58	12	20	23	11	22	23	6	26	26	14	27	18	10

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 E?

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
97	Use a geiger counter to detect radiation level	0	0	1	2	94	3	0	1	1	0	0	2	1	1	1	2	2	5	1
98	Operate a hydraulic lift (Hoyer) to move patient	0	0	2	2	94	3	0	0	3	0	2	1	0	2	1	2	3	5	1
99	Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment	0	1	10	44	42	55	9	18	26	8	18	28	5	34	15	14	21	24	3
100	Perform CPR with the use of life-support equipment	2	1	10	39	44	52	8	14	27	10	13	28	7	29	15	13	21	25	4
101	Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV)	0	2	10	37	48	49	6	13	23	5	18	25	12	33	3	13	19	23	2
102	Use a bag-valve mask unit to perform IPPV	1	2	6	10	78	18	3	2	10	3	6	7	5	12	1	6	10	13	2
103	Perform mouth-to-mouth method of IPPV	1	0	5	34	57	40	4	10	17	4	11	23	10	23	5	16	17	18	2
104	Perform mouth-to-nose method of IPPV	1	0	1	11	83	13	1	2	8	2	2	7	2	9	0	10	8	11	2
105	Use a sphygmomanometer and stethoscope to obtain a patient's blood pressure	4	9	22	26	36	61	6	14	25	2	14	42	34	22	3	14	21	26	4
106	Place fingers on patient's wrist to count radial pulse	6	19	24	35	14	84	9	23	29	6	21	49	50	27	3	23	26	27	7
107	Assemble intravenous fluid administration equipment	0	0	2	9	86	10	5	1	2	2	5	3	6	5	0	3	3	4	2
108	Perform a venipuncture to administer intravenous fluids	0	1	0	2	94	2	1	1	1	0	1	2	2	1	0	2	1	2	1

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 E0

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
109 Use a syringe to administer intravenous medications into the I.V. tubing	0	0	0	2	94	2	1	1	0	0	1	1	1	1	0	2	1	2	0
110 Use a syringe to administer intravenous medications	0	0	0	1	95	1	0	1	0	0	0	1	1	0	0	2	1	2	0
111 Use a syringe to administer intramuscular medications	0	0	0	1	97	1	0	0	0	0	0	0	0	0	0	2	0	2	0
112 Operate a defibrillator to administer empirical defibrillation	0	0	1	4	93	5	2	0	2	2	2	1	1	3	1	2	1	3	1
113 Operate an electrocardiograph scope and recorder to observe patient's cardiac activity	0	3	8	3	83	14	3	4	6	2	6	6	6	9	0	2	4	7	2
114 Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG)	0	1	5	4	87	10	2	2	5	3	3	3	2	7	1	2	2	6	2
115 Operate a two-way voice communication radio	24	18	30	21	6	94	10	15	46	4	19	62	75	12	2	21	36	12	19
116 Answer telephone to receive requests for ambulance service	7	12	22	30	26	71	10	14	30	4	15	45	52	14	2	16	26	6	18
117 Perform minor mechanical maintenance on emergency medical equipment	5	5	11	23	52	44	9	12	16	3	15	21	22	18	0	12	14	6	10
118 Perform building maintenance on physical facility	5	6	6	19	60	37	4	10	17	2	11	19	24	7	0	10	14	2	7
119 Replace oxygen tank in vehicle	3	6	17	43	29	70	10	17	32	6	19	42	54	13	0	17	28	10	17
120 Refill oxygen tanks with compressed oxygen	3	2	6	14	71	26	4	6	11	5	4	16	21	4	0	6	14	5	5

TASK RESPONSES
PCT OF NUMBER RESPONDING

OPATION: ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 EC

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
121	Extricate an entrapped patient	0	1	10	50	34	62	11	15	31	13	28	18	3	38	18	16	26	16	7
122	Direct traffic at scene of accident	2	0	6	30	58	37	12	6	13	1	18	15	16	19	0	11	14	4	10
123	Use highway flares to control traffic at accident scene	1	1	13	32	50	46	8	10	18	1	18	23	26	14	2	14	21	3	10
124	Use portable floodlights to illuminate work area	1	2	11	38	45	52	9	10	22	2	25	20	32	16	1	17	20	6	10
125	Instruct patient's family how to care for patient at home	0	1	2	8	86	10	2	3	2	0	4	4	4	4	0	3	2	5	1
126	Evaluate quality of training program	0	0	2	10	82	13	2	6	4	2	7	3	2	9	2	6	6	2	2
127	Conduct on-the-job training sessions	2	2	6	16	70	26	8	10	6	5	11	9	10	15	1	12	7	4	3
128	Conduct formal classes to instruct individuals in emergency medical care techniques	1	2	6	18	72	26	4	13	6	2	10	11	7	16	1	12	6	8	0
129	Use an orthopedic stretcher to transport a patient	2	6	18	45	26	71	13	19	34	6	27	34	30	36	2	18	25	24	3
130	Use a variable position stretcher to transport a patient	12	11	26	30	18	78	14	20	36	6	29	38	46	25	2	20	30	17	9
131	Use stretcher composed of rubberized canvas on an aluminum frame to transport a patient	6	2	10	28	50	46	6	13	23	2	20	22	24	21	0	10	24	14	5
132	Use rubberized stretcher to suspend a patient from the ceiling of an ambulance	1	0	1	26	69	28	4	10	10	2	11	13	10	14	2	6	18	5	5

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIENT ATTENDANTS TOTAL RESPONSE 125 PCT OF TOT 60 730927

GROUP 2 : 4 6 EO

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
133	Use a chair stretcher to transport a patient	4	5	11	46	31	66	12	18	31	6	27	30	30	33	2	16	30	14	7
134	Use a chair to transport a patient	0	2	11	31	52	44	4	10	26	2	17	19	19	19	2	10	22	11	8
135	Use a wheelchair to transport a patient	0	2	3	22	70	26	1	7	11	2	6	16	15	9	0	11	10	8	4
136	Drive an emergency medical vehicle to transport a patient under non-emergency conditions	9	6	16	17	49	48	5	10	18	2	14	29	31	15	0	10	20	10	10
137	Drive an emergency medical vehicle to transport a patient using emergency warning devices	9	6	18	16	47	49	4	9	20	2	14	30	24	21	2	10	18	10	10
138	Operate a fire control device (fire extinguisher) to extinguish a fire	0	5	9	35	47	49	7	14	16	6	18	21	29	17	0	17	14	9	11
139	Use a watercraft to transport a patient	0	1	2	1	94	3	0	0	2	0	1	2	2	1	1	4	1	3	1
140	Use a fixed wing aircraft (airplane) to transport a patient	0	0	1	0	96	1	0	0	1	0	0	1	0	1	0	2	1	0	0
141	Use a rotary wing aircraft (helicopter) to transport a patient	0	0	1	1	96	2	0	0	2	0	1	1	0	2	0	2	2	0	0

TOTAL RESPONSES

PCT OF NUMBER RESPONDING

PAID PERSONNEL

(FULL- AND PART-TIME)

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 04 3

TASK	FREQUENCY 1	2	3	4	5	PCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
1 Set standard type and quantity of emergency medical equipment needed for unit operation.	6	25	13	11	43	56	11	14	24	5	22	21	25	25	1	5	22	17	11
2 Inventory type and quantity of emergency medical equipment to determine need for replacement,etc.	11	19	24	22	21	76	17	19	32	8	25	33	43	29	1	11	33	11	19
3 Place emergency medical equipment in assigned location	27	17	13	14	27	71	11	16	40	11	17	35	48	21	0	6	37	11	17
4 Set standard type and quantity of emergency medical supplies needed for unit operation	11	14	5	11	56	41	6	17	11	8	11	16	21	17	0	5	14	11	13
5 Inventory type and quantity of emergency medical supplies to determine need for resupply	8	27	14	24	32	68	16	14	27	6	27	25	44	16	1	6	24	14	17
6 Place emergency medical supplies in assigned location	29	21	11	11	27	71	13	16	37	10	24	27	51	16	0	8	32	8	19
7 Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation	5	2	3	2	86	11	3	2	5	2	3	3	5	5	0	0	5	8	2
8 Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies	2	8	8	5	73	22	2	8	10	8	3	6	8	10	0	2	8	8	3
9 Place drugs and I.V. fluids in assigned location	5	3	11	8	70	27	10	5	11	6	10	8	17	8	0	2	10	8	8
10 Set standard type and amount of office supplies needed for unit operation	6	5	5	10	71	25	5	8	5	3	5	11	14	10	2	8	8	3	10
11 Inventory type and amount of office supplies to determine need for resupply or new supplies	6	5	11	8	68	30	8	3	6	3	10	10	21	8	0	6	11	3	13
12 Place office supplies in assigned location	6	5	10	10	68	30	8	5	13	3	8	11	25	3	0	3	10	5	13

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 OR 3

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
13 Design emergency medical equipment such as a special splint or vehicle floor plan	2	0	0	24	71	25	8	5	8	6	0	5	6	13	5	0	11	3	11
14 Examine physical facilities to determine need for expansion or construction	2	0	0	14	81	16	3	5	6	0	2	8	5	5	3	2	5	0	10
15 Prepare budget for operation of unit	0	0	0	14	83	14	5	3	2	3	3	5	3	5	5	8	2	0	5
16 Assign crew and vehicle to respond to ambulance call based upon the nature of the call	24	6	16	5	48	51	11	13	13	3	16	22	21	24	0	3	17	8	17
17 Survey type and quantity of emergency medical equipment available for purchase	0	3	5	14	73	22	6	8	5	0	8	8	10	8	3	2	6	0	13
18 Maintain personnel records	5	5	2	10	75	21	0	8	5	3	3	10	10	10	0	3	6	2	10
19 Prepare payroll for unit employees	0	2	5	2	89	8	0	5	0	0	0	8	3	3	1	2	3	0	3
20 Prepare financial report of unit operation	0	0	3	10	84	13	2	5	0	2	3	6	3	6	3	2	5	2	6
21 Examine record of service to patient to bill patient for service	10	3	6	5	75	24	5	5	8	3	3	13	14	8	0	5	13	2	3
22 Maintain accounting records	2	2	6	0	86	10	3	3	0	0	2	5	2	5	1	3	3	0	2
23 Maintain records of patients serviced	17	13	5	0	59	35	3	11	13	5	6	21	22	11	0	3	16	6	8
24 Operate a typewriter	10	3	0	8	75	21	3	2	8	0	3	13	14	5	0	10	0	2	10

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 04 3

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
25	Maintain records of maintenance performed on emergency medical equipment	6	6	8	11	63	32	3	10	13	5	10	13	13	16	0	2	17	5	6
26	Complete information required by special form to report accident	6	10	6	14	60	37	5	11	10	3	14	16	11	22	0	2	10	11	13
27	Complete information required by special form to report ambulance trip	40	24	10	2	24	75	11	11	33	8	29	33	40	32	0	5	37	16	14
28	Complete information required by special forms other than those listed above	13	13	5	10	52	40	6	6	17	3	13	19	22	11	0	6	17	6	6
29	Examine record of service to patient to determine charges to patient	10	5	6	2	76	22	6	3	5	0	5	11	14	5	0	3	6	2	8
30	Record analysis of ambulance trips to determine such things as type of service provided, etc.	17	6	3	8	65	35	6	16	10	0	17	11	13	21	0	3	16	3	10
31	Create and maintain on-call roster of staff required to operate unit	8	10	10	5	65	32	3	10	6	2	10	14	13	13	1	2	14	5	10
32	Conduct meetings with hospital representative(s) to coordinate emergency medical services	2	0	2	16	79	19	3	2	5	3	5	3	3	10	1	3	3	3	5
33	Conduct meetings with unit personnel	2	5	24	14	52	44	0	14	19	0	16	21	22	17	1	5	10	8	17
34	Develop policies or procedures to provide guidelines for daily operation of the unit	2	13	3	5	73	22	2	11	6	3	6	8	8	13	0	3	8	5	5
35	Develop and on-the-job training program	2	10	6	11	70	29	5	16	5	5	10	6	5	14	5	3	6	6	10
36	Conduct interview to determine if applicant meets standards for employment	0	2	6	8	83	16	0	10	0	2	2	5	8	5	0	2	3	0	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

OPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 04 3

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
37 Administer test to determine if applicant meets standards for employment	0	2	2	10	86	13	0	6	2	2	2	5	5	3	1	2	0	5	3
38 Evaluate unit personnel to determine progress, raises, discipline and promotion	3	0	5	13	78	21	0	10	3	2	3	8	5	10	3	5	3	3	5
39 Determine staff required to operate unit effectively in any specific time period	8	3	6	6	75	24	0	8	3	2	3	10	8	11	0	3	6	2	8
40 Explain general hospital procedures to patient or family	17	5	16	11	49	49	6	6	19	0	13	32	32	13	1	5	8	8	25
41 Inform patient's family of patient's general condition	11	11	3	10	63	35	2	6	17	0	8	24	14	16	3	2	10	6	14
42 Inform patient's attending physician of patient's death	5	2	8	22	62	37	2	3	24	0	10	24	13	17	6	0	17	6	11
43 Inform Coroner's office of patient's death	6	5	10	21	57	41	3	5	25	6	10	21	24	13	5	0	13	10	16
44 Use an emisis basin in treating nauseated patient	11	14	17	33	21	76	16	10	35	3	13	56	63	10	0	8	27	16	24
45 Use a urinal to provide the patient with an opportunity to urinate	3	5	5	27	59	40	11	5	16	2	2	32	29	8	0	0	19	8	10
46 Use a bedpan to provide the patient with an opportunity to defecate	2	5	2	16	75	24	6	2	10	0	2	16	16	6	0	0	13	8	5
47 Use sandbags to immobilize patient's cervical spine (neck)	5	3	14	41	35	63	11	11	33	8	17	30	27	32	3	5	19	22	14
48 Use a cervical collar to immobilize patient's neck	3	6	17	52	19	79	13	25	33	13	22	37	22	48	8	5	24	32	16

TASK RESPONSES
PCT OF NUMBER RESPONDING

LOCATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 0+ 3

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
49	Use a 3-foot spine board to immobilize patient's spine to transport	3	5	14	41	35	63	8	24	25	10	21	30	19	32	11	3	21	24	13
50	Use a 6-foot spine board to immobilize patient's spine to transport	3	3	13	29	51	48	5	19	19	11	11	22	16	24	7	3	13	16	11
51	Use nasal cannula to administer oxygen	8	17	21	14	37	60	14	11	21	3	11	41	51	12	ø	6	24	25	5
52	Use mask to administer oxygen	17	17	35	19	10	89	19	22	30	5	24	54	71	14	ø	8	38	33	8
53	Use a traction splint to treat a lower extremity fracture	5	6	25	30	29	67	10	16	35	3	21	37	24	38	3	6	25	29	10
54	Use a pneumatic (air) splint to immobilize a closed fracture	5	10	25	43	16	83	11	33	33	5	29	46	40	38	1	6	30	37	10
55	Use a padded board splint to immobilize a fracture	2	5	22	22	48	51	3	17	25	5	14	27	22	25	1	5	19	19	6
56	Use a sling to immobilize a fractured arm or clavicle	2	5	22	52	17	81	8	22	43	6	21	49	40	37	3	6	32	33	8
57	Apply direct pressure to control hemmorrhage (bleeding)	8	13	33	37	8	90	11	21	43	5	24	57	48	40	1	8	27	40	14
58	Apply digital pressure to control hemorrhage	3	8	11	48	29	70	8	19	30	3	16	41	24	40	5	6	19	37	8
59	Apply tourniquet to control hemorrhage	ø	ø	2	13	84	14	3	2	8	ø	3	8	5	6	1	2	5	10	3
60	Apply dressing to control hemorrhage	5	13	32	40	10	89	11	27	32	3	24	54	46	38	1	8	25	41	13

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 04 3

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
61 Apply bandage to secure dressing to wound	11	16	33	25	13	86	11	22	37	8	19	54	60	24	0	10	25	37	13
62 Apply bandages to immobilize a fracture (e.g., ribs)	2	8	21	37	32	67	8	24	29	8	16	38	35	29	1	6	19	32	10
63 Apply a sterile dressing to treat a burn	2	6	5	62	24	75	8	29	29	6	22	47	17	56	0	6	25	35	10
64 Apply cold wet applications to treat a burn	0	3	8	32	54	43	5	13	21	5	13	21	14	27	0	3	13	22	6
65 Apply vaseline gauze or other non-porous material to seal a pneumothorax	0	0	5	38	56	43	3	11	19	6	10	21	11	25	5	5	13	25	10
66 Use a bulk dressing to immobilize an impaled object	0	2	2	38	57	41	2	13	19	5	10	21	5	24	10	5	13	27	6
67 Use a constricting band to treat a snakebite	0	0	2	10	89	10	0	2	3	0	3	3	5	3	0	3	5	13	2
68 Make an incision over fang marks and suck out snake venom	2	0	0	5	94	5	0	2	2	0	2	3	5	0	1	2	5	10	2
69 Elevate the head and shoulders of a patient who is having difficulty in breathing	16	24	38	17	3	95	14	21	41	5	29	54	65	25	0	8	33	38	13
70 Use an oropharangeal airway to maintain a patent (open) airway	3	14	21	46	14	84	13	14	38	8	21	48	30	49	1	6	29	35	14
71 Use an oxygen demand valve to administer oxygen	6	13	32	32	16	83	13	25	27	8	24	44	46	33	1	2	35	35	10
72 Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV)	3	10	17	38	29	68	13	21	24	6	21	35	27	37	3	3	22	30	14

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 04 3

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
73 Use an S-tube airway adjunct to perform IPPV	2	5	3	13	73	22	2	8	8	2	5	10	10	11	1	3	8	14	2
74 Use an endotracheal tube to maintain an open airway	0	3	2	11	83	16	2	6	6	2	6	6	5	6	3	2	8	8	3
75 Administer oxygen through a mask	17	21	33	19	8	92	13	21	35	6	29	49	63	24	0	10	32	43	5
76 Administer oxygen through a nasal cannula	6	14	19	16	43	56	5	11	19	2	11	38	40	14	0	6	22	25	3
77 Administer oxygen through an oxygen catheter	2	2	2	13	79	17	0	6	8	2	6	10	6	10	0	0	8	13	0
78 Administer oxygen through an incubator system	0	3	3	27	65	33	3	13	11	2	14	13	17	13	1	2	16	13	5
79 Administer Holger-Neilson (back pressure-arm lift) method of resuscitation to ventilate patient	0	0	0	13	86	13	6	3	2	5	3	3	3	6	1	0	11	10	2
80 Operate pressure-cycled, oxygen-powered automatic mechanical resuscitator to perform IPPV	5	5	2	16	71	27	3	13	6	5	13	8	5	16	5	2	11	10	6
81 Operate an oxygen-powered, manually triggered, mechanical ventilation device	8	8	19	25	37	60	6	14	27	5	17	30	35	22	1	2	25	29	3
82 Maintain body temperature and elevate lower extremities to treat patient for shock	3	16	21	46	13	86	11	25	37	6	32	38	59	24	1	3	32	41	6
83 Treat a conscious patient who has ingested a poison	0	3	3	44	46	51	3	14	25	6	11	27	10	32	8	2	17	32	3
84 Operate vehicle mounted suction to remove fluids from patient's airway	0	11	19	37	32	67	6	17	24	5	11	41	19	43	3	3	27	27	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 32 730927

GROUP 1 : 7 2 04 3

TASK	FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
	1	2	3	4	5	PCT	1	2	3	1	2	3	1	2	3	1	2	3	4
85 Operate portable suction unit to remove fluids from patient's airway	0	5	14	43	35	62	8	17	25	5	14	32	17	37	5	2	29	29	5
86 Administer patient's insulin to treat a patient in a diabetic coma	2	0	0	2	95	2	0	2	0	0	2	2	2	0	0	0	2	2	0
87 Administer sugar or sugar product to treat patient in insulin shock	0	0	2	32	63	33	6	11	13	6	11	11	16	16	0	0	14	19	2
88 Use cold applications to lower patient's body temperature	2	2	0	17	79	19	6	6	3	3	6	3	6	11	0	2	8	14	0
89 Use warm water (100-105 F) to treat frostbite	2	0	0	6	92	6	3	3	0	3	0	2	2	5	0	0	6	10	0
97 Use a flashlight to examine the pupillary reaction of a patient	6	21	17	29	25	73	6	17	24	3	13	46	54	17	0	5	22	35	11
91 Use cold pack to treat injury to soft tissue	2	8	3	22	56	35	6	11	8	3	6	17	27	8	0	6	16	14	2
92 Maintain drainage tubing without suction (e.g., urinary catheter)	0	2	8	14	71	24	2	6	5	0	6	11	13	10	0	0	10	8	5
93 Perform an emergency childbirth delivery	2	0	2	40	56	40	3	13	19	6	11	16	6	16	16	5	17	21	5
94 Place deceased patient in a disaster pouch	0	3	6	35	51	44	5	19	16	0	16	19	27	8	7	2	19	10	13
95 Place deceased patient in a shroud	2	3	5	19	68	27	3	8	13	0	8	16	16	11	0	2	13	5	8
96 Use restraint straps to control a combative patient	2	2	11	59	22	73	11	27	29	10	22	32	14	27	30	3	33	24	13

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 04 3

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
97	Use a geiger counter to detect radiation level	2	2	0	2	95	0	0	0	0	0	0	0	0	0	0	0	0	2	0
98	Operate a hydraulic lift (Hoyer) to move patient	0	5	0	2	89	6	0	2	3	0	2	0	5	2	0	0	3	5	2
99	Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment	0	0	17	43	33	60	5	16	35	5	14	33	11	29	20	2	17	38	6
100	Perform CPR with the use of life-support equipment	3	3	17	49	21	73	6	16	44	8	19	38	17	38	15	2	22	43	8
101	Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV)	0	6	16	38	37	60	3	14	32	6	11	37	16	38	3	3	17	30	8
102	Use a bag-valve mask unit to perform IPPV	2	5	11	22	57	40	5	5	21	8	12	17	10	24	5	0	16	25	5
103	Perform mouth-to-mouth method of IPPV	2	0	3	43	51	46	5	14	14	5	10	29	13	22	10	3	14	30	6
104	Perform mouth-to-nose method of IPPV	0	0	2	19	78	19	3	3	8	5	3	12	3	11	1	0	11	16	2
105	Use a sphygmomanometer and stethoscope to obtain a patient's blood pressure	13	11	16	21	37	60	6	10	22	3	6	44	41	17	0	3	14	35	8
106	Place fingers on patient's wrist to count radial pulse	10	21	27	16	17	79	5	14	33	3	13	56	56	19	3	8	22	40	8
107	Assemble intravenous fluid administration equipment	2	2	3	17	73	24	8	3	8	5	10	6	11	10	1	0	5	13	5
108	Perform a venipuncture to administer intravenous fluids	2	3	0	6	87	10	2	5	2	0	5	3	3	6	0	0	3	5	2

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 0- 3

TASK	FREQUENCY 1	2	3	4	5	PCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
110 Use a syringe to administer intravenous medications into the I.V. tubing	2	3	0	3	90	6	2	3	0	0	3	2	2	5	0	0	3	3	0
112 Use a syringe to administer intravenous medications	2	3	0	0	94	3	0	2	0	0	0	2	2	2	0	0	2	2	0
111 Use a syringe to administer intramuscular medications	0	2	0	0	97	2	0	2	0	0	0	2	2	0	0	0	2	0	0
113 Operate a defibrillator to administer empirical defibrillation	2	2	3	11	81	16	3	5	6	2	6	6	3	13	0	0	5	10	2
114 Operate an electrocardiograph scope and recorder to observe patient's cardiac activity	3	6	13	11	63	33	5	13	10	5	17	16	11	21	0	2	6	19	5
115 Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG)	2	6	10	10	67	27	5	10	10	6	5	14	8	19	0	0	5	17	5
116 Operate a two-way voice communication radio	62	14	10	8	3	94	6	8	51	5	17	65	81	11	0	6	46	19	21
116 Answer telephone to receive requests for ambulance service	14	24	16	13	30	67	10	6	30	3	11	48	52	13	0	6	27	11	21
117 Perform minor mechanical maintenance on emergency medical equipment	6	14	11	19	46	51	8	11	19	2	16	24	25	22	0	11	16	6	16
118 Perform building maintenance on physical facility	8	8	8	11	60	35	0	10	17	2	6	19	27	5	0	10	8	5	10
119 Replace oxygen tank in vehicle	3	14	29	32	19	78	11	13	41	3	22	46	62	13	0	2	38	14	22
120 Refill oxygen tanks with compressed oxygen	3	5	6	3	78	17	6	0	6	0	2	14	14	2	0	0	10	5	3

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 38 730927

GROUP 1 : 7 2 OR 3

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PRM	1	2	3	1	2	3	1	2	3	1	2	3	4
121	Extricate an entrapped patient	2	2	17	56	21	75	11	24	33	10	30	27	10	38	22	5	32	27	8
122	Direct traffic at scene of accident	2	8	2	17	68	27	5	6	8	2	8	14	19	5	0	5	11	3	8
123	Use highway flares to control traffic at accident scene	2	10	6	19	60	35	3	11	10	2	10	17	32	0	0	8	16	2	10
124	Use portable floodlights to illuminate work area	2	5	6	32	52	43	3	13	16	2	11	27	37	5	0	5	19	11	8
125	Instruct patient's family how to care for patient at home	2	2	6	10	78	17	3	2	6	0	2	11	11	5	2	2	2	10	3
126	Evaluate quality of training program	0	3	2	16	71	21	2	11	6	2	11	5	3	16	1	2	6	3	10
127	Conduct on-the-job training sessions	3	8	8	13	62	32	3	14	11	3	14	10	6	24	0	6	6	5	13
128	Conduct formal classes to instruct individuals in emergency medical care techniques	2	8	10	17	60	35	5	14	11	6	10	14	11	22	0	5	10	14	5
129	Use an orthopedic stretcher to transport a patient	6	16	22	38	13	83	14	19	43	6	32	37	40	37	1	5	35	35	5
130	Use a variable position stretcher to transport a patient	32	21	17	17	10	86	10	21	48	6	25	46	52	29	0	6	38	29	11
131	Use a stretcher composed of rubberized canvas on an aluminum frame to transport a patient	14	8	16	22	33	60	5	24	25	5	19	30	38	19	0	0	29	21	8
132	Use rubberized stretcher to suspend a patient from the ceiling of an ambulance	0	0	3	29	63	32	2	13	10	0	10	16	11	13	5	2	16	5	6

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: PAID PERSONNEL(FULL/PART) TOTAL RESPONSE 63 PCT OF TOT 30 730927

GROUP 1 : 7 2 04 3

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
133	Use a chair stretcher to transport a patient	11	5	19	33	27	68	10	17	35	5	22	35	41	21	3	2	24	25	11
134	Use a chair to transport a patient	2	6	17	49	19	75	8	17	41	5	25	37	41	29	0	2	30	22	16
135	Use a wheelchair to transport a patient	3	2	5	21	63	30	2	10	10	2	8	17	19	8	0	5	13	8	6
136	Drive an emergency medical vehicle to transport a patient under non-emergency conditions	30	13	14	16	21	73	5	19	25	8	21	38	46	22	0	8	32	21	11
137	Drive an emergency medical vehicle to transport a patient using emergency warning devices	27	24	17	10	17	78	5	19	29	10	17	44	35	38	0	10	29	24	11
138	Operate a fire control device (fire extinguisher) to extinguish a fire	0	0	3	43	49	46	6	8	14	3	11	22	27	14	0	10	14	11	10
139	Use a watercraft to transport a patient	0	0	2	3	92	5	2	3	2	0	2	3	3	0	1	0	2	2	2
140	Use a fixed wing aircraft (airplane) to transport a patient	0	0	0	3	92	3	0	2	0	0	0	2	2	0	0	0	2	0	0
141	Use a rotary wing aircraft (helicopter) to transport a patient	0	0	0	2	95	2	0	2	0	0	0	2	2	0	0	0	2	0	0

TOTAL RESPONSES

PCT OF NUMBER RESPONDING

VOLUNTEER PERSONNEL

TASK RESPONSES
PCT OF NUMBER RESPONDING

OPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 730927

GROUP 2 : 7 1 ST

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
1Set standard type and quantity of emergency medical equipment needed for unit operation.	8	11	20	17	41	57	11	10	31	12	26	13	30	22	1	22	17	13	10
2Inventory type and quantity of emergency medical equipment to determine need for replacement,etc.	3	13	26	20	36	62	11	13	30	10	27	18	38	16	1	12	26	6	20
3Place emergency medical equipment in assigned location	8	22	36	17	15	83	15	17	45	13	32	30	55	23	1	14	32	10	24
4Set standard type and quantity of emergency medical supplies needed for unit operation	2	8	21	17	46	48	14	6	24	11	20	11	26	15	2	8	23	8	13
5Inventory type and quantity of emergency medical supplies to determine need for resupply	1	13	24	22	37	59	12	12	30	10	24	16	29	23	1	7	29	7	18
6Place emergency medical supplies in assigned location	4	22	31	22	16	80	17	13	41	9	30	31	58	15	Ø	15	34	5	24
7Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation	2	1	3	3	87	7	1	1	5	3	1	2	1	4	2	1	3	3	4
8Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies	1	2	3	2	86	8	1	2	4	2	2	2	1	6	Ø	1	4	3	3
9Place drugs and I.V. fluids in assigned location	2	2	3	3	86	8	1	2	4	1	3	3	4	3	Ø	3	4	2	3
10Set standard type and amount of office supplies needed for unit operation	1	3	7	13	73	24	6	8	6	4	8	9	10	10	1	8	6	3	8
11Inventory type and amount of office supplies to determine need for resupply or new supplies	1	3	5	13	77	22	6	6	7	1	10	7	10	8	0	5	8	2	8
12Place office supplies in assigned location	1	6	8	12	73	26	7	6	10	1	10	10	18	6	0	8	7	2	12

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 730927

GROUP 2 : 7 1 E?

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
13 Design emergency medical equipment such as a special splint or vehicle floor plan	0	0	5	20	72	24	6	6	11	7	9	6	5	14	3	9	6	4	6
14 Examine physical facilities to determine need for expansion or construction	1	1	1	18	73	22	4	3	12	2	11	6	4	12	3	7	3	3	7
15 Prepare budget for operation of unit	1	0	3	13	81	17	4	6	3	4	3	6	2	6	7	7	3	1	6
16 Assign crew and vehicle to respond to ambulance call based upon the nature of the call	4	10	12	17	56	43	13	12	10	8	13	19	18	18	5	7	17	6	15
17 Survey type and quantity of emergency medical equipment available for purchase	2	2	4	27	64	34	8	9	13	8	9	9	8	15	3	8	5	4	13
18 Maintain personnel records	3	3	4	13	76	22	4	6	6	3	6	8	8	8	0	5	6	3	7
19 Prepare payroll for unit employees	0	0	1	1	94	1	0	0	0	0	0	1	0	1	0	1	1	1	1
20 Prepare financial report of unit operation	0	1	2	8	86	10	1	6	1	0	4	5	4	4	1	6	1	2	5
21 Examine record of service to patient to bill patient for service	0	2	5	6	85	13	2	4	5	1	5	6	6	6	1	5	6	2	3
22 Maintain accounting records	1	1	3	2	89	8	1	3	1	0	1	6	3	4	0	4	3	1	3
23 Maintain records of patients serviced	7	9	10	11	60	38	8	10	13	4	11	17	20	13	1	8	15	7	10
24 Operate a typewriter	3	2	11	15	65	31	5	6	6	1	4	21	17	9	1	17	3	6	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 732927

GROUP 2 : 7 1 EC

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
25 Maintain records of maintenance performed on emergency medical equipment	1	3	9	13	71	27	7	7	8	6	11	5	13	10	0	7	8	3	6
26 Complete information required by special form to report accident	2	9	17	17	53	46	9	12	18	3	15	22	27	13	0	7	17	3	15
27 Complete information required by special form to report ambulance trip	12	21	33	18	15	84	13	19	41	8	27	40	57	19	1	15	34	9	19
28 Complete information required by special forms other than those listed above	1	4	10	7	75	22	6	3	8	4	5	8	8	10	0	3	10	3	4
29 Examine record of service to patient to determine charges to patient	1	1	4	3	86	9	1	1	4	0	4	3	3	4	0	0	4	2	4
30 Record analysis of ambulance trips to determine such things as type of service provided, etc.	5	7	6	10	71	27	6	9	8	2	13	9	11	11	1	5	12	4	8
31 Create and maintain on-call roster of staff required to operate unit	2	2	8	8	78	20	4	7	6	3	9	7	11	6	2	4	10	3	7
32 Conduct meetings with hospital representative(s) to coordinate emergency medical services	0	1	2	13	81	16	3	6	7	2	6	7	5	6	4	5	5	4	6
33 Conduct meetings with unit personnel	1	1	10	29	58	40	12	12	12	6	16	10	13	19	2	9	13	4	9
34 Develop policies or procedures to provide guidelines for daily operation of the unit	1	2	7	22	65	32	11	9	8	3	16	8	6	18	3	7	9	8	8
35 Develop and on-the-job training program	1	2	10	13	71	26	10	9	5	6	11	6	5	15	3	7	8	4	7
36 Conduct interview to determine if applicant meets standards for employment	0	1	1	8	88	9	3	5	1	2	2	3	2	5	1	2	3	4	3

TASK RESPONSES
PCT OF NUMBER RESPONDING

OPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 · 730927

GROUP 2 : 7 1 50

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
37 Administer test to determine if applicant meets standards for employment	0	1	1	7	89	8	1	6	1	1	3	2	1	6	1	3	1	3	1
38 Evaluate unit personnel to determine progress, raises, discipline and promotion	2	1	3	9	84	13	3	3	4	3	4	1	2	3	3	3	4	2	3
39 Determine staff required to operate unit effectively in any specific time period	1	3	3	13	77	20	3	6	6	5	8	3	3	10	2	2	5	4	8
40 Explain general hospital procedures to patient or family	1	6	8	8	73	24	3	8	12	1	9	12	9	13	1	7	7	4	9
41 Inform patient's family of patient's general condition	2	4	8	17	66	31	7	9	11	1	10	17	10	16	4	7	9	6	15
42 Inform patient's attending physician of patient's death	0	4	2	11	81	17	4	6	4	1	8	4	2	8	4	3	4	7	6
43 Inform Coroner's office of patient's death	1	2	3	20	72	26	6	3	11	4	8	8	10	9	2	6	9	7	8
44 Use an emisis basin in treating nauseated patient	0	5	18	43	31	66	15	16	24	1	15	43	34	22	6	13	28	15	14
45 Use a urinal to provide the patient with an opportunity to urinate	0	3	5	32	59	40	8	13	13	3	9	22	20	12	3	10	13	10	9
46 Use a bedpan to provide the patient with an opportunity to defecate	0	3	3	22	72	27	7	8	10	1	8	15	11	8	4	8	10	8	8
47 Use sandbags to immobilize patient's cervical spine (neck)	0	1	10	42	46	53	14	20	17	8	22	20	16	29	5	15	15	19	10
48 Use a cervical collar to immobilize patient's neck	1	3	10	48	37	62	13	26	22	11	22	23	17	34	6	18	22	23	7

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIENT VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 732927

GROUP 2 : 7 1 00

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
49 Use a 3-foot spine board to immobilize patient's spine to transport	1	3	13	42	41	59	11	24	20	15	22	18	8	38	9	18	22	20	8
50 Use a 6-foot spine board to immobilize patient's spine to transport	0	3	9	37	49	49	10	18	17	10	19	17	8	31	6	13	16	22	7
51 Use nasal cannula to administer oxygen	2	2	8	32	55	44	8	14	14	6	15	19	28	14	0	15	14	18	3
52 Use mask to administer oxygen	3	15	36	34	11	88	23	24	31	16	29	38	62	25	2	24	32	25	6
53 Use a traction splint to treat a lower extremity fracture	0	2	9	25	60	36	5	16	14	8	11	15	13	22	0	17	15	17	2
54 Use a pneumatic (air) splint to immobilize a closed fracture	2	4	31	41	20	78	16	29	29	14	27	33	38	36	1	27	27	22	6
55 Use a padded board splint to immobilize a fracture	1	2	3	36	55	43	10	16	15	6	17	17	17	22	2	22	13	20	3
56 Use a sling to immobilize a fractured arm or clavicle	2	0	5	53	38	60	12	20	23	6	21	29	24	29	3	24	22	20	3
57 Apply direct pressure to control hemmorrhage (bleeding)	3	3	24	47	23	76	16	20	33	13	22	36	34	33	4	28	22	22	7
58 Apply digital pressure to control hemorrhage	1	1	10	40	46	51	11	14	20	11	13	24	21	25	3	24	13	22	3
59 Apply tourniquet to control hemorrhage	0	0	1	8	90	9	1	3	4	2	1	4	2	4	1	10	3	14	1
60 Apply dressing to control hemorrhage	1	3	24	43	25	74	22	20	28	13	24	34	35	34	1	26	23	24	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 730927

GROUP 2 : 7 1 ES

TASK	FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
61 Apply bandage to secure dressing to wound	3	7	32	45	14	85	21	24	31	11	36	32	48	35	1	25	29	24	8
62 Apply bandages to immobilize a fracture (e.g., ribs)	1	1	11	47	38	60	14	17	25	11	22	26	25	32	1	25	15	26	3
63 Apply a sterile dressing to treat a burn	1	0	6	53	38	60	11	23	20	13	17	27	20	36	1	27	15	27	2
64 Apply cold wet applications to treat a burn	0	1	2	39	57	42	11	14	13	8	14	15	20	20	1	19	15	20	1
65 Apply vaseline gauze or other non-porous material to seal a pneumothorax	1	0	1	10	87	12	4	3	4	3	1	6	5	4	2	11	6	17	1
66 Use a bulk dressing to immobilize an impaled object	1	0	1	20	77	22	6	8	5	4	5	10	7	8	5	13	10	20	0
67 Use a constricting band to treat a snakebite	1	0	1	8	90	9	2	4	3	3	3	3	3	4	1	13	4	17	1
68 Make an incision over fang marks and suck out snake venom	1	0	1	6	92	7	2	3	1	2	1	3	3	3	1	10	3	17	0
69 Elevate the head and shoulders of a patient who is having difficulty in breathing	1	9	29	38	22	77	22	23	24	10	27	33	42	32	1	24	24	21	8
70 Use an oropharangeal airway to maintain a patent (open) airway	0	0	18	36	43	55	12	18	17	10	15	24	20	27	4	22	16	23	3
71 Use an oxygen demand valve to administer oxygen	2	5	20	33	38	59	15	16	20	7	21	27	35	21	1	23	17	22	5
72 Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV)	1	3	13	21	59	38	6	13	13	4	13	18	17	17	3	18	9	18	3

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 730927

GROUP 2 : 7 1 80

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
73 Use an S-tube airway adjunct to perform IPPV	0	0	5	21	72	26	4	9	6	2	8	13	7	15	1	13	8	16	3
74 Use an endotracheal tube to maintain an open airway	0	0	1	8	87	10	1	3	3	1	2	6	1	8	1	4	6	10	1
75 Administer oxygen through a mask	3	10	34	39	12	87	24	22	28	11	29	40	50	31	1	27	29	24	7
76 Administer oxygen through a nasal cannula	1	3	6	24	62	34	9	9	10	3	10	17	18	15	0	11	15	15	2
77 Administer oxygen through an oxygen catheter	1	1	2	7	86	11	1	6	3	1	5	5	5	6	1	8	3	13	1
78 Administer oxygen through an incubator system	0	0	1	10	87	11	3	3	2	2	1	6	5	5	0	2	5	9	3
79 Administer Holger-Neilson (back pressure-arm lift) method of resuscitation to ventilate patient	0	0	0	4	94	4	1	0	2	1	1	1	1	2	1	8	4	13	1
82 Operate pressure-cycled, oxygen-powered automatic mechanical resuscitator to perform IPPV	0	1	2	23	72	26	6	8	6	3	6	12	9	12	1	11	8	13	3
81 Operate an oxygen-powered, manually triggered, mechanical ventilation device	1	3	10	17	65	31	6	13	10	4	10	15	15	15	0	9	13	15	3
82 Maintain body temperature and elevate lower extremities to treat patient for shock	1	3	26	47	22	77	14	24	31	15	25	34	39	32	2	22	27	22	8
83 Treat a conscious patient who has ingested a posion	1	0	2	33	62	36	6	12	12	5	11	17	11	21	2	20	12	18	3
84 Operate vehicle mounted suction to remove fluids from patient's airway	0	1	12	42	42	55	10	18	20	8	16	27	16	31	5	20	21	19	6

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 730927

GROUP 2 : 7 1 ED

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
85 Operate portable suction unit to remove fluids from patient's airway	1	2	7	42	46	52	8	19	17	9	13	24	15	29	5	17	20	20	5
86 Administer patient's insulin to treat a patient in a diabetic coma	0	0	1	5	92	6	2	1	1	1	1	2	0	5	0	3	2	8	1
87 Administer sugar or sugar product to treat patient in insulin shock	2	0	3	19	75	22	5	8	6	1	8	10	10	10	0	17	9	14	3
88 Use cold applications to lower patient's body temperature	0	0	3	22	73	24	4	10	7	2	8	13	12	10	2	14	9	18	1
89 Use warm water (100-105 F) to treat frostbite	0	0	1	8	90	8	3	3	1	1	2	5	4	3	0	10	2	15	1
90 Use a flashlight to examine the pupillary reaction of a patient	1	3	17	43	34	64	13	14	24	8	17	35	38	22	1	20	22	22	4
91 Use cold pack to treat injury to soft tissue	0	1	10	34	55	44	8	12	17	4	13	26	28	13	1	16	16	17	3
92 Maintain drainage tubing without suction (e.g., urinary catheter)	0	1	1	6	90	8	1	3	1	1	2	5	5	3	0	4	5	8	0
93 Perform an emergency childbirth delivery	0	0	1	18	80	19	6	7	5	6	2	10	3	8	7	13	11	18	2
94 Place deceased patient in a disaster pouch	0	1	1	30	66	32	6	9	13	3	13	12	8	15	5	9	12	11	6
95 Place deceased patient in a shroud	0	0	2	17	77	20	3	7	9	1	10	8	7	9	3	6	7	8	7
96 Use restraint straps to control a combative patient	3	0	8	47	44	55	12	21	18	10	22	18	6	20	26	15	27	16	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

OPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 730927

GROUP 2 : 7 1 EG

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
97 Use a geiger counter to detect radiation level	0	0	1	3	94	4	1	1	1	1	0	2	1	1	1	3	3	8	1
99 Operate a hydraulic lift (Hoyer) to move patient	0	0	1	3	94	5	1	1	2	1	1	3	1	2	1	3	4	6	1
99 Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment	0	1	8	48	42	57	12	19	24	12	17	24	6	34	14	20	22	20	4
100 Perform CPR with the use of life-support equipment	0	1	8	38	51	48	10	15	21	10	10	24	5	27	13	18	21	16	3
101 Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV)	0	1	9	38	49	48	8	13	22	6	18	23	15	29	3	16	21	21	3
102 Use a bag-valve mask unit to perform IPPV	0	1	3	6	87	10	1	3	5	1	3	4	3	6	0	6	7	14	1
103 Perform mouth-to-mouth method of IPPV	1	1	3	38	55	43	7	9	19	6	13	20	10	26	3	19	18	20	2
104 Perform mouth-to-nose method of IPPV	1	0	1	12	84	13	1	2	7	1	3	6	3	6	1	11	8	16	1
105 Use a sphygmomanometer and stethoscope to obtain a patient's blood pressure	1	9	18	27	43	55	6	16	21	3	15	34	30	19	3	16	20	22	2
106 Place fingers on patient's wrist to count radial pulse	1	14	22	41	20	78	8	23	25	8	22	39	41	29	1	23	26	22	6
107 Assemble intravenous fluid administration equipment	0	0	1	4	92	5	2	1	0	1	2	1	3	2	0	3	1	6	1
108 Perform a venipuncture to administer intravenous fluids	0	1	1	1	95	2	1	1	0	1	1	1	1	1	0	2	1	5	1

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 730927

GROUP 2 : 7 1 EC

TASK	FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
109 Use a syringe to administer intravenous medications into the I.V. tubing	0	0	1	1	95	2	1	1	0	1	0	1	1	1	0	2	1	5	0
110 Use a syringe to administer intravenous medications	0	0	0	1	95	1	1	1	0	1	0	1	1	0	0	2	1	4	0
111 Use a syringe to administer intramuscular medications	0	0	0	1	97	1	1	0	0	1	0	0	1	0	0	2	0	4	0
112 Operate a defibrillator to administer empirical defibrillation	0	0	1	1	97	1	1	1	0	1	1	0	0	1	1	1	1	3	0
113 Operate an electrocardiograph scope and recorder to observe patient's cardiac activity	0	1	3	3	92	7	1	3	2	1	3	3	3	3	1	2	3	6	1
114 Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG)	0	0	1	3	95	3	1	2	1	0	3	1	0	2	1	1	3	3	0
115 Operate a two-way voice communication radio	15	24	33	22	5	94	11	18	42	6	18	59	75	10	2	22	37	9	19
116 Answer telephone to receive requests for ambulance service	9	10	23	32	24	74	8	18	27	8	12	45	50	14	2	17	29	5	16
117 Perform minor mechanical maintenance on emergency medical equipment	3	3	15	23	52	45	6	15	16	6	12	21	20	20	0	12	15	6	10
118 Perform building maintenance on physical facility	3	6	10	23	55	43	8	13	16	2	13	23	23	12	1	11	15	3	11
119 Replace oxygen tank in vehicle	2	4	20	44	29	70	12	18	29	7	17	39	53	10	1	18	27	9	16
120 Refill oxygen tanks with compressed oxygen	2	2	10	22	63	36	3	11	15	6	7	20	26	6	0	9	15	5	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 730927

GROUP 2 : 7 1 E2

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
121	Extricate an entrapped patient	0	1	10	50	35	62	13	17	26	14	24	19	3	36	18	17	24	17	7
122	Direct traffic at scene of accident	0	1	10	33	51	43	13	9	14	1	22	17	19	22	1	13	17	6	13
123	Use highway flares to control traffic at accident scene	1	0	15	37	43	52	10	12	20	3	22	23	29	16	3	13	22	8	15
124	Use portable floodlights to illuminate work area	1	1	8	45	40	56	10	12	22	1	25	22	34	16	1	15	22	8	13
125	Instruct patient's family how to care for patient at home	0	0	0	8	89	8	1	4	1	1	3	1	3	3	0	3	3	3	0
126	Evaluate quality of training program	0	1	3	15	76	20	2	12	4	4	8	6	1	13	4	6	8	6	3
127	Conduct on-the-job training sessions	1	2	8	22	64	33	7	15	7	6	10	13	10	17	3	10	10	7	3
128	Conduct formal classes to instruct individuals in emergency medical care techniques	1	1	6	20	67	29	5	13	5	5	8	11	6	16	3	10	8	7	2
129	Use an orthopedic stretcher to transport a patient	0	3	20	45	29	69	12	23	29	7	25	32	29	34	1	21	26	20	4
130	Use a variable position stretcher to transport a patient	5	10	29	31	20	76	14	24	30	8	27	34	41	27	1	21	29	15	9
131	Use a stretcher composed of rubberized canvas on an aluminum frame to transport a patient	3	4	12	28	50	47	9	13	20	3	18	23	24	20	0	14	22	13	7
132	Use rubberized stretcher to suspend a patient from the ceiling of an ambulance	1	1	3	27	65	32	7	9	11	3	12	14	15	14	0	8	19	9	5

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: VOLUNTEER TOTAL RESPONSE 143 PCT OF TOT 68 732927

GROUP 2 : 7 1 82

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
133	Use a chair stretcher to transport a patient	1	6	10	50	32	67	15	20	27	7	26	29	29	34	2	19	29	14	9
134	Use a chair to transport a patient	1	1	6	34	55	43	6	13	17	3	16	17	17	18	3	13	19	10	8
135	Use a wheelchair to transport a patient	0	1	3	23	69	27	3	7	10	1	8	15	17	8	0	13	11	9	3
136	Drive an emergency medical vehicle to transport a patient under non-emergency conditions	4	6	20	22	45	52	6	15	16	3	13	30	32	17	2	14	19	8	13
137	Drive an emergency medical vehicle to transport a patient using emergency warning devices	3	8	21	22	43	53	5	15	18	4	13	31	25	24	1	13	18	9	13
138	Operate a fire control device (fire extinguisher) to extinguish a fire	2	6	13	36	42	55	8	15	16	8	22	22	31	20	2	17	17	10	15
139	Use a watercraft to transport a patient	0	1	1	3	93	4	2	1	2	0	3	1	3	1	0	5	1	6	1
140	Use a fixed wing aircraft (airplane) to transport a patient	0	0	1	0	97	1	0	0	1	0	0	1	0	1	0	2	1	1	0
141	Use a rotary wing aircraft (helicopter) to transport a patient	0	0	1	1	96	2	1	0	1	1	1	1	0	2	0	2	1	2	0

TOTAL RESPONSES

PCT OF NUMBER RESPONDING

ATTENDANT - REGISTERED EMT

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIENT ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731009

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
1	Set standard type and quantity of emergency medical equipment needed for unit operation.	11	19	19	14	36	64	17	6	39	6	36	14	39	25	0	8	14	19	22
2	Inventory type and quantity of emergency medical equipment to determine need for replacement,etc.	11	22	17	11	33	61	14	11	25	11	33	14	33	25	0	6	28	8	22
3	Place emergency medical equipment in assigned location	17	42	14	6	19	78	17	11	39	14	33	28	50	22	0	8	39	14	17
4	Set standard type and quantity of emergency medical supplies needed for unit operation	8	6	11	17	50	42	19	6	14	11	19	11	17	22	0	6	22	11	11
5	Inventory type and quantity of emergency medical supplies to determine need for resupply	8	28	11	11	39	58	14	11	25	11	31	11	31	22	0	3	31	11	19
6	Place emergency medical supplies in assigned location	19	44	11	8	14	83	17	17	39	8	36	28	56	19	0	11	36	6	31
7	Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation	6	0	0	6	81	11	0	3	8	6	3	3	0	8	3	0	8	8	3
8	Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies	3	3	11	3	69	22	0	6	17	11	6	6	8	11	0	0	17	6	6
9	Place drugs and I.V. fluids in assigned location	8	0	14	11	58	33	8	0	25	8	17	8	19	14	0	0	19	8	14
10	Set standard type and amount of office supplies needed for unit operation	3	6	6	6	75	19	6	3	8	8	8	3	8	11	0	6	8	6	6
11	Inventory type and amount of office supplies to determine need for resupply or new supplies	6	8	6	6	75	25	11	3	6	6	6	8	14	8	0	6	8	6	8
12	Place office supplies in assigned location	0	8	8	8	72	25	11	3	8	3	8	8	17	8	0	3	11	0	14

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731009

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY					PCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
13	Design emergency medical equipment such as a special splint or vehicle floor plan	0	0	3	22	69	25	11	0	14	11	11	3	8	11	6	3	14	6	6
14	Examine physical facilities to determine need for expansion or construction	0	0	0	11	83	11	3	0	8	0	6	3	3	6	0	3	8	0	3
15	Prepare budget for operation of unit	0	0	3	3	89	6	6	0	0	6	0	0	0	0	6	6	3	0	3
16	Assign crew and vehicle to respond to ambulance call based upon the nature of the call	6	3	25	6	61	39	3	6	14	3	17	19	17	17	3	3	14	8	14
17	Survey type and quantity of emergency medical equipment available for purchase	0	3	0	14	75	17	8	0	6	0	11	3	6	8	0	6	3	0	8
18	Maintain personnel records	3	0	8	8	81	19	3	3	8	0	6	6	11	3	0	0	8	0	8
19	Prepare payroll for unit employees	0	0	3	0	94	3	0	0	0	0	0	0	0	0	0	0	3	0	3
20	Prepare financial report of unit operation	0	3	3	0	94	6	0	3	0	0	0	0	3	0	0	0	3	0	6
21	Examine record of service to patient to bill patient for service	3	3	3	0	89	8	0	0	6	3	3	3	8	0	0	0	11	0	3
22	Maintain accounting records	0	0	3	0	94	3	0	0	0	0	0	0	0	0	0	3	3	0	0
23	Maintain records of patients serviced	11	6	6	6	69	28	6	0	14	8	8	8	17	8	0	0	17	3	6
24	Operate a typewriter	6	0	3	11	78	19	3	0	8	0	3	8	14	0	0	8	0	0	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731009

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
25	Maintain records of maintenance performed on emergency medical equipment	3	8	3	11	72	25	3	0	17	6	8	8	17	6	0	0	19	0	3
26	Complete information required by special form to report accident	8	11	14	6	58	39	8	6	17	3	8	19	19	11	0	0	14	3	17
27	Complete information required by special form to report ambulance trip	39	31	17	3	11	89	8	11	47	8	39	33	47	33	3	8	44	17	14
28	Complete information required by special forms other than those listed above	6	11	14	6	61	36	8	3	17	0	22	11	22	8	0	8	17	3	6
29	Examine record of service to patient to determine charges to patient	6	0	3	8	81	17	0	3	6	0	8	3	8	3	0	0	8	0	3
32	Record analysis of ambulance trips to determine such things as type of service provided, etc.	11	3	3	11	69	28	3	8	11	0	17	3	8	14	0	0	14	0	6
31	Create and maintain on-call roster of staff required to operate unit	6	3	11	3	75	22	3	3	8	3	11	8	3	19	0	0	17	0	6
32	Conduct meetings with hospital representative(s) to coordinate emergency medical services	0	0	6	6	86	11	3	0	8	3	8	0	6	3	3	8	8	0	0
33	Conduct meetings with unit personnel	0	6	11	17	67	33	6	8	17	0	14	14	17	17	0	8	11	6	8
34	Develop policies or procedures to provide guidelines for daily operation of the unit	0	8	6	8	78	22	8	6	8	3	11	8	3	14	3	3	11	6	3
35	Develop and on-the-job training program	0	6	14	8	69	28	6	8	14	8	11	8	6	17	3	3	14	11	6
36	Conduct interview to determine if applicant meets standards for employment	0	0	0	6	92	6	3	0	3	3	0	3	3	3	0	3	6	0	0

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIENT ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731009

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
37	Administer test to determine if applicant meets standards for employment	0	0	0	6	92	6	0	0	6	3	3	0	0	6	0	3	3	3	0
38	Evaluate unit personnel to determine progress, raises, discipline and promotion	0	0	3	6	89	8	0	3	6	3	3	3	0	6	3	3	6	0	0
39	Determine staff required to operate unit effectively in any specific time period	0	0	3	8	86	11	0	3	6	0	6	3	0	8	0	3	6	0	3
40	Explain general hospital procedures to patient or family	22	11	22	6	36	61	0	11	36	0	25	36	33	28	0	8	22	6	28
41	Inform patient's family of patient's general condition	11	17	6	6	61	39	0	8	22	0	14	22	17	17	6	3	14	6	19
42	Inform patient's attending physician of patient's death	0	6	6	17	72	28	3	6	17	0	11	14	11	14	3	3	11	8	8
43	Inform Coroner's office of patient's death	3	3	3	14	78	22	6	3	14	6	8	6	11	8	3	6	3	6	11
44	Use an emisis basin in treating nauseated patient	8	14	31	36	11	89	28	11	31	0	19	67	72	6	11	6	42	19	22
45	Use a urinal to provide the patient with an opportunity to urinate	0	8	6	28	58	42	19	3	17	0	3	39	33	3	3	3	22	6	14
46	Use a bedpan to provide the patient with an opportunity to defecate	0	8	6	14	72	28	11	0	14	0	3	25	17	6	3	6	14	6	8
47	Use sandbags to immobilize patient's cervical spine (neck)	0	0	25	31	44	56	11	11	28	3	17	33	22	28	3	6	17	25	11
48	Use a cervical collar to immobilize patient's neck	3	8	28	42	19	81	17	28	31	14	25	36	25	50	6	6	25	44	11

TASK RESPONSES
PCT OF NUMBER RESPONDING

JPATIO: ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731009

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
49	Use a 3-foot spine board to immobilize patient's spine to transport	3	6	19	44	28	72	14	28	25	8	31	33	19	47	6	8	19	33	14
50	Use a 6-foot spine board to immobilize patient's spine to transport	0	3	22	28	47	53	11	19	19	11	17	25	19	33	0	8	14	22	11
51	Use nasal cannula to administer oxygen	6	17	19	25	33	67	17	8	25	3	19	42	47	17	0	8	28	33	3
52	Use mask to administer oxygen	17	25	33	17	8	92	22	22	33	8	28	56	64	28	0	8	39	31	14
53	Use a traction splint to treat a lower extremity fracture	3	3	31	36	28	72	11	17	39	3	28	39	22	50	0	11	25	33	6
54	Use a pneumatic (air) splint to immobilize a closed fracture	6	8	42	31	14	86	14	19	50	6	31	50	50	36	0	8	31	36	11
55	Use a padded board splint to immobilize a fracture	3	6	19	22	50	50	6	25	17	3	25	22	19	28	3	11	8	28	6
56	Use a sling to immobilize a fractured arm or clavicle	3	0	33	36	28	72	14	17	33	8	14	50	31	39	3	8	25	33	8
57	Apply direct pressure to control hemmorrhage (bleeding)	8	8	33	31	19	81	17	19	33	8	14	58	33	47	0	14	25	31	17
58	Apply digital pressure to control hemorrhage	3	3	11	47	36	64	8	19	33	6	8	44	19	44	0	11	17	28	11
59	Apply tourniquet to control hemorrhage	0	0	0	3	97	3	0	0	3	0	3	0	0	3	0	0	0	11	0
60	Apply dressing to control hemorrhage	8	11	28	33	19	81	14	19	31	3	22	53	31	47	0	14	22	36	14

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731209

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
61	Apply bandage to secure dressing to wound	14	14	36	22	14	86	17	19	36	8	22	56	50	33	3	14	28	31	14
62	Apply bandages to immobilize a fracture (e.g., ribs)	3	0	31	42	25	75	8	22	39	6	19	50	31	44	0	14	25	33	8
63	Apply a sterile dressing to treat a burn	3	0	17	53	28	72	3	25	36	6	19	47	25	47	0	14	22	36	6
64	Apply cold wet applications to treat a burn	0	0	14	36	50	50	3	17	28	3	14	33	19	31	0	6	17	25	6
65	Apply vaseline gauze or other non-porous material to seal a pneumothorax	3	0	6	33	58	42	6	11	19	8	3	31	6	31	6	8	11	28	6
66	Use a bulk dressing to immobilize an impaled object	0	0	6	44	50	50	6	17	25	3	11	36	8	33	9	8	14	33	3
67	Use a constricting band to treat a snakebite	3	0	3	8	86	14	0	3	8	3	3	8	3	8	3	3	6	11	0
68	Make an incision over fang marks and suck out snake venom	3	0	3	3	92	8	0	3	3	3	0	6	3	6	0	3	3	8	0
69	Elevate the head and shoulders of a patient who is having difficulty in breathing	11	31	22	22	14	86	22	14	33	3	25	58	56	31	0	8	33	31	14
70	Use an oropharangeal airway to maintain a patent (open) airway	0	6	36	39	17	81	17	17	31	6	28	47	31	50	0	11	28	28	17
71	Use an oxygen demand valve to administer oxygen	8	14	33	22	22	78	19	19	25	8	25	44	39	36	3	6	31	36	8
72	Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV)	0	8	25	28	36	61	11	19	19	6	28	25	17	36	6	8	22	17	14

PATIENT ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731009

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
73	Use an S-tube airway adjunct to perform IPPV	0	0	8	14	75	22	6	8	6	0	6	14	6	17	0	3	14	14	3
74	Use an endotracheal tube to maintain an open airway	0	0	6	11	81	17	3	8	6	3	3	11	3	8	6	0	14	6	0
75	Administer oxygen through a mask	14	25	31	22	8	92	22	14	36	8	28	56	58	33	0	11	36	39	6
76	Administer oxygen through a nasal cannula	3	14	19	22	39	58	11	8	19	0	19	39	33	25	0	3	28	36	0
77	Administer oxygen through an oxygen catheter	3	3	6	6	83	17	3	8	3	3	8	6	6	11	0	3	8	11	0
78	Administer oxygen through an incubator system	0	0	0	25	75	25	6	8	11	6	14	6	14	8	3	0	22	6	0
79	Administer Holger-Neilson (back pressure-arm lift) method of resuscitation to ventilate patient	0	0	0	3	97	3	3	0	0	3	0	0	0	3	0	0	6	8	0
80	Operate pressure-cycled, oxygen-powered automatic mechanical resuscitator to perform IPPV	3	0	0	11	86	14	3	6	6	3	3	8	6	8	0	0	8	6	3
81	Operate an oxygen-powered, manually triggered, mechanical ventilation device	6	3	25	25	42	58	3	22	22	8	22	28	31	25	3	6	25	28	0
82	Maintain body temperature and elevate lower extremities to treat patient for shock	3	6	44	39	8	92	11	28	42	6	33	50	61	22	6	8	33	39	11
83	Treat a conscious patient who has ingested a posion	3	0	8	56	33	67	8	14	36	8	22	36	17	44	6	8	28	33	3
84	Operate vehicle mounted suction to remove fluids from patient's airway	0	8	39	31	22	78	11	22	31	3	22	53	19	53	6	3	36	36	6

OCCUPATION: ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731009

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
85	Operate portable suction unit to remove fluids from patient's airway	3	6	19	39	33	67	11	17	31	6	14	42	11	47	6	3	31	31	6
86	Administer patient's insulin to treat a patient in a diabetic coma	0	0	3	3	94	6	0	3	3	0	0	6	0	6	0	0	6	0	0
87	Administer sugar or sugar product to treat patient in insulin shock	0		8	19	72	28	3	8	17	3	14	11	11	17	0	0	19	14	3
88	Use cold applications to lower patient's body temperature	0	0	6	19	75	25	3	14	8	3	6	17	11	14	0	0	14	11	3
89	Use warm water (100-105 F) to treat frostbite	0	0	3	8	89	11	3	6	3	3	0	8	0	11	0	0	6	11	0
90	Use a flashlight to examine the pupillary reaction of a patient	6	22	28	25	19	81	17	17	28	3	19	58	53	25	3	6	31	42	6
91	Use cold pack to treat injury to soft tissue	3	6	11	33	47	53	6	17	22	3	8	42	28	22	0	6	22	25	3
92	Maintain drainage tubing without suction (e.g., urinary catheter)	0	0	11	11	75	22	3	8	3	0	6	17	11	11	0	3	11	8	3
93	Perform an emergency childbirth delivery	0	0	3	39	58	42	6	17	17	3	14	25	3	25	14	0	25	19	3
94	Place deceased patient in a disaster pouch	0	0	6	28	67	33	0	11	19	0	11	22	22	6	6	0	17	11	11
95	Place deceased patient in a shroud	0	0	6	22	72	28	0	11	14	0	6	22	14	8	6	0	19	11	3
96	Use restraint straps to control a corbative patient	0	0	19	58	22	78	11	22	42	11	39	28	3	42	33	0	44	25	11

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIENT ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731009

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
97	Use a geiger counter to detect radiation level	0	0	3	3	94	6	0	0	3	0	0	3	0	3	0	0	3	3	0
98	Operate a hydraulic lift (Hoyer) to move patient	0	0	6	0	94	6	0	0	6	0	3	3	0	6	0	0	6	3	0
99	Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment	0	0	19	56	22	75	8	19	44	8	25	42	8	47	19	6	31	36	8
100	Perform CPR with the use of life-support equipment	0	0	22	47	28	69	6	17	44	11	19	36	11	42	17	3	31	33	8
101	Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV)	0	3	22	42	33	67	3	17	39	6	22	39	11	53	3	0	25	44	3
102	Use a bag-valve mask unit to perform IPPV	3	3	17	25	53	47	6	8	25	8	14	22	11	33	3	0	25	22	3
103	Perform mouth-to-mouth method of IPPV	0	0	14	42	44	56	6	11	28	3	17	33	14	36	3	0	28	25	6
104	Perform mouth-to-nose method of IPPV	0	0	3	31	67	33	3	3	22	3	6	22	8	22	0	0	17	19	3
105	Use a sphygmomanometer and stethoscope to obtain a patient's blood pressure	11	22	39	19	8	92	8	17	47	3	22	67	56	33	3	0	33	50	8
106	Place fingers on patient's wrist to count radial pulse	11	39	33	8	8	92	6	19	44	6	17	61	58	28	3	0	36	42	8
107	Assemble intravenous fluid administration equipment	0	0	6	17	78	22	11	3	6	8	11	3	8	14	0	0	8	11	6
108	Perform a venipuncture to administer intravenous fluids	0	0	0	3	97	3	3	0	0	0	3	0	0	3	0	0	0	6	0

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIENT ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731209

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
109	Use a syringe to administer intravenous medications into the I.V. tubing	0	0	0	3	97	3	3	0	0	0	3	0	0	3	0	0	0	6	0
110	Use a syringe to administer intravenous medications	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	3	0
111	Use a syringe to administer intramuscular medications	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	3	0
112	Operate a defibrillator to administer empirical defibrillation	0	0	3	11	86	14	8	0	6	6	8	0	0	11	3	0	3	11	0
113	Operate an electrocardiograph scope and recorder to observe patient's cardiac activity	0	8	17	8	67	33	8	11	8	6	14	14	11	22	0	0	8	19	6
114	Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG)	0	3	14	11	69	28	8	6	11	11	8	8	3	25	0	0	6	17	6
115	Operate a two-way voice communication radio	50	22	25	0	3	97	8	11	56	3	19	72	75	17	3	11	44	19	19
116	Answer telephone to receive requests for ambulance service	14	22	33	11	19	81	11	14	33	3	17	58	53	22	3	11	33	14	19
117	Perform minor mechanical maintenance on emergency medical equipment	11	8	19	25	33	64	8	14	31	0	25	31	31	28	0	14	19	6	19
118	Perform building maintenance on physical facility	14	11	14	8	53	47	0	14	28	0	17	31	39	6	0	17	14	3	14
119	Replace oxygen tank in vehicle	3	8	33	33	22	78	14	17	39	3	22	53	58	19	0	6	33	11	28
120	Refill oxygen tanks with compressed oxygen	3	3	6	8	78	19	3	0	11	3	0	17	19	0	0	0	14	3	6

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731209

GROUP 1 : 4 6 EQ 12 1 EQ

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
121	Extricate an entrapped patient	0	0	31	47	22	78	6	25	44	8	36	31	8	53	17	8	36	25	8
122	Direct traffic at scene of accident	0	0	14	25	58	39	8	8	17	0	17	22	22	17	0	6	17	8	8
123	Use highway flares to control traffic at accident scene	0	3	17	36	44	56	6	8	25	0	14	39	33	14	6	11	25	3	14
124	Use portable floodlights to illuminate work area	3	3	19	39	36	64	6	17	28	0	25	33	36	19	3	14	25	8	11
125	Instruct patient's family how to care for patient at home	0	3	6	8	83	17	6	6	0	0	6	11	8	8	0	3	3	11	3
126	Evaluate quality of training program	0	0	6	14	81	19	0	11	8	0	19	0	3	14	3	0	11	3	6
127	Conduct on-the-job training sessions	3	6	17	14	61	39	6	17	14	6	17	17	17	19	3	6	14	11	8
128	Conduct formal classes to instruct individuals in emergency medical care techniques	3	6	14	11	69	31	6	11	11	6	11	14	14	17	0	3	11	17	0
129	Use an orthopedic stretcher to transport a patient	6	11	25	39	19	81	11	19	44	6	31	42	31	42	3	3	39	36	3
130	Use a variable position stretcher to transport a patient	25	17	31	14	14	86	11	22	44	6	31	47	44	33	3	6	39	28	11
131	Use a stretcher composed of rubberized canvas on an aluminum frame to transport a patient	3	6	14	28	50	50	6	19	22	3	22	25	22	28	0	3	28	19	3
132	Use rubberized stretcher to suspend a patient from the ceiling of an ambulance	0	0	3	31	67	33	0	11	17	0	11	22	11	17	6	3	22	8	6

TOTAL RESPONSES

PCT OF NUMBER RESPONDING

ATTENDANT -- NON-REGISTERED EMT

TASK RESPONSES
PCT OF NUMBER RESPONDING

'ATION! ATTENDENTS-EMT TOTAL RESPONSE 36 PCT OF TOT 17 731209

GROUP 1 ! 4 6 EQ 12 1 EQ

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
133	Use a chair stretcher to transport a patient	8	6	28	36	22	78	8	17	47	3	25	47	33	42	0	6	33	19	14
134	Use a chair to transport a patient	0	3	22	36	36	.61	6	8	42	3	22	33	31	28	0	6	25	19	14
135	Use a wheelchair to transport a patient	0	0	8	25	67	.33	0	3	19	0	6	25	17	14	0	8	11	14	8
136	Drive an emergency medical vehicle to transport a patient under non-emergency conditions	17	17	25	8	31	.67	8	8	28	3	19	42	36	28	0	6	33	14	14
137	Drive an emergency medical vehicle to transport a patient using emergency warning devices	19	11	31	8	28	69	11	3	31	8	17	42	25	36	3	8	31	17	11
138	Operate a fire control device (fire extinguisher) to extinguish a fire	0	11	11	28	50	.50	11	6	28	8	14	22	31	17	0	11	14	14	11
139	Use a watercraft to transport a patient	0	0	3	0	97	3	0	0	3	0	0	3	0	3	0	0	3	3	0
140	Use a fixed wing aircraft (airplane) to transport a patient	0	0	3	0	97	3	0	0	3	0	0	3	0	3	0	0	3	0	0
141	Use a rotary wing aircraft (helicopter) to transport a patient	0	0	3	3	94	6	0	0	6	0	3	3	0	6	0	0	6	0	0

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIONT ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 EQ 12 1 NE

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
1	Set standard type and quantity of emergency medical equipment needed for unit operation.	7	11	17	15	46	49	13	3	28	9	25	6	26	20	0	19	17	13	7
2	Inventory type and quantity of emergency medical equipment to determine need for replacement,etc.	4	11	21	24	36	61	11	9	34	6	25	28	40	15	0	16	22	8	13
3	Place emergency medical equipment in assigned location	11	17	37	19	13	84	16	15	48	11	33	29	56	24	0	15	31	8	25
4	Set standard type and quantity of emergency medical supplies needed for unit operation	4	7	16	13	52	40	10	4	22	9	19	4	21	12	1	7	16	9	11
5	Inventory type and quantity of emergency medical supplies to determine need for resupply	3	10	19	25	38	57	15	8	30	8	24	12	29	19	2	7	24	10	13
6	Place emergency medical supplies in assigned location	9	17	33	22	15	81	18	7	48	8	33	27	63	10	0	17	30	6	24
7	Set standard type and quantity of drugs and intravenous (I.V.) fluids needed for unit operation	0	1	3	1	91	6	1	0	4	2	1	1	1	4	0	2	2	2	4
8	Inventory type and quantity of drugs and I.V. fluids to determine need for resupply or new supplies	1	2	1	0	92	4	1	0	3	2	1	0	0	4	0	2	1	2	2
9	Place drugs and I.V. fluids in assigned location	0	2	2	1	91	6	3	0	2	1	1	3	4	1	0	3	1	2	2
10	Set standard type and amount of office supplies needed for unit operation	4	1	4	7	80	17	6	3	6	1	7	6	8	7	0	7	4	1	6
11	Inventory type and amount of office supplies to determine need for resupply or new supplies	2	2	3	8	82	16	8	2	3	1	8	3	8	6	0	3	7	1	3
12	Place office supplies in assigned location	2	2	6	10	78	20	9	2	7	1	9	7	15	4	0	6	8	2	7

TASK RESPONSES
PCT OF NUMBER RESPONDING

UPATION: ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 50 12 1 NE

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PTM	1	2	3	1	2	3	1	2	3	1	2	3	4
13	Design emergency medical equipment such as a special splint or vehicle floor plan	1	0	2	13	80	17	4	3	6	4	6	3	1	11	2	4	4	1	6
14	Examine physical facilities to determine need for expansion or construction	0	1	0	15	80	16	6	2	7	3	9	2	2	9	2	4	2	2	7
15	Prepare budget for operation of unit	1	0	0	10	87	11	3	2	2	2	3	3	1	4	3	4	3	1	3
16	Assign crew and vehicle to respond to ambulance call based upon the nature of the call	3	2	4	18	70	28	9	6	8	2	10	10	15	7	3	2	12	6	11
17	Survey type and quantity of emergency medical equipment available for purchase	0	0	1	24	72	25	8	3	8	8	4	3	8	7	2	3	2	3	10
18	Maintain personnel records	2	1	1	9	83	13	4	1	2	2	3	2	3	4	0	2	4	3	3
19	Prepare payroll for unit employees	0	0	0	0	94	0	0	0	0	0	0	0	0	0	0	0	0	2	0
20	Prepare financial report of unit operation	0	0	0	3	91	3	0	2	0	1	0	2	2	0	1	0	1	3	2
21	Examine record of service to patient to bill patient for service	0	0	2	2	92	4	1	1	1	1	2	1	1	2	1	0	2	3	1
22	Maintain accounting records	0	0	0	0	94	0	0	0	0	0	0	0	0	0	0	0	2	1	0
23	Maintain records of patients serviced	4	6	7	9	70	26	6	8	8	3	9	10	17	6	0	7	10	7	6
24	Operate a typewriter	3	1	8	10	74	22	7	3	3	1	4	15	16	3	1	13	2	7	6

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 EQ 12 1 NE

TASK		FREQUENCY					PCT RPY	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5		1	2	3	1	2	3	1	2	3	1	2	3	4
25	Maintain records of maint[illegible] performed on emergency medical equipment	1	2	8	3	81	15	1	2	3	3	7	1	6	7	0	4	6	2	2
26	Complete information required by special form to report accident	2	3	16	15	62	36	8	8	13	3	11	16	24	8	0	6	16	2	9
27	Complete information required by special form to report ambulance trip	9	15	30	21	22	75	13	18	30	8	24	35	56	12	0	13	28	10	16
28	Complete information required by special forms other than those listed above	1	1	6	6	82	13	7	1	2	4	2	2	6	4	0	2	6	3	1
29	Examine record of service to patient to determine charges to patient	0	0	3	0	93	3	1	0	1	0	1	1	0	2	0	0	3	3	0
30	Record analysis of ambulance trips to determine such things as type of service provided, etc.	7	3	4	3	79	18	3	9	4	1	9	6	10	6	0	2	10	3	7
31	Create and maintain on-call roster of staff required to operate unit	0	0	3	4	89	6	2	2	1	1	3	2	4	2	1	1	7	3	4
32	Conduct meetings with hospital representative(s) to coordinate emergency medical services	0	1	1	9	87	11	1	3	3	2	3	3	3	3	2	3	2	3	4
33	Conduct meetings with unit personnel	1	0	8	26	64	35	9	9	9	6	15	7	8	18	1	4	11	4	7
34	Develop policies or procedures to provide guidelines for daily operation of the unit	0	1	3	17	75	21	9	1	7	2	11	3	2	12	2	2	8	3	8
35	Develop and on-the-job training program	1	2	2	11	79	17	8	3	2	3	8	2	2	9	2	4	3	2	6
36	Conduct interview to determine if applicant meets standards for employment	0	1	1	2	92	4	0	3	0	1	1	0	1	2	0	1	0	3	1

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 EQ 12 1 NE

	TASK	FREQUENCY 1	2	3	4	5	PCT	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
37	Administer test to determine if applicant meets standards for employment	2	1	1	7	88		2	7	1	2	1	5	2	4	1	2	0	6	1
38	Evaluate unit personnel to determine progress, raises, discipline and promotion	0	0	1	4	93	6	1	3	1	1	1	0	0	1	1	2	2	2	0
39	Determine staff required to operate unit effectively in any specific time period	1	1	0	7	86	9	2	1	2	1	3	1	2	3	0	1	2	2	3
40	Explain general hospital procedures to patient or family	1	1	9	11	75	22	4	6	10	1	9	10	8	12	1	8	4	3	9
41	Inform patient's family of patient's general condition	1	1	9	20	65	31	10	3	13	0	10	20	9	18	3	9	9	4	12
42	Inform patient's attending physician of patient's death	1	3	0	8	84	12	3	1	3	0	3	4	0	6	2	2	3	4	3
43	Inform Coroner's office of patient's death	3	2	1	13	78	20	3	1	8	1	3	9	6	7	2	3	8	4	4
44	Use an emisis basin in treating nauseated patient	1	3	15	47	30	66	12	12	28	0	11	47	34	24	3	13	25	13	16
45	Use a urinal to provide the patient with an opportunity to urinate	1	1	4	28	64	35	7	12	10	2	8	19	16	11	3	8	11	10	6
46	Use a bedpan to provide the patient with an opportunity to defecate	0	1	1	20	76	22	7	6	7	1	7	10	9	7	3	8	6	9	4
47	Use sandbags to immobilize patient's cervical spine (neck)	3	1	6	44	45	54	15	18	17	10	19	19	13	33	4	19	12	18	8
48	Use a cervical collar to immobilize patient's neck	2	1	3	32	40	58	9	24	20	7	21	22	12	33	6	20	17	20	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIENT ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731209

GROUP 2 : 4 6 EC 12 1 NE

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
49	Use a 3-foot spine board to immobilize patient's spine to transport	2	1	7	44	45	54	12	17	18	12	18	16	7	30	9	21	15	20	8
50	Use a 6-foot spine board to immobilize patient's spine to transport	1	1	1	36	56	39	9	12	12	8	15	12	3	25	6	17	10	19	3
51	Use nasal cannula to administer oxygen	4	2	7	29	54	43	9	11	15	3	17	17	30	10	0	15	11	18	4
52	Use mask to administer oxygen	7	10	31	40	9	89	22	22	31	10	34	37	63	21	0	27	28	24	4
53	Use a traction splint to treat a lower extremity fracture	1	1	9	19	62	30	7	11	10	2	13	11	9	19	0	18	13	15	3
54	Use a pneumatic (air) splint to immobilize a closed fracture	2	3	22	46	21	76	17	28	27	12	28	31	35	36	2	28	20	24	6
55	Use a padded board splint to immobilize a fracture	1	1	4	34	56	40	11	13	13	3	19	13	16	20	1	22	13	17	1
56	Use a sling to immobilize a fractured arm or clavicle	2	1	3	45	45	52	10	17	18	1	22	22	20	24	1	27	16	18	0
57	Apply direct pressure to control hemorrhage (bleeding)	6	3	19	49	21	78	16	17	34	7	27	35	34	33	4	28	18	25	6
58	Apply digital pressure to control hemorrhage	2	1	9	34	48	46	10	12	17	6	15	22	21	17	4	25	8	19	2
59	Apply tourniquet to control hemorrhage	0	0	0	9	88	9	1	1	3	0	0	4	1	3	0	15	2	10	1
60	Apply dressing to control hemorrhage	3	2	22	45	26	73	20	18	27	8	24	35	36	29	1	27	15	27	8

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731209

GROUP 2 : 4 6 EQ 12 1 NE

TASK		FREQUENCY 1	2	3	4	5	TOT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
61	Apply bandage to secure dressing to wound	4	2	29	48	15	84	18	25	29	7	37	31	48	33	0	29	21	24	8
62	Apply bandages to immobilize a fracture (e.g., ribs)	0	2	8	42	45	52	16	10	20	8	18	21	24	22	2	27	7	24	1
63	Apply a sterile dressing to treat a burn	2	1	3	47	44	54	9	20	18	8	17	26	13	36	2	27	10	22	4
64	Apply cold wet applications to treat a burn	0	2	1	31	63	35	12	12	8	4	15	12	16	17	1	24	9	17	1
65	Apply vaseline gauze or other non-porous material to seal a pneumothorax	0	0	0	6	92	6	2	2	0	2	1	1	1	3	0	15	2	10	1
66	Use a bulk dressing to immobilize an impaled object	1	0	0	10	87	11	1	6	1	1	2	4	0	6	2	13	3	15	0
67	Use a constricting band to treat a snakebite	0	0	0	4	92	4	1	3	0	0	3	0	1	2	1	16	2	13	0
68	Make an incision over fang marks and suck out snake venom	0	0	0	2	94	2	1	1	0	0	0	1	0	2	0	13	2	10	0
69	Elevate the head and shoulders of a patient who is having difficulty in breathing	6	6	29	38	20	79	20	21	25	8	26	34	42	29	1	26	21	19	10
70	Use an oropharangeal airway to maintain a patent (open) airway	1	1	13	38	43	54	12	18	13	9	15	25	16	27	6	24	11	21	6
71	Use an oxygen demand valve to administer oxygen	4	1	13	37	40	56	13	16	16	4	19	26	31	21	1	24	12	19	6
72	Use an oxygen demand valve to perform intermittent positive pressure ventilation (IPPV)	3	1	7	21	62	33	4	11	12	2	10	18	16	13	2	17	7	16	3

IPATION! ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 EQ 12 1 NE

TASK		FREQUENCY					PCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	RFM	1	2	3	1	2	3	1	2	3	1	2	3	4
73	Use an S-tube airway adjunct to perform IPPV	2	0	3	18	74	24	4	8	4	2	8	9	6	15	0	17	6	12	1
74	Use an endotracheal tube to maintain an open airway	0	0	0	6	90	6	1	2	1	0	1	3	1	4	0	6	3	9	0
75	Administer oxygen through a mask	8	3	29	46	11	87	25	19	27	9	30	38	51	33	0	29	26	22	7
76	Administer oxygen through a nasal cannula	3	3	6	21	61	34	8	9	10	2	8	17	21	11	0	13	9	13	2
77	Administer oxygen through an oxygen catheter	0	1	0	6	88	7	0	4	1	0	3	2	2	3	1	8	0	10	0
78	Administer oxygen through an incubator system	0	0	1	6	89	7	2	1	1	1	1	2	2	3	0	1	1	7	2
79	Administer Holger-Neilson (back pressure-arm lift) method of resuscitation to ventilate patient	0	0	0	6	90	6	2	1	1	2	1	1	0	2	3	10	6	9	1
82	Operate pressure-cycled, oxygen-powered automatic mechanical resuscitator to perform IPPV	1	1	3	20	70	26	6	9	3	4	7	10	6	12	3	12	8	11	2
81	Operate an oxygen-powered, manually triggered, mechanical ventilation device	4	1	4	16	70	26	6	8	9	2	9	13	12	12	0	8	8	15	2
82	Maintain body temperature and elevate lower extremities to treat patient for shock	4	2	18	51	24	75	15	21	29	11	29	31	38	35	0	21	26	22	7
83	Treat a conscious patient who has ingested a posion	0	1	2	24	70	27	6	8	8	4	8	12	7	18	1	19	10	15	1
84	Operate vehicle mounted suction to remove fluids from patient's airway	0	1	6	39	51	46	11	15	12	9	11	21	12	27	4	21	16	16	6

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 EQ 12 1 NE

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
85	Operate portable suction unit to remove fluids from patient's airway	0	1	4	36	56	42	6	15	15	7	13	20	12	22	4	17	15	17	4
86	Administer patient's insulin to treat a patient in a diabetic coma	0	0	0	4	92	4	1	1	1	0	1	1	0	3	0	4	1	7	1
87	Administer sugar or sugar product to treat patient in insulin shock	1	0	1	20	74	22	7	9	3	3	7	9	9	11	0	11	9	11	4
88	Use cold applications to lower patient's body temperature	1	0	1	17	79	19	4	7	2	2	6	9	8	9	0	17	8	15	1
89	Use warm water (100-105 F) to treat frostbite	0	0	0	7	92	7	2	2	0	0	2	3	3	2	0	12	2	12	0
90	Use a flashlight to examine the pupillary reaction of a patient	3	1	12	44	38	61	12	11	21	8	15	33	39	18	0	20	19	20	4
91	Use cold pack to treat injury to soft tissue	0	1	6	37	52	44	10	9	16	3	13	25	33	10	0	16	16	16	3
92	Maintain drainage tubing without suction (e.g., urinary catheter)	0	1	0	6	89	7	0	2	1	0	1	4	3	2	0	2	2	8	2
93	Perform an emergency childbirth delivery	0	0	0	12	83	12	6	4	2	7	0	6	1	3	7	13	9	15	1
94	Place deceased patient in a disaster pouch	0	1	0	27	67	28	8	7	10	2	13	9	7	16	2	10	9	7	8
95	Place deceased patient in a shroud	0	1	0	13	80	15	2	6	7	1	10	3	4	9	1	8	2	6	7
96	Use restraint straps to control a combative patient	1	0	2	46	47	49	12	19	16	11	15	21	7	22	22	19	20	16	9

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 ED 12 1 NE

TASK		FREQUENCY 1	2	3	4	5	PCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
97	Use a geiger counter to detect radiation level	0	3	0	2	93	2	0	1	0	0	0	2	1	0	1	3	2	6	1
98	Operate a hydraulic lift (Hoyer) to move patient	0	0	0	2	93	2	0	0	2	0	2	0	0	1	1	2	2	6	1
99	Perform cardiopulmonary resuscitation (CPR) without the use of life-support equipment	0	1	7	39	49	47	9	17	19	8	15	22	3	29	14	18	17	19	1
100	Perform CPR with the use of life-support equipment	2	1	6	36	51	45	9	13	20	10	10	25	6	24	15	17	17	21	2
101	Operate a bag-valve mask unit to perform intermittent positive pressure ventilation (IPPV)	0	1	6	35	54	42	7	11	17	4	17	19	12	25	3	18	17	15	2
102	Use a bag-valve mask unit to perform IPPV	0	1	2	3	88	7	2	0	3	1	3	1	2	3	0	8	4	9	1
103	Perform mouth-to-mouth method of IPPV	1	0	1	31	62	34	3	10	12	4	9	19	9	18	5	22	12	16	1
104	Perform mouth-to-nose method of IPPV	1	0	0	3	90	4	0	1	2	1	1	1	0	3	0	13	4	8	1
105	Use a sphygmomanometer and stethoscope to obtain a patient's blood pressure	1	3	16	28	47	48	4	13	16	2	11	33	26	17	3	20	16	17	2
106	Place fingers on patient's wrist to count radial pulse	3	11	20	46	16	81	10	25	22	7	22	44	47	27	3	33	21	21	7
107	Assemble intravenous fluid administration equipment	0	0	0	6	89	6	2	0	1	0	2	3	4	1	0	4	1	1	1
108	Perform a venipuncture to administer intravenous fluids	0	1	0	1	92	2	0	1	1	0	0	2	2	0	0	2	1	1	1

TASK RESPONSES
PCT OF NUMBER RESPONDING

PATIENT ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 EC 12 1 NE

TASK		FREQUENCY					TOT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
109	Use a syringe to administer intravenous medications into the I.V. tubing	0	0	0	1	93	1	0	1	0	0	0	1	1	0	0	2	1	1	0
110	Use a syringe to administer intravenous medications	0	0	0	1	93	1	0	1	0	0	0	1	1	0	0	2	1	1	0
111	Use a syringe to administer intramuscular medications	0	0	0	1	96	1	0	0	0	0	0	0	0	0	0	2	0	1	0
112	Operate a defibrillator to administer empirical defibrillation	0	0	0	1	96	1	0	0	1	0	0	1	1	0	0	2	0	0	1
113	Operate an electrocardiograph scope and recorder to observe patient's cardiac activity	0	1	4	1	90	7	1	1	4	1	2	3	3	3	0	3	2	2	1
114	Operate one-way electrocardiograph telemetry system to transmit (EKG or ECG)	0	0	1	1	94	2	0	0	2	0	1	1	1	0	1	2	0	1	1
115	Operate a two-way voice communication radio	13	17	33	29	7	92	11	17	43	4	19	57	75	10	1	25	33	9	19
116	Answer telephone to receive requests for ambulance service	4	8	18	37	29	67	9	13	28	4	15	39	52	10	1	18	22	2	18
117	Perform minor mechanical maintenance on emergency medical equipment	2	3	8	22	60	36	9	11	10	4	11	17	19	15	0	11	12	6	6
118	Perform building maintenance on physical facility	1	4	3	24	63	33	6	8	12	3	9	15	18	8	0	8	15	2	4
119	Replace oxygen tank in vehicle	3	6	10	47	31	66	9	17	29	7	18	37	53	10	0	21	26	9	12
120	Refill oxygen tanks with compressed oxygen	3	2	7	16	69	28	4	9	11	6	6	16	21	6	0	9	13	6	4

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

GROUP 2 : 4 6 EQ 12 1 NE

TASK		FREQUENCY					TCT	ASSIST			SUPERVISION			DIFFICULTY			TRAINING			
		1	2	3	4	5	PFM	1	2	3	1	2	3	1	2	3	1	2	3	4
121	Extricate an entrapped patient	0	1	2	52	39	55	13	11	26	15	25	13	1	33	18	19	21	12	7
122	Direct traffic at scene of accident	0	0	5	33	58	36	13	6	11	1	19	12	13	20	0	13	13	2	10
123	Use highway flares to control traffic at accident scene	1	0	11	30	52	43	9	10	16	1	20	17	24	13	1	15	19	3	9
124	Use portable floodlights to illuminate work area	0	1	8	38	48	47	10	8	20	2	25	15	30	15	0	18	18	6	9
125	Instruct patient's family how to care for patient at home	0	0	0	8	87	8	0	2	2	0	3	1	2	2	0	3	2	2	0
126	Evaluate quality of training program	0	0	1	9	82	10	2	4	2	2	2	4	1	7	1	8	3	1	0
127	Conduct on-the-job training sessions	2	0	2	17	74	21	9	7	3	4	9	6	7	13	0	15	4	1	1
128	Conduct formal classes to instruct individuals in emergency medical care techniques	1	0	2	20	71	24	3	13	3	0	10	10	4	16	1	16	3	4	0
129	Use an orthopedic stretcher to transport a patient	1	4	15	47	29	67	13	19	29	6	26	31	30	34	1	25	19	19	3
130	Use a variable position stretcher to transport a patient	7	9	24	36	19	75	15	19	33	7	28	35	47	21	1	26	26	12	8
131	Use a stretcher composed of rubberized canvas on an aluminum frame to transport a patient	7	1	9	28	51	45	7	10	24	2	19	21	25	18	0	13	22	11	6
132	Use rubberized stretcher to suspend a patient from the ceiling of an ambulance	1	0	0	25	70	26	6	9	7	3	11	9	9	12	1	8	17	3	4

TASK RESPONSES
PCT OF NUMBER RESPONDING

OCCUPATION: ATTENDENT-NON EMT TOTAL RESPONSE 89 PCT OF TOT 42 731009

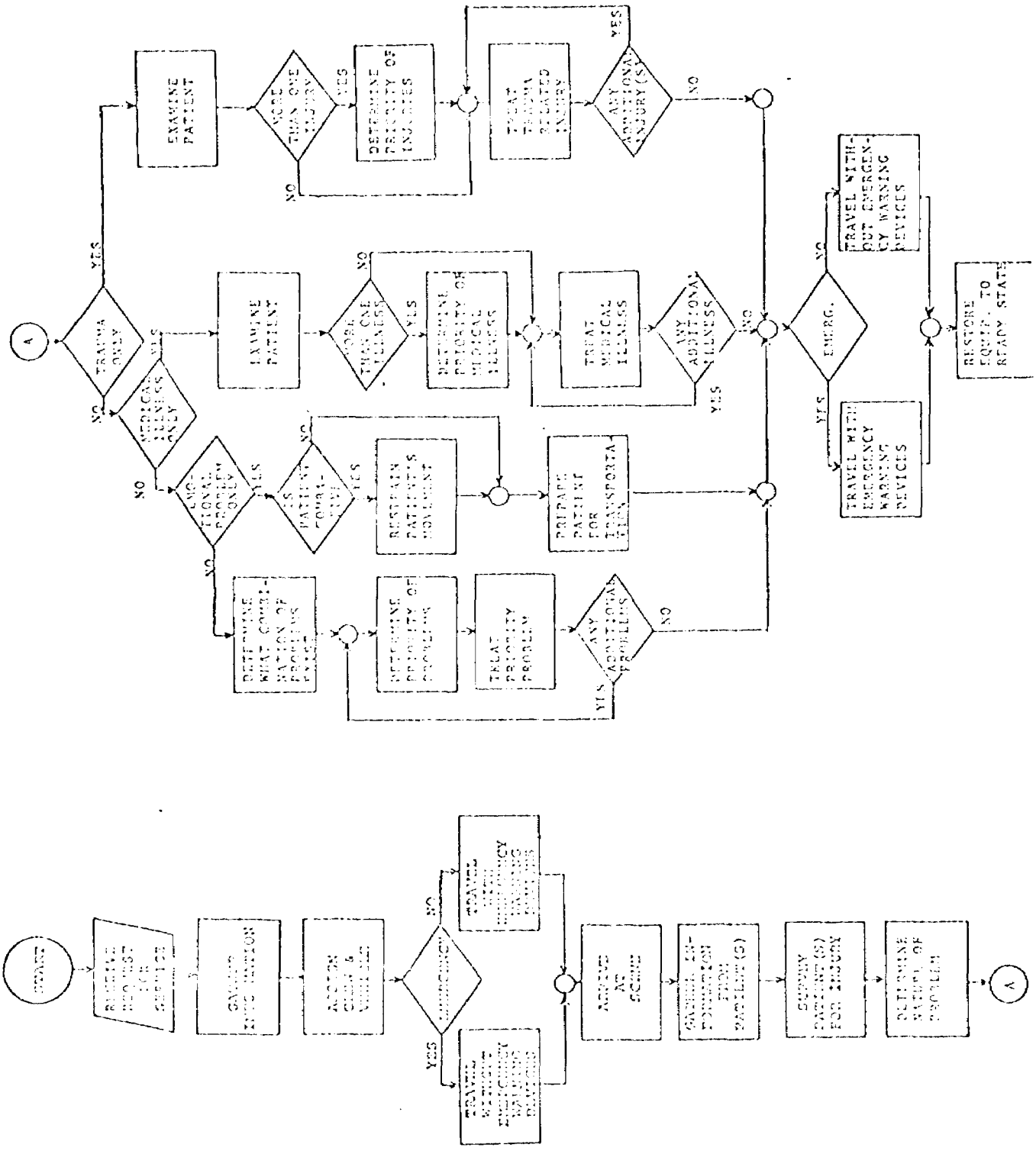
GROUP 2 : 4 6 EQ 12 1 NE

TASK		FREQUENCY 1	2	3	4	5	TCT PFM	ASSIST 1	2	3	SUPERVISION 1	2	3	DIFFICULTY 1	2	3	TRAINING 1	2	3	4
133	Use a chair stretcher to transport a patient	2	4	4	51	35	62	13	19	25	7	28	22	28	29	2	20	29	12	4
134	Use a chair to transport a patient	0	1	7	29	58	37	3	10	19	2	15	13	15	16	3	11	20	8	6
135	Use a wheelchair to transport a patient	0	2	1	20	71	24	1	9	8	2	6	12	15	7	0	12	10	6	2
136	Drive an emergency medical vehicle to transport a patient under non-emergency conditions	6	2	12	20	56	40	3	10	13	2	11	24	29	10	0	11	15	9	8
137	Drive an emergency medical vehicle to transport a patient using emergency warning devices	4	4	12	19	55	40	1	11	16	0	12	25	24	15	1	10	12	8	10
138	Operate a fire control device (fire extinguisher) to extinguish a fire	0	2	8	38	46	48	6	17	11	6	19	20	28	17	0	19	15	7	11
139	Use a watercraft to transport a patient	0	1	1	1	92	3	0	0	2	0	1	2	2	0	1	6	0	3	1
140	Use a fixed wing aircraft (airplane) to transport a patient	0	0	0	0	96	0	0	0	0	0	0	0	0	0	0	2	0	0	0
141	Use a rotary wing aircraft (helicopter) to transport a patient	0	0	0	0	97	0	0	0	0	0	0	0	0	0	0	2	0	0	0

APPENDIX C

SYSTEM FLOW

SYSTEM FLOW


EXAMINE PATIENT
MORE THAN ONE INJURY
YES
NO
DETERMINE PRIORITY OF INJURIES
TREAT TRAUMA RELATED INJURIES
ANY ADDITIONAL INJURY(S)
YES
NO
TRAUMA ONLY
YES
NO
MEDICAL ILLNESS ONLY
EXAMINE PATIENT
MORE THAN ONE ILLNESS
YES
NO
DETERMINE PRIORITY OF MEDICAL ILLNESS
TREAT MEDICAL ILLNESS
ANY ADDITIONAL ILLNESS
YES
NO
EMERG.
YES
NO
TRAVEL WITHOUT EMERGENCY WARNING DEVICES
TRAVEL WITH EMERGENCY WARNING DEVICES
RESTORE EQUIP. TO READY STATE
LIFE THREATENING PROBLEM
YES
NO
PATIENT TRANSPORTABLE
YES
NO
RESTRAIN PATIENTS MOVEMENT
PREPARE PATIENT FOR TRANSPORTATION
DETERMINE WHAT COMBINATION OF PROBLEMS EXIST
DETERMINE PRIORITY OF PROBLEMS
TREAT PRIORITY PROBLEM
ANY ADDITIONAL PROBLEMS
YES
NO
A
A

APPENDIX D

TASK DESCRIPTION

DISPATCH

ELEMENTS	EXPLANATIONS
	Assumes that the following items are available: A. a telephone system for receiving requests for emergency care; B. a radio system for dispatch control; C. writing implement and paper; D. crew members "on call" to respond to requests for ambulance service; and, E. ambulance vehicles to respond.
1. Answer telephone to receive a request for ambulance service and/or emergency care without allowing the telephone to ring more than two times. The first words spoken by the dispatcher should be clear (e.g., "Ambulance Service").	The telephone should be answered in such a manner that it is obvious to the individual requesting service that the number he has reached is in fact an ambulance service. (See Note 1)
2. Gather information from caller about the patient, the incident or conditions resulting in the callers perception of the need for an ambulance and the location of the potential patient. Information gathered must include: A. phone number of caller; B. name of patient (if known); C. specific location of the patient, including the street name and adress, or in an auto accident, the nearest intersection or other landmark; D. callers perception of the nature of the patient's problem; E. specifics concerning the patient's vital signs (i.e., is the patient breathing, bleeding severely, conscious or in severe pain). If any of the listed problems exist; Loop 1; F. name of the patient's doctor (if known);	The method used to gather the information is most often a series of short questions asked by the dispatcher. As the call for an ambulance is received, the person calling may volunteer most of the necessary information and the dispatcher must gather and record that information as rapidly as possible. The information gathered must be recorded in some manner. If tape recording equipment is available, each call should be taped in order to serve as a backup record if some information is lost or not gathered at all. The dispatcher should always record in writing all vital information relating to the patient's condition and location as well as the time of all activities relating to dispatching a crew and vehicle. (See Note 2) A special pad of paper is helpful in providing guidance to the dispatcher in obtaining all the necessary information. (See Note 3) In all telephone conversations, it is advisable that the dispatcher find out

ELEMENTS	EXPLANATIONS
G. time that the call was received; H. time and date for which ambulance service is requested (If appropriate); I. time that the incident occured (if appropriate and/or possible).	the name of the caller and use the caller's name, showing a more personal interest in the caller. All information must be as accurate as possible. (See Note 4)
3. Determine what the nature of the problem may be, based upon the information gathered from the caller. (If problem is emotional illness, Loop 2; If patient is dead, Loop 3)	The dispatcher may have to combine all information received from the caller in an attempt to determine the true nature of the patient's problem. (See Note 5)
4. Decide that an ambulance is required to transport patient. (If an ambulance is not required, Loop 4; If dispatching for more than 1 service, Loop 5).	If there is <u>any</u> indication that an ambulance is needed, it is best to dispatch a crew and vehicle.
5. Inform caller of the estimated time of arrival and explain any anticipated delays. (If call requires Coroner, Loop 6)	
6. Determine if this call is an emergency by analyzing all information concerning the call. Basing that decision on the fact that the only criteria for an emergency is if the patient's condition is of a "life-threatening" nature.	If an ambulance call is to be handled as a life-threatening emergency, a situation must exist in which the patient's life is in immediate danger if he does not receive medical care immediately. (See Note 6)
	Assures that a list is maintained which contains the names and locations of all individuals subject to call. Assures that all personnel will use proper PCC procedures as outlined in the Public Safety Communications Standard Operating Procedure Manual.
7. Determine what crew(s) and vehicle(s) will be dispatched, based upon the nature of the call, the personnel and vehicles available. (If specialized crew(s) and vehicle(s) are available, Loop 7)	Assures that all crew members have equal levels of training and experience and all vehicles have the same equipment. (See Note 7)

ELEMENTS	EXPLANATIONS
8. Contact the necessary crew members which have been selected by using phone, portable radio home monitor system or by speaking to the crew directly if they are in the same location as the dispatcher. Inform those crew members at that time of the information necessary for them to respond: A. nature of call; B. name of patient (if available); C. the exact location of the call; D. any special conditions which may affect travel to the scene.	It is important for the EMT to know the nature of the call for two reasons: A. to know if the response to the request requires travel under emergency conditions using emergency warning devices; B. to be able to anticipate the situation to be encountered at the scene and prepare for tasks to be performed at the scene while enroute.
9. Monitor communication of the mobile unit (ambulance) by listening to any communication between: A. the ambulance(s) dispatched and any other vehicle crews with whom they may communicate; B. the ambulance(s) dispatched and any other base station; C. the ambulance(s) dispatched and any hospital.	It is important for the dispatcher to be aware of what is occurring in the field which may have an affect on the ambulance(s) dispatched. Anything which might occur may have an affect on future decisions to be made by the dispatcher. The following information is important to the dispatcher. A. location of all vehicles; B. location of all crew members; C. status of crew (i.e., do they have a patient); D. are crew and vehicle ready for service.
10. Receive, acknowledge and record communication from mobile units when transmissions indicate that they have: A. departed base and are moving to the scene; B. arrived at the scene; C. departed the scene and are moving to their destination (e.g., hospital or rest home);	The dispatcher should record time at which these transmissions are received to provide a permanent record of these aspects of an ambulance call. One of the most common complaints received by those people providing ambulance service is based upon "response time" or the length of time required to get an ambulance to the patient. By recording the time the call was received and all of the information in Element #10, it is possible to

ELEMENTS	EXPLANATIONS
D. arrived at their destination; E. departed their destination and are returning to base; F. finished call and are ready for service.	determine exact response time and support or refute any claims of slow ambulance service. (See Note 8)

LOOP 1

ELEMENTS	EXPLANATIONS
1. Determine what illness or injury symptoms may be treated or alleviated by the caller when given proper instruction by the dispatcher.	
2. Provide instruction to the caller in very simple terms concerning emergency care techniques (e.g., airway maintenance, mouth-to-mouth, resuscitation, control of hemorrhage). (Go to Element #2,F)	The dispatcher should usually obtain location information before attempting to instruct the caller in any emergency care procedures so that a crew may be dispatched as soon as possible. In that way the crew may be enroute while the dispatcher instructs the caller.

LOOP 2

ELEMENTS	EXPLANATIONS
1. Ask caller if the patient has consented to admission to either a medical or psychiatric hospital. (If patient has consented to admission, go to Element 4)	
2. If patient must be involuntarily committed, ask caller if the local office of the Bureau of Mental Health and Mental Retardation has been contacted in reference to an involuntary emergency commitment. (If this has been done, go to Element #4)	Under the Pennsylvania Mental Health and Mental Retardation Act of 1966, an involuntary emergency commitment can only occur if a MHMR Form #405 is completed and signed. The only way that form can be completed is if it can be certified that: A. the patient has threatened another individual's life, or; B. the patient has threatened to take his own life.
3. If the proper procedures have not been followed, inform the caller of those procedures to provide assistance as necessary (e.g., provide caller with the necessary phone number). (Go to End)	

LOOP 3

ELEMENTS	EXPLANATIONS
1. Determine probable cause or conditions surrounding death by gathering information such as: A. brief medical history; B. caller's perception of cause of death; C. approximate time of death; D. where patient died. (Go to Element #4)	By gathering information concerning the conditions surrounding the patient's death, the dispatcher will be able to determine what auxiliary services may be needed (e.g., coroner police or funeral director) and what other actions should be taken by the ambulance service.

LOOP 4

ELEMENTS	EXPLANATIONS
1. Suggest appropriate alternative method of transportation to caller (e.g., taxi, convalescent coach, relative's car, hearse).	It may be necessary to explain to the caller, the reason that an ambulance cannot provide the service requested (e.g., an otherwise healthy patient needs a ride to the hospital to have a cast removed from his arm). This explanation will be based on local policy within an ambulance service.
2. Provide caller with assistance necessary (i.e., appropriate phone numbers) Go to End.	

LOOP 5

ELEMENTS	EXPLANATION
1. Determine which ambulance service should take the call based upon: A. location of patient; B. location of ambulance services; C. nature of call; D. type of service provided by various ambulance services; E. availability of crews and/or vehicles; F. whose turn it is. (Go to Element #5)	There may be territorial boundaries which must be considered when dispatching two or more ambulance services in the same general area. If these boundaries exist, it is the obligation of the dispatcher to be aware of those boundaries and observe them as much as possible. The nature of the call may dictate that a special service is required which may only be offered by only one ambulance service. In that case, the dispatcher should call that special service (e.g., heavy rescue capability, mobile coronary care capability).

LOOP 6

ELEMENTS	EXPLANATIONS
1. Determine if patient's death will require a coroner's investigation by deciding that one or more of the following conditions exist: A. possible murder; B. possible suicide; C. unexplained death; D. patient has not seen a physician in the last 48 hours; E. sudden unsuspected death; F. unusual or suspicious circumstances surrounding patient's death. (If none of the above conditions exist, go to Element #4)	The coroner's office to be notified is the office within the county in which the patient has died. If the body must cross county lines while being transported, the coroner of all counties involved must be notified and their consent given. Technically, the body cannot be moved until the coroner is notified and then: A. examines the body before it is moved or; B. authorizes movement of the body to another location for his examination.
2. If one or more of the above conditions exist, call cor office (or representative, i.e., deputy coroner) and/or police and inform of the circumstances surrounding the patient's death.	
3. Receive any instruction and assist the corner, the coroner's representative or the police as necessary. (Go to Element #4)	

LOOP 7

ELEMENTS	EXPLANATIONS
1. Determine which specialized crews and vehicles are available by checking on-call roster and log book to determine what equipment and crew members are already out.	A specialized crew is defined as any group of EMTs which may have training and expertise in an area in which others are not as qualified and a specialized vehicle is a vehicle which carries equipment, related to the EMT's speciality, which may not be available in other vehicles. An example of a specialized crew and vehicle would be a crew trained in emergency coronary care techniques in a vehicle equipped with an EKG scope, an EKG recorder, I.V. fluid administration equipment, drugs, defibrillator and telemetry.
2. Select specialized crew and vehicle based upon the nature of the call and the personnel and vehicles available. (Go to Element #8)	

NOTES

1. In all cases, the dispatcher must remain cool and calm since someone requesting ambulance service may be experiencing one of the most stressful moments of his or her life. By concentrating on gathering the necessary information, the dispatcher will be less likely to become emotionally involved in the problem of the caller. It may be necessary to "calm down" the caller in order to obtain vital information concerning the location and condition of the patient. If the dispatcher has to perform the function, it is best to inform the caller that it will not be possible to send help unless certain information is obtained. The dispatcher should take charge and control all conversations by being firm and decisive... be courteous but firm.

2. Tape recordings of dispatching process can be valuable in two ways:

   A. tape recordings provide a record of exactly what was said by the caller, regardless of the speed at which the caller spoke;

   B. tapes can be used as a training aid for both EMT students and dispatchers, by providing realistic examples of incoming requests for ambulance service.

   However, the dispatcher should never rely entirely upon a tape recording but should attempt to gather all important information and record that information in writing. Advantages in this procedure include:

   A. a quick, visable reference of the critical information necessary for dispatching;

   B. a reliable reference in the event of an equipment failure.

   By recording dispatching times, it is possible for the dispatcher to make a rapid assessment of how efficiently the dispatching process is progressing at any point.

3. The following is an example of a form which may be used for recording dispatching information. This form must be modified to suit local needs.

TIMES

FORM #_____

DATE __/__/__

Incident Occurred	_____hrs	
Call Received	_____hrs	ROUND TRIP
Vehicle Enroute	_____hrs	_____hrs
Arrive at Scene	_____hrs	_____hrs
Depart Scene	_____hrs	_____hrs
Arrive Destination	_____hrs	_____hrs
Ready for Service	_____hrs	_____hrs

CALLER'S PHONE NUMBER _____ _____ EXT. _____

PATIENT'S NAME _____

_____

ADDRESS OR LOCATION _____

_____

_____

_____

DESTINATION _____

NATURE OF CALL _____

_____

PATIENT'S DOCTOR _____

WHEN IS AMBULANCE NEEDED? _____

_____

CREW DISPATCHED _____ DISPATCHER

_____ _____

4. If the dispatcher remains calm and has had some experience, it is possible that the dispatcher may detect those callers who are, for one reason or another, unreliable. Once the dispatcher feels that there is the slightest possibility that any of the information gathered from the caller is inaccurate, it is the dispatcher's obligation to inform the emergency medical technicians dispatched, of any potentially inaccurate information. The dispatcher must never guess... all information given to the ambulance crew must be accurate.

5. The caller is usually very excited in a true emergency situation and therefore any information which is relayed to the dispatcher may be highly inaccurate. It is usually possible to separate the accurate from the inaccurate, however, it is possible that the dispatcher may never have a true picture of what is really wrong with a potential patient. At this point, the dispatcher must make a very important decision based on inaccurate information and it is generally an accepted practice to handle such a call as an emergency situation.

6. One of the most critical decisions to be made by the dispatcher involves the determination concerning the difference between emergency and non-emergency ambulance calls. This decision has to be based upon the information gathered from the person requesting ambulance service by calling the dispatcher. After the dispatcher has gathered all the information concerning the patient's name, location and condition, the dispatcher must combine all information received and determine if the call should be handled as an emergency or a non-emergency call. An emergency situation is described in the Pennsylvania Motor Vehicle code as that situation in which the loss of human life is imminent. This definition of an emergency is often loosely interpreted in such a manner that any ambulance call is erroneously assumed to be an emergency and emergency warning devices are used (e.g., red lights and siren). If details are sketchy concerning an accident or any possible injury to a patient, it can only be left to the decision of the ambulance driver as to whether a call for assistance should be considered and treated as an emergency. Automobile accidents have a high frequency of injuries and to avoid indecision it is usually advisable to handle those calls under emergency conditions until the patient(s) examination(s) reveals a non-emergency situation. If an ambulance service or fire department ambulance routinely responds to fire calls, there is no reason that the response to the fire scene should be handled under emergency conditions unless there is good reason to believe that there is a patient at the scene who needs emergency medical care to alleviate a life-threatening situation.

If all equipment and training levels are equal within an organization, the one aspect which may vary among individuals is the amount of experience which they have had and the amount of responsibility which they are able to assume. The dispatcher may have orders to guide decisions relating to which individuals

may respond to which calls or that decision may be left entirely up to the dispatcher. This process requires that the nature of the call be matched with the type of experience the individuals available have had in an effort to dispatch the most qualified individuals available.

The dispatcher may also have to decide which vehicle and/or crew should remain at the base station to be prepared to respond to other calls which may come in during the response to the current request for help.

8. With the increasingly high volume of radio traffic on the emergency frequencies, it has become vital that the ABC's of communication be observed (A - Accuracy, B - Brevity and C - Courtesy). In order to promote brevity (short radio transmissions), it is a good practice to code most information transmitted over a two-way radio. This is especially true when the condition of a patient is involved since the patient's family or the patient himself may overhear the transmission. For any code system to work, it is essential that all individuals within the radio network are familiar with all code designations. By coding information transmitted to the hospital, the hospital staff will be required to spend less time on the radio. It must be emphasized that alerting the hospital should be according to the established local policy. Some hospitals wish to be notified of all arrivals, others only want notification of victims with life-threatening emergencies.

VOICE RADIO COMMUNICATION

Listen before pressing the button on the microphone to avoid interfering with another person's transmission.

Pause for at least one second before speaking once the button is depressed.

In all radio transmission procedures, messages must be as brief and concise as possible.

Military time should be used in all radio communication and in all written reports to avoid the confusion between "am" and "pm"

MILITARY TIME

1:00 am	= 0100 hrs
2:00 am	= 0200 hrs
3:00 am	= 0300 hrs
4:00 am	= 0400 hrs
5:00 am	= 0500 hrs
6:00 am	= 0600 hrs
7:00 am	= 0700 hrs
8:00 am	= 0800 hrs
9:00 am	= 0900 hrs
10:00 am	= 1000 hrs
11:00 am	= 1100 hrs
12:00 Noon	= 1200 hrs
1:00 pm	= 1300 hrs
2:00 pm	= 1400 hrs
3:00 pm	= 1500 hrs
4:00 pm	= 1600 hrs
5:00 pm	= 1700 hrs
6:00 pm	= 1800 hrs
7:00 pm	= 1900 hrs
8:00 pm	= 2000 hrs
9:00 pm	= 2100 hrs
10:00 pm	= 2200 hrs
11:00 pm	= 2300 hrs
12:00 Midnight	= 2400 hrs

Example: 5:45 pm is 1745 hrs in military time

Difficult words or names may need to be made more clear during a transmission. They may be spelled by using the phonetic alphabet preceded by the words I SPELL. If the word or name may be pronounced, pronounce it before saying I SPELL and immediately follow with the spelling of the word.

PHONETIC ALPHABET

LETTER	SPOKEN AS	LETTER	SPOKEN AS
A	Alfa	N	November
B	Bravo (Brah-Vo)	O	Oscar
C	Charlie	P	Papa (Pa-Pa')
D	Delta	Q	Quebec (K-Beck)
E	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	T	Tango
H	Hotel	U	Uniform
I	India	V	Victor
J	Juliett	W	Whiskey
K	Kilo (Key-Lo)	X	X-Ray
L	Lima (Lee-Ma)	Y	Yankee
M	Mike	Z	Zulu

Example: If the receiving party would have difficulty understanding the word ambulance the transmitting party would say:

Am....bu....lance - I SPELL

Alfa
Mike
Bravo
Uniform
Lima
Alfa
November
Charlie
Echo

TRAVEL TO SCENE

ELEMENTS	EXPLANATIONS
	Assumes that crew has been dispatched and informed of: A. patient's name; B. location of patient(s); C. nature of call; D. destination to which patient(s) is to be transported (if appropriate); E. any special conditions which may affect travel to the scene; F. any other emergency units responding to the scene.
1. Determine if the nature of the call requires that emergency warning devices (e.g., red lights and siren) will be used while driving to the scene. (If emergency, Loop 1)	(See Dispatch Note 6)
2. Determine the best route of travel to the scene by analyzing routes of travel, distance to scene, time of day, weather conditions, probable conjested areas along proposed routes.	
3. Determine if a police escort may be needed during any portion of the ambulance call by assessing: 1. traffic conditions; 2. familiarity with the necessary route and destination. (If escort is needed, Loop 2)	If traffic conditions indicate that traffic may be very heavy, it may be advantageous to obtain a police escort to assist in negotiating through that traffic. If the crew members are not familiar with the route to be traveled and/or the destination, a police escort may prevent the crew from becoming lost.
4. Determine what equipment will most likely be needed at the scene based on the nature of the call.	The nature of the patient's illness or injury will determine the general types of tasks which will be performed at the scene and will therefore dictate the types of equipment which will be needed. (See Note 1)
5. Gather the necessary equipment and check to be sure	If the equipment is kept in a cabinet or box, hung on the wall or stored in

ELEMENTS	EXPLANATIONS
that all of the vital equipment is operating properly. (If not operating properly, Loop 3)	some other organized manner, obtain that equipment and assemble it for use.
6. Discuss crew members' responsibilities while enroute so that upon arriving at the scene each individual will act promptly and efficiently.	Depending upon the members of the crew, it may be possible that a formal assignment of responsibilities will not be made due to a close working relationship or similar experience at a previous time.
7. Follow directions given by dispatcher to locate patient. (If something happens which causes excessive delay; e.g., mechanical failure or flat tire, Loop 4) (If unable to locate patient, Loop 5)	
8. Arrive at scene and verify that the location reached is, in fact, the location of the patient by checking: A. house number; B. name of building; C. name on mail box; D. with bystanders; or, E. some other method which will provide verification.	
	Assumes there is two-way radio communication with dispatcher.
9. Contact dispatcher by radio and inform dispatcher that the ambulance and crew have arrived at the scene. (If no radio, Loop 6)	EMT must use proper FCC procedures in all radio communication procedures.
10. Decide if the number of patients at the scene will require additional vehicles by rapidly observing the number of patients and determining that that number exceeds the number of patients which the vehicle(s) at the scene can transport.	

ELEMENTS	EXPLANATIONS
11. Decide if any patient(s) require transportation to a different destination from the scene than any other patient(s) and determine if additional vehicles are needed. (If additional vehicles are needed, Loop 7) (Go to Patient Survey, Element #1).	The need for transportation to different location may result from an obvious need for different types of care (e.g., severe neurological injury may be treated more expertly by one medical facility while severe burns may be handled by a different facility).

LOOP 1

ELEMENTS	EXPLANATIONS
1. Turn on emergency warning devices and travel to the scene by adhering to applicable sections of the Pennsylvania Vehicle Code.	Any motor vehicle accident involving an ambulance will be judged objectively by the courts. If an ambulance is traveling under emergency conditions, it is not exempt from violation of right-of-way law.
2. Come to a complete stop before proceeding through a red traffic signal or a stop sign to be sure other vehicles yield right of way. While approaching an intersection, the ambulance should decrease speed and use the siren to alert other drivers of the approach of an emergency vehicle.	It is not stated in the Pennsylvania Vehicle Code that it is necessary for an emergency vehicle (operating with red lights and siren) to come to a complete stop before proceeding through a red traffic signal or a stop sign. However, it may be best to come to a complete stop in order to carefully observe all traffic in and around an intersection.
3. When overtaking or passing a slow-moving vehicle on two lane roads, use the siren to move the vehicle to the right berm of the road so it will not be necessary to cross the centerline. If it becomes necessary to cross the centerline of the road, the emergency vehicle should have one-half mile of visability to observe the opposite lane of traffic. (Go to Element #2)	If an accident occurs, involving an emergency vehicle while passing another vehicle in a no-passing zone, it is most likely that the emergency vehicle driver will be at fault and charged with a violation under the Vehicle Code of Pennsylvania.

LOOP 2

ELEMENTS	EXPLANATIONS
1. Contact police by telephone to inform them of the need for an escort. (If no escort available, go to Element #4)	Assumes that there is no direct radio contact with the police.
2. Determine where ambulance will meet escort vehicle and at what time.	
3. Meet escort vehicle and follow that vehicle by one car length for every 10 miles per hour speed. It may not be necessary to sound the siren of the ambulance in the case of a police escort, however, it may be necessary to avoid being overlooked by other drivers concentrating on the police vehicle.	One of the major disadvantages of an escort situation is that other drivers tend to observe the first passing (police) and may pull back onto the roadway or into an intersection before the ambulance has arrived. Great care must be exercised during an escort to avoid that situation. Another problem which may occur is that the police vehicle may go too fast for the condition of the patient if the policeman driving is not aware of the condition of the patient. If the police vehicle goes too fast, the ambulance driver should go only as fast as may be comfortable for and best for the patient's condition.

LOOP 3

ELEMENTS	EXPLANATIONS
1. Examine equipment to be sure it is properly assembled and if it is not, assemble it properly.	
2. Determine if equipment is now operating properly. (If operating properly, go to Element #6)	
3. Determine if some minor repair may be made to the equipment in order that it may operate properly and repair that equipment. (If operating properly, go to Element #6)	If a minor repair is necessary and some spare parts and tools are carried in the vehicle, it may be possible to perform some very minor maintenance while enroute to the scene.
4. If nothing may be done to repair or adjust the equipment selected so that it works, select an alternate piece of equipment and/or set of procedures. (Go to Element #5)	If another type of equipment and/or set of procedures is selected, an attempt must be made to select an alternative which will accomplish the job as well as the first choice of equipment and/or procedures.

LOOP 4

ELEMENTS	EXPLANATIONS
1. Determine that some set of events may cause excessive delay in responding to the call within an acceptable time frame.	Assumes another vehicle can respond within an acceptable time frame.
2. Contact dispatcher by radio and inform dispatcher of expected delay.	
3. Dispatcher must determine if another vehicle can respond within an acceptable time frame. (If another vehicle cannot respond within an acceptable time frame, go to Element #5 in Loop 4) (If another vehicle is to be dispatched, follow dispatch procedures)	
4. Determine what can be done to allow the vehicle to return to complete service.	If the problem is mechanical, it should be determined if it can be repaired, thus permitting the vehicle to return to complete service. If the problem is other than mechanical, it should be determined if the problem can be eliminated or circumvented (e.g., out of gas, detour enroute to patient, landslide).
5. Perform those tasks which may be necessary to return the vehicle to complete service (e.g., change a flat tire, fill gas tank with gas, drive around a detour). (Go to Element #8)	If the problem cannot be solved by the crew, it will be necessary to obtain help of an appropriate nature.

LOOP 5

ELEMENTS	EXPLANATIONS
	Assumes that there is two-way radio communication between vehicle and dispatcher.
1. Call dispatcher on radio and inform dispatcher of ambulance location and explain difficulty in locating patient.	All communication should comply with FCC regulations and any explanation of the situation should be brief.
2. Request that dispatcher verify directions to patient. (If error is found in direction originally recorded, go to Element #7)	This usually requires the dispatcher to read the directions over the radio while the crew checks those directions against the directions originally received.
3. If the directions recorded by the EMT were correct originally, ask dispatcher to obtain a clarification or new set of directions by telephoning caller that requested an ambulance.	
4. Receive clarification of old directions or new set of directions from dispatcher. (Go to Element #7)	

LOOP 6

ELEMENTS	EXPLANATIONS
1. Contact dispatcher by telephone to inform dispatcher that ambulance has arrived at scene. (Go to Element #10)	If a radio is not available, the dispatcher must be contacted in some manner and a telephone may be available. If a telephone is not available and there is no other reasonable method of communication, it will not be possible to inform the dispatcher of the status and location of the crew.

LOOP 7

ELEMENTS	EXPLANATIONS
	Assumes that there is two-way radio communication between the vehicle and the dispatcher.
1. Contact the dispatcher by radio to inform the dispatcher of the need for additional vehicles at the scene.	
2. Inform dispatcher of what specific vehicles are needed and the possible destination if that information is available. (Go to Patient Survey, Element #1)	

NOTES

Upon arriving at the location of the patient, it may be necessary to have a variety of equipment at the side of the patient as soon as possible. In order to assure that certain basic items of emergency care equipment are within easy reach and ready for use at all times, it may be helpful to store those items in a portable container which may be taken to a patient's side. The size of the container and the items carried must permit the EMT to carry the stretcher and the basic equipment at the same time. That container may be the size of a tackle box or knapsack and may include such items as:

A. bag-valve mask;
B. assortment of airways;
C. padded tongue blades;
D. stethescope;
E. blood pressure cuff;
F. assorted elastic bandages;
G. assorted gauze dressings;
H. assorted trauma dressings;
I. assorted gauze bandages;
J. triangular bandages;
K. assorted adhesive bandages;
L. assorted tape rolls;
M. scissors;
N. portable suction with catheters;
O. I.V. fluids administration set (if applicable);
P. I.V. fluids (if applicable);
Q. eurhythmia control drugs (if applicable).

This kit is usually referred to as a jump kit and has become a vital part of the equipment used by many emergency medical technicians.

PRIMARY CONTACT AND SURVEY OF PATIENTS

ELEMENTS	EXPLANATIONS
	Assumes the EMT has arrived at the scene, the ambulance vehicle is parked out-of-the-way (but as close to the patient(s) as possible and that the EMT can see the patient to be surveyed).
1. Move to the side of the patient to be surveyed. (If more than one patient, Loop 1). (If the patient is conscious, Loop 2).	Immediately upon arriving at the patient's location, the EMT must move rapidly to the patient's side. (See Note 1)
2. Determine if the patient's life is in immediate danger because of the lack of sufficient respirations or the loss of a large amount of blood by positioning the patient's airway in a hyperextended position and quickly observing for massive blood loss. (If patient is not breathing, go to task of performing IPPV; If patient is bleeding severely, go to task of controlling massive external hemorrhage).	The hyperextension of the patient's neck can be accomplished quickly by placing one hand (palm up) under the patient's neck, the other hand (palm down) on the forehead and then applying gentle pressure to point the chin straight up. (See Note 2)
(If all patients have not been examined, Loop 1)	While this process is being performed, the EMT can visually observe any external blood loss which is resulting in a life-threatening condition. (See Note 3)
4. Determine if the patient can communicate well enough to assist the EMT in the assessment of the problem. (If the patient can not communicate, Loop 3)	
5. Place one hand on the patient's wrist to feel the radial pulse and monitor that pulse during the entire survey.	The pulse is monitored with light pressure from the second and third finger tips on the radial pulse. The purpose of this procedure is not necessarily to count the pulse but to note its strength, consistency and general rate. (See Note 4) This monitoring process should occur during the entire survey of the patient if possible; this allows the EMT to monitor any changes which may occur in the pulse. (See Note 5)

ELEMENTS	EXPLANATIONS
6. If the patient can communicate to the EMT, or if there is a possibility that the patient can understand what is being said, the EMT must talk to the patient to: A. reassure the patient that he will be cared for; B. gather information about the patient's physical condition by inquiring for painful areas and the patient's perception of the problem.	If the patient is conscious, the EMT can gather valuable information about that patient's condition since the patient's description of pain, its location and what caused it are important pieces of information if the EMT is to accurately determine the exact nature of the problem. The EMT must also talk to the patient to reassure the patient and attempt to put the patient more at ease. (See Note 6)
7. Check for horizontal nystagmus on left or right gaze to determine level of consciousness and simultaneously observe pupils for degree of dialation and reaction to light.	This procedure involves asking the patient to look rapidly to the left (i.e., at the finger of the EMT) and rapidly to the right while the EMT closely observes the pupils of the eyes to determine if they "wobble" when trying to focus on the object at the right or left. If the pupils do "wobble" on a left or right gaze, this indicates that the patient is not at a full level of consciousness and may, in fact, tend to become less alert as time grows on.
8. While gathering the information from the patient the EMT should observe other aspects of the patient's physical condition including: A. any blood loss or wounds; B. the color and pallor of the patient's skin; C. the relative temperature and moisture of the skin; D. the degree of skin profusion; and, E. any deformities, depressions or protrusions. (If problem is medical illness only, Loop 4) (If problem is psychiatric illness only, go to the task of treatment of a psychiatric patient). (If problem is some combination of trauma, medical illness or psychatric illness, Loop 5).	While talking to the patient, the eyes of the EMT must continue to scan the patient in an effort to gather as much information as possible (using all of the senses available to the EMT) in as short a period of time as possible. All of the survey signs listed in Element #8 can be checked in less than 15 seconds and no equipment is required. (See Note 7)

ELEMENTS	EXPLANATIONS
9. If nature of problem is trauma-related, the EMT must determine what actions caused the patient's injury by: A. observing patient's present position; B. determining previous position of the patient (if appropriate); C. observing items which may have come in contact with the patient or which may have caused movement of a harmful nature. (If bystanders are present, Loop 6)	The EMT can obtain a great deal of information concerning the patient's problem by determining the mechanism of injury (i.e., what caused the injury). This will help the EMT in determining what actions caused injury to what portions of the body, (e.g., if a driver has his headrest in the down position and his car is hit from behind, there is a high probability of a cervical spine injury).
	Assumes that a sphygmomanometer and stethescope are available.
10. Place the sphygmonanometer (blood pressure cuff) around the patient's left bicep (if that area is injured or inaccessable - use the right bicep) and connect the cloth cuff so that the pressure gauge is visable. Shut the valve by the inflating bulb (if screw-type, turn screw clockwise; if push-button type, do not push button), and repeatedly squeeze the bulb until the needle of the gauge stops moving with the pulse. This usually occurs between a reading 150 to 200 mm Hg. (Millimeters of Mercury).	In the routine ambulance call, the patient's left arm is the one which is most accessable enroute to the hospital. This is due to the fact that the patient is usually located on the drivers side of the vehicle, with his head toward the front of the vehicle and on his back. Therefore, the patient's left arm is toward the center of the vehicle and if the sphgmonanometer is on that arm, the EMT may periodocally monitor the blood pressure on the way to the hospital.
11. During the entire process of obtaining the blood pressure, the patient should be instructed to remain motionless.	It should be explained to the patient that movement will make it difficult to obtain an accurate reading.
12. The diaphragm of the stethescope should be placed over the brachial artery just below the blood pressure cuff and in the bend or fold in the elbow. The other ends of the stethescope are placed in the ears of the EMT.	It may be helpful to palpate the brachial artery to assist in determining exactly where to place the stethescope. The earpieces of the stethescope may transmit bacteria from the ears of one EMT to another. As a precaution, all stethescope earpieces must at least be cleansed in an alchol solution after use.

ELEMENTS	EXPLANATIONS
13. The EMT then opens the valve near the inflating bulb (in the screw-type, by turning the screw very slowly in a counter-clockwise direction; in the push-button type, by depressing the button very slowly) to allow air to escape and the needle to drop approximately 5mm Hg. per second.	Air must be released slowly enough to allow an accurate reading of gauge.
14. Two numbers must be recorded: A the point on the gauge at which the pulse is first heard through the stethescope (i.e., the systolic pressure); B. the point on the gauge at which the pulse is last heard through the stethescope (i.e., the diastolic pressure).	The blood pressure of a given patient tends to vary, based upon age and sex. The normal systolic pressure for an adult male is 100 + the man's age (up to 140 or 150 mm Hg.) and the normal diastolic pressure for an adult male is 65-85 mm Hg. Both pressures are usually 8-10 mm Hg lower in the female. A tolerance of 10 mm Hg. is the generally accepted standard, however, in the case of a low blood pressure (e.g., 90/50 mm Hg), the tolerance becomes more critical as does the relationship between more than one pressure reading.
15. The EMT must combine all the diagnostic signs which have been observed in the survey of the patient and compare the set of symptoms in this patient with symptoms of a wide variety of problems. The most critical decision to be made by the EMT at this time concerns the possibility of his patient returning to or entering a life-threatening situation.	This is the most critical task which an EMT will perform since it determines what activities will occur from this point on. If the EMT uses poor judgment at this point, a major problem may go untreated for a considerable period of time.
16. Once the diagnostic signs are combined in the mind of the EMT, the EMT must establish a priority of problems for the individual patient. (Go to appropriate task relating to patients highest priority problem)	Certain injuries and/or illnesses will result in greater danger and discomfort to the patient than other injuries and/or illnesses. The EMT must select those problems which are most serious and treat those problems first. If the EMT uses poor judgment at this point, a minor illness or injury may be treated while a major illness or injury may be neglected (e.g., a minor scalp laceration may be

ELEMENTS	EXPLANATIONS
	expertly bandaged while the patient slips into deep shock because the EMT has failed to place the patient in a shock position). (See Note 8)
17. As patients are surveyed and treatment is begun, the EMT should be planning and acting upon the preparation and transportation of patients.	

LOOP 1

ELEMENTS	EXPLANATIONS
	Assumes there is only one EMT to survey and treat more than one patient and the EMT can see all patients.
1. Observe all patients and determine which patient may need emergency medical attention first (second, third, etc.). The priority established may be based on: A. visual observation by the EMT; B. information from bystanders; and, C. information gathered by the dispatcher.	By scanning all visable patients from a distance, the EMT must determine which patients may need care before other patients. Bystanders may provide information which will help in the selection of the most critical patients, however, the information from bystanders may merely mislead the EMT. All available information must be combined in an effort to reach the best possible decision. The patient's surveyed first may not actually be treated first since further examination may reveal that other patients are, in fact, more critical.
2. Move rapidly to the side of the first patient selected and determine if the patient is conscious. (If patient is conscious, Loop 2) (If patient is unconscious, go to Element #2 in primary contact and survey of patients).	

LOOP 2

ELEMENTS	EXPLANATIONS
	Assumes that the patient selected is conscious, breathing and can talk to the EMT conducting the survey.
1. It is not necessary to position the airway on this patient but the patient should be surveyed for massive blood loss by looking for large amounts of blood and/or a spurting artery. (If massive bleeding is occurring go to task of controlling massive external hemorrhaging).	
2. If no life-threatening problems are present and there are other patients to be surveyed, inform the patient of where you are going and instruct the patient not to move until you return. (If there are other patients, Loop 1). (If this is the only patient to be surveyed, go to the task Element #5 in primary contact and survey of patients).	It is best to leave someone with this patient to observe any change in condition. This individual need not necessarily be an EMT and must be instructed to contact an EMT if any change occurs.

LOOP 3

ELEMENTS	EXPLANATIONS
	Assumes the patient to be examined can not communicate (talk) with the EMT well enough to assist the EMT in the survey process and that the patient has no problem which is immediately life-threatening.
1. Check the scalp for lacerations and/or contusions by observing for blood in the hair, placing the hands on either side of the neck and sliding the fingers upward and toward the top of the head.	The EMT must be careful not to move the head while checking for scalp wounds since it is not clear at this point if the cervical spine is injured.
2. Check the skull for depressions and/or any protruding bone fragments by gently feeling the skull with the finger tips.	Care still must be exercised not to move the head in case the cervical spine is injured. The EMT must also be careful in this procedure not to press so hard on the skull that any bone fragments are pushed into the brain.
3. Check the ears and nose for fluid and/or blood by looking carefully in the nostrils and at the opening of the ears.	A clear water-like fluid in either the nose or ears is probably cerebro-spinal fluid (the fluid which surrounds and cushions the brain from shock) which indicates the possibility of serious brain injury. Blood in either location may be from two sources: A. lacerated brain tissue; and/or, B. damage to tissue in the nose or the ear. The EMT should determine as closely as possible, where the source of blood is orginating. When in doubt, assume that there is the possibility of brain damage.
4. Check the neck for fractures by looking and feeling for deformity of bony protrusions in the cervical spine area. (If a cervical spine injury is suspected, go to the task of immobilization of a spine injury).	If the cervical spine is injured, the neck may be fixed in an abnormal position. If it is, the patient should not be moved or examined further until the cervical spine is completely immobilized.

ELEMENTS	EXPLANATIONS
5. Observe and check the chest for movement on both sides and for possible fractures from a position at the head of the patient. Look down the chest to see if the chest is rising and falling in a normal manner (i.e., together) and gently feel the rib cage for possible fractures.	If the chest is not rising and falling in a normal manner, rib and/or lung damage may be present. If depressions are detected or a grating sensation is felt, rib fractures may be present. If a male EMT is examining a female patient, it may be necessary to offer an explanation to bystanders concerning the purpose of the described procedures.
6. Check the abdomen for spasms and tenderness by gently pressing against the abdomen.	If the abdomen is very hard and "rock-like", there is a strong possibility that there is massive internal hemorrhage and/or the contents of the abdomenal organs have been displaced and spilled into the abdominal cavity.
7. Check the pelvic area for fractures by feeling the entire pelvic girdle for bony protrusions, depressions, grating and deformity. Observe legs for outward rotation.	Outward rotation of one or both legs is characteristic of a fractured hip. If the EMT is examining a patient of the opposite sex, this may also be a difficult procedure and it may be necessary to offer an explanation.
8. Check the upper and lower extremities for fractures by looking for: A. swelling and discoloration; B. lumps or bony protrusions; C. bruises and other external trauma; and, D. deformity.	
9. Check lower extremities for paralysis by probing the bare soles of the feet with a sharp instrument (or the skin of the ankles above the shoes) and observing for the involuntary muscular reaction to pain (i.e., the patient's leg will flinch).	If there has been spinal cord damage the involuntary muscular activity will not occur.

LOOP 3 (CONTINUED)

ELEMENTS	EXPLANATIONS
10. Check the upper extremities for spinal cord damage by probing the pelvis of the hand with a sharp instrument and observing for the involuntary muscular reaction. (If there is any evidence of spinal cord damage, go to the task of immobilization of a spine injury).	If there is no involuntary muscular activity, there has been spinal cord damage in the cervical spine area. If this test produces a reaction in the upper extremities but not in the lower extremities, the cord damage has occured below the area of the cervical spine. If there is the slightest possibility of spinal cord damage, the patient's entire spine should be immobilized before the patient is moved.
11. If no spinal cord damage is apparent, roll patient into a position so that the back buttocks may be examined for fractures or wounds. (If there are more patients, Loop 1) (If all patients have been surveyed, determine priority of injuries among all patients and go to appropriate task based on highest priority patient).	The back and buttocks area should be checked with as little body motion as possible since the possibility of a spinal fracture can not be eliminated even though, at this point, it does not appear to be cord damage. Once all patients have been surveyed and priorities have been established between patients, the EMT must begin to methodically treat priority patients. (See Note 8)

LOOP 4

ELEMENTS	EXPLANATIONS
1. Gather patient's medical history information by asking the patient and/or family, if present, such things as: A. if anything like this has occurred before, and, if so, when and how often; B. if the patient has seen a doctor recently; C. if the patient is on any medication; and, D. how long this current problem has been going on. (If the patient cannot supply all information and there are no relatives present, look for an emergency medical identification symbol) (Go to Element #10 in the task of primary contact and survey of patients)	All patient history information must be objectively assessed after other diagnostic symptoms are observed by the EMT since the medical problem at the moment may have no relation to any previous problem. If it becomes necessary to look for an emergency medical identification symbol, it is best to inform those around the patient (e.g., bystanders, family, other medical or rescue personnel) exactly what is occurring during the search.

LOOP 5

ELEMENTS	EXPLANATIONS
1. Determine what combination of problems are affecting the patient's condition at this time: A. trauma-related injury; B. medical illness; C. psychiatric illness. The EMT must observe the patient and determine which problem is causing the patient the most harm.	
2. Once the conditions affecting the patient have been assessed, the EMT must set a priority among those problems. (Based on the priority established, go to the appropriate task)	

LOOP 6

ELEMENTS	EXPLANATIONS
	Assumes that the bystanders present witnessed the accident which caused the injury to the patient.
1. Question bystanders to determine: A. time incident occurred; B. specifics concerning impact or contact which had a direct effect upon patient; and, C. any other conditions which may have caused trauma to the patient.	The EMT must not become sidetracked by the bystanders into discussions of activities not specifically relating to the trauma encountered by the patient (e.g., who was at fault in an automobile accident)? Any information gathered from bystanders must be judged by the EMT for credibility and accuracy and be combined with other observations of the scene.
2. After combining all available information, the EMT must determine the mechanism of injury. (Go to Element #10 in the task of primary contact and survey of patients).	

NOTES

1. Upon arriving at the scene and selecting a patient to survey, the EMT must not be detoured from moving to that patient for any reason, if possible. If someone wishes to speak to the EMT at the scene to discuss any matter, the EMT should be sure to not stop, but continue to move toward the patient. This rapid movement to the patient is especially important when the patient or patients may be critically ill or injured. If the EMT can immediately determine that the patient(s) is not in a life-threatening condition, the EMT may be able to gather some valuable background information before even seeing the patient. If there is any doubt in the mind of the EMT that the patient may possibly be in a serious condition, he should move rapidly to the side of the patient and avoid any delays.

2. While positioning the airway by hyperextending the patient's neck, the EMT should be careful to avoid any twisting motion of the neck which may possibly aggravate any cervical spine injury which may be present. Hyperextension of the neck is generally considered to be a safe movement which will not cause any further spinal cord damage in the event that there is, in fact, a cervical spine injury. If there is any possibility of a neck injury, the EMT should even perform the hyperextension movement very slowly and carefully to avoid any possibility of further damage. The movements which are most likely to cause further damage include:

   A. Flection of the neck (i.e., tucking the chin towards the patient's chest); and,

   B. A twisting motion of the head (i.e., turning the head from left to right). If at any time during the survey, either the primary survey or the secondary survey, the EMT believes that there is a possibility of a spinal injury, the cervical spine area should be immediately immobilized in a hyperextended position.

3. If blood loss is to become immediately life-threatening to the patient, that blood loss must be in very large volume and this generally occurs only upon the complete severance of a major artery (e.g., the brachial or femoral arteries). In an adult male patient, one to two quarts of blood lost in a short period of time will result in a very serious, life-threatening condition. While in a child patient, blood loss of one to two pints is equally as serious. At this point in the survey, the only blood loss which should be considered or treated is a hemorrhage of this magnitude. The EMT should not be sidetracked into worrying about or treating any blood loss of a lesser nature.

4. While monitoring the radial pulse during the evaluation of other symptoms, the EMT need not be precise in counting the pulse itself. The purpose of this activity is to monitor the pulse to determine if the pulse is strong, regular and close to an acceptable rate. After practice, the EMT should be able to estimate with a reasonable degree of accuracy, the pulse of any individual without actually having to refer to a watch and constantly count the pulse.

5. By monitoring the pulse and observing for rate changes, the EMT will be able to have one method of constantly monitoring the patient's condition during other aspects of the survey. If rate changes do occur, the EMT should note when they occur and should attempt to determine why those rate changes are occurring (e.g., the pulse may become more rapid upon asking the patient a certain question which for some reason stimulates increased cardiac output). If, by monitoring the pulse, the EMT can determine that something is aggravating the patient's condition, that situation should be eliminated.

6. When reassuring a patient, the EMT should never lie or mislead the patient by saying such things as, "Don't worry; everything will be just fine." It is obvious to the patient at this point that everything is not going to be all right since the patient is injured and you have been called to the scene. If any individual in the emergency medical services system lies to a patient or misleads a patient, the job of the rest of the EMS team will be that much more difficult since the patient will question anything else which is said. If the patient has any unreasonable fears, the EMT should attempt to alleviate those fears by explaining the situation and informing the patient of what activities are occurring and why. If there is nothing good to say, be honest in what is said and remain neutral concerning topics of discussion. If the patient does have sincere fears and anxieties, those fears and anxieties may lead to traumatic shock which can be equally as damaging to the patient's physiological well-being as any traumatic injury. During the entire survey process, the EMT should first find out the patient's name and then continue to use the patient's name in a polite and courteous manner throughout the entire survey procedure. This use of the patient's name tends to show a personal interest in the patient and generally results in alleviating some of the anxiety and discomfort which the patient may be feeling.

7. Certain tentative conclusions may be drawn from certain indications received from the primary diagnostic signs observed.

Diagnostic Sign	Observation	Indication
Respiration	None	Respiratory arrest
	Deep, gasping, labored	Airway obstruction, heart failure
	Bright red, frothy blood with each exhalation	Lung damage

Diagnostic Sign	Observation	Indication
Pulse	Absent	Cardiac arrest, death
	Rapid, bounding	Fright, hypertension
	Rapid, weak	Shock

Diagnostic Sign	Observation	Indication
Skin Temperature	Hot, dry	Excessive body heat (as in heat stoke), high fever
	Cool, clammy	Shock
	Cold, moist	Body is losing heat
	Cool, dry	Exposure to cold

Diagnostic Sign	Observation	Indication
Skin Color	Red skin	High blood pressure, carbon monoxide poisoning, heart attack
	White skin	Shock, heart attack, fright
	Blue skin	Asphyxia, anoxia, heart attack, poisoning

Diagnostic Sign	Observation	Indication
Pupils of the Eyes	Dilated	Unconsciousness, cardiac arrest
	Constricted	Disorder affecting the central nervous system, drug use
	Unequal	Head injury, stroke

Diagnostic Sign	Observation	Indication
State of Consciousness	Brief unconsciousness	Simple fainting
	Confusion	Alcohol use, mental condition, slight blow to the head
	Stupor	Severe blow to the head
	Deep coma	Severe brain damage, poisoning

Diagnostic Sign	Observation	Indication
Paralysis or Loss of Sensation	Lower extremities	Injury to spinal cord in the lower back
	Upper extremities	Injury to spinal cord in the neck
	Limited use of extremities	Pressure on spinal cord
	Paralysis limited to one side	Stroke, head injury with brain damage

Diagnostic Sign	Observation	Indication
Reaction to Pain	General pain present at injury sites	Injuries to the body, but probably no damage to the spinal cord
	Local pain in the extremities	Fracture, occluded artery to extremity
	No pain, but obvious signs of injury	Spinal cord damage, hysteria, violent shock, excessive drug or alcohol use

8. Patients with certain conditions have priority over others. An outline of these conditions is as follows:

A. Highest priority

1. Airway and breathing difficulties
2. Cardiac arrest
3. Uncontrolled or suspected severe bleeding
4. Severe head injuries
5. Severe medical problems - poisonings, diabetic complications, cardiac patients
6. Open chest or abdominal wounds
7. Severe shock

B. Second priority

1. Burns
2. Major multiple fractures
3. Back damage with or without spinal cord damage

C. Lowest priority

1. Fractures or other injuries of a minor nature
2. Obvious mortal wounds where death appears reasonably certain
3. Obviously dead patients that are dead upon arrival at the scene.

There is one problem that frequently occurs when the EMT is required to place priorities among his patients. That problem relates to bystanders and/or family members which may be present and have what they believe to be a different listing of priorities for one reason or another. The EMT must not be swayed from the determination which has been made based upon objective information and an evaluation of all patients. The EMT may be required to confront and deal with the individuals that feel the EMT has made an improper selection of priority patients. If this does in fact occur, the EMT should not let this bystander or family member interfere with treatment of critically ill or injured patients and if necessary should seek the necessary support to remove the individual creating the problem from the scene.

TRIAGE

ELEMENTS	EXPLANATIONS
	Assumes that there are two or more patients which require emergency medical care and transportation to a medical facility. Assumes there are two or more emergency medical technicians at the scene and all patients have been surveyed for injury. Assumes that the following items are available: A. writing implement; B. trip report sheets or; C. other sheets of paper.
1. Confer with all crew members who have surveyed injured patients to determine nature of injuries of all patients.	This is usually not a "formal" meeting but may be through a series of signs or signals, indicating the severity of individual patients.
2. Determine the number of patients in each of the three levels of priority and their probable destination.	Once all patients have been examined and sorted according to the severity of their condition, the EMT must determine the number of patients in each priority level. This number must be accurate so the EMT may match patients with available transportation. (See Primary Contact & Survey of Patient's Note 8)
3. Determine the type and number of vehicles available to transport patients.	The number of vehicles available is important since the EMT must know how many patients can be transported at any given time. It is also important for the EMT to be aware of the nature of those vehicles (i.e., are they specialized vehicles such as Mobile Intensive Care Units) so that the individual patient may be matched with the best vehicle for his specific needs.
4. Assign patients to vehicles based upon: A. level of priority in reference to all other patients; B. specific nature of patient's problem; C. vehicles available.	This assignment of patients must be clear to all individuals at the scene. To avoid confusion, all involved emergency care personnel must be informed of the assignments made. (See Triage Note 1)

ELEMENTS	EXPLANATIONS
5. Determine which patients have similar priority problems and will be transported to the same location.	All patients being taken to a specialized facility should be transported in the same vehicle or group of vehicles to avoid confusion and unnecessary delay.
6. While patients are being treated and prepared for transportation (packaged), the EMT must anticipate which patients will be ready for transportation first and this may require that some less critical patients be transported initially.	If a critical patient has not been properly prepared for transportation and stabilized, less critical patients should be transported. However, it is essential that sufficient vehicles remain behind to transport the critical patients when they are ready.
7. Inform all vehicle crew members and/or drivers of the destination of their patients and if their vehicle should return to the scene once the patient(s) are delivered. (If the EMT will stay with the same patient until that patient is examined by a physician, Loop 1)	In a situation in which it becomes necessary to triage (i.e., survey all patients and decide how to handle them), the EMT in charge of the scene should stay at the scene and perform the following activities: A. work with other EMT personnel who are providing emergency medical care to some degree at the scene; B. observe the entire situation and supervise all activities at the scene; and; C. remain at the scene until all patients have been transported. (See Note 2)
8. Prepare a written statement concerning the patient's condition including: A. patient's name (if known); B. level of consciousness and any changes in the original level; C. any vital sign information gathered at the scene; D. time of incident; E. time of initial contact and survey; F. any changes which may have occurred in the patient's condition; and, G. the times of those changes. The written record can either be a special form (e.g., a carbon copy of the ambulance "trip sheet") or simply information written on a plain piece of paper.	This written statement is vital to assure a continuum of patient care when the patient(s) are delivered to a medical facility. Without the EMT or a written record of the patient's condition and treatment rendered, the hospital staff can not provide the best care possible. This is due to the fact that the hospital staff is operating on partial information, which can only be provided by the EMT who performed the survey and provided the emergency care or a written record accompanying the patient.

ELEMENTS	EXPLANATIONS
9. Attach the patient's record to his body in such a manner that it is easily observable.	If there is a predetermined position in which the record is to be placed (e.g., under the patient's pillow), it should be placed in that location. The predetermined position of the form must be common knowledge among all individuals responsible for patient care to avoid any confusion in an urgent situation.
10. Inform the crew members responsible for transportation that there is a written record to be transported with the patient.	If the crew members participated in emergency care at the scene, they will be aware of the fact that a written record will accompany the patient.
11. Determine if all patients have undergone the triage process and transportation. (If there are patients remaining, go to Elment #3) (If all patients have undergone the triage process, go tc an appropriate task based on need)	Once the triage process is completed, the EMT usually accompanies the last patient(s) loaded in a vehicle. It is essential that the EMT in charge of the triage of a large number of patients, remain at the scene until all patients are evacuated.

TRIAGE - LOOP 1

ELEMENTS	EXPLANATIONS
	Assumes that the EMT conducting the triage and care of a patient will stay with that patient until he or she is examined by a member of the medical staff.
1. Inform the individual examining the patient at the medical facility of the information gathered at the scene. Including the items in Triage Element #8.	It may not be necessary to have a written record to provide the essential information to the individual conducting the initial examination. However, to assure that an accurate record of the patients progress is maintained every time the patient "switches hands", a written record of emergency care rendered at the scene is essential.
2. Determine if it is necessary to return to the scene to treat and transport additional patients. (If it is necessary to return, go to Triage Element #7) (If it is not necessary to return to the scene, go to an appropriate termination or clean-up task)	The exact nature of the clean-up or termination task will be determined by equipment and procedures used in the treatment of the patient.

TRIAGE - NOTES

1. In certain cases, it may be necessary to transport some patients who are third priority before higher priority patients due to other conditions. This procedure should never be practiced until all life-threatening situations have been eliminated in potentially serious patients. The cases in which this procedure should be implemented are affected by certain patients which are contributing to the trauma, panic and/or confusion at the scene. If there is a patient or if there are a number of patients who are causing some type of problem at the scene, they should be removed from the area as soon as possible.

2. In working with the other emergency medical technicians at the scene, the EMT in charge of the triage should not become so involved that he looses contact with the overall perspective of other activities at the scene. The EMT in charge should be aware of the progress of individual patients but must also control the entire rescue and evacuation effort.

APPENDIX E

A SAMPLE TEACHING UNIT

MODULE 2

LESSON PLAN

TOPICS	MATERIALS
DISPATCH PROCEDURES	EPI TR 1
Practical exercise	B TR 31-37
Stages of an ambulance call	
Description of dispatch stage	
Practical exercise	
TRAVEL TO THE SCENE	
Emergency or non-emergency	
Legal aspects	P.D.H. Handout
Ambulance accidents	P.D.H. Handout
Communication during travel	
PRIMARY CONTACT AND SURVEY OF PATIENT(S)	EPI TR 2
Mechanisms of injury	B TR 4-30
Survey of patient(s)	Manikin
Triage	Jump Kits
Communication at the scene	Blankets

EQUIPMENT NEEDED

1. Overhead Projector
2. Projector Screen
3. Four (4) Manikins
4. Four (4) Jump Kits
5. Four (4) Blankets

MATERIALS NEEDED

1. EPI Transparencies 1-2
2. Brady Transparencies 4-37
3. P.D.H. Handouts
   a. Applicable Sections of Pennsylvania Vehicle Code
   b. Statistical Summary of Accidents Involving Ambulances

MODULE 2

INSTRUCTOR'S NOTES

1. During the opening practical exercise, attempt to create a realistic simulation of the information-gathering process and allow the students to make any errors which may occur. When the students critique the activities of the exercise, the instructor should discuss the situation with the students so that they may be able to discover what information, if any, was omitted during the simulation. In this manner, the students will assist in the teaching process.

2. Once the dispatch instruction is complete, all students should have an opportunity to perform the same practical exercise as discussed above and their participation should be recorded on the class roster. Each student should participate in this final exercise in an area away from the rest of the class in groups of four (4). Each student will list the necessary dispatch information and will act as the caller for another member of the group. The dispatch member of the group will be required to obtain all vital information.

3. The instructor should give the following examples of ambulance calls and ask the students to:
   a. Determine if the call should be handled as an emergency;
   b. Justify their decision.

Examples:
   a. A call is received to respond to an automobile accident in which the State Police inform you that there may be some injuries.
   b. You are informed that there is a house fire in your area (with no specific information concerning any patients).
   c. A panic-stricken mother calls to ask for an ambulance to pick up her 5 year old son who has fallen off his swing set and may have broken one leg and one arm.
   d. You are called to transfer a patient to a special surgical hospital in another town, 60 miles away, so that the patient may receive surgery to repair tendons and ligaments in his hand.
   e. A doctor calls from the hospital and requests an ambulance to transfer a patient to another hospital to receive a cardiac pacemaker.
   f. One of the members of your own organization calls from the scene of an accident and informs you that there are three patients to be transported with the following problems respectively:
      1. Severe lasceration of the left leg which is dressed and bandaged with bleeding controlled;
      2. A fractured right arm;
      3. A possible fractured pelvis and hip.

4. The student's should be presented with the following examples and asked to pick first, second and third priority patients.

The following examples assume that the EMT walks into an area in which there are three patients and each one is 25 feet from the EMT.

- Which one is surveyed first?
- Which one is surveyed third?
- Does it make any difference?
- Why?

Example 1

Patient A Large pool of blood next to patient, patient is leaning against the wall with hips and legs on the floor, patient is pale and is gazing at the opposite wall with a blank expression.

Patient B Patient is pinned under a pile of debris and is screaming that his leg is broken.

Patient C Patient is lying on the floor on his back, looks bluish in color and doesn't appear to be moving at all.

Example 2

Patient A Patient is slumped over the steering wheel of a car with her airway in a flexed position.

Patient B Lying on ground with one hip on the ground and one hip hip touching the rocker panel of the car, patient is screaming she is being crushed.

Patient C Middle-aged male in back seat, holding his chest and leaning against the back seat.

Example 3

Patient A One tire of a car is resting on the patient's chest; the patient's face is a deep purple, mouth and eyes are open.

Patient B Sitting in the front seat holding a handkerchief over a soft tissue injury to the scalp with head, face and one sholder covered with dark redish-brown blood.

Patient C Lying in a nearby ditch, face down with no movement.

MODULE 2

OUTLINE

Text References Visual Aids/ Notes

I. Dispatch Procedures

A. Introduction practical exercise — Instructor's Note 1

1. Simulate dispatch process by:
   a. Selecting two students as caller and dispatcher respectively;
   b. Students will talk as if the dispatcher is receiving a request for ambulance service;
   c. Student dispatcher will gather what he feels is essential information.
2. Instructor will list information gathered.
3. Critique by students including discussion of:
   a. Items included;
   b. Items omitted;
   c. Method of obtaining information, etc.

B. Description or the stages of an ambulance call

1. The job of providing ambulance service consists of much more than transporting ill or injured patients to a hospital, rest home, or clinic
2. Ambulance calls and all tasks performed have four basic stages:
   a. Preparation stage (getting things ready);
   b. Execution stage (performing the task);
   c. Evaluation stage (looking at what has been done and determining if it has been done properly);
   d. Termination stage (cleaning-up and returning equipment and/or personnel to a ready state).
   e. The ambulance call itself may actually be sub-divided into six divisions or stages:
      1. The pre-dispatch stage;
      2. The dispatch stage;
      3. Travel to the scene;
      4. Actions at the scene;
      5. Travel to the hospital;
      6. Actions at the hospital.

	Text References Visual Aids/ Notes
3. The pre-dispatch stage (getting things ready)	B 37
a. The emergency vehicle must be kept in peak condition, with the tank full of gas at all times; recommended equipment should always be on board and kept scrupulously clean and in good repair.	B-TR 32
b. Fully trained personnel must be available to cope with each emergency; an ambulance run should never be used as a training exercise for new personnel.	
4. The dispatch stage	B 37-38
a. The ambulance crew should be provided all information about the call before they leave quarters; this information should include the following points:	AAOS 259 B-TR 33
1. The name of the patient (if known);	
2. The exact location of the call, including the street name and number, or in a highway accident, the nearest intersection or other landmark;	
3. The nature of the call, so that crew members may be selected and operations pre-planned while enroute to the scene.	
b. If recording equipment is not available, a specially marked chalkboard or printed form is helpful to remind the person taking the call of all necessary information.	
c. Methods of receiving calls may vary from organization to organization:	
1. Direct phone call from person requesting help;	
2. Phone call from police or emergency operations center (EOC) which receives all emergency calls;	
3. Radio communication from an EOC or other source.	
d. When phone is answered, it should be clear to the caller the number reached is, in fact, an ambulance service.	EPI-Dispatcl ELEMENT 1- EPI TR-1
e. Gather the information necessary to provide the EMT with all the information he will need to respond to the call:	
1. Phone number of caller;	
2. Name of patient (if known);	

3. Specific location of the patient, including the street name and address, or in an auto accident, the nearest intersection or other landmark;
4. Caller's perception of the nature of the patient's problem;
5. Specifics concerning the patient's vital signs (i.e., is the patient breathing, bleeding severely, conscious or in severe pain)?;
6. Name of the patient's doctor (if known);
7. Time that the call was received;
8. Time and date for which ambulance service is requested (if appropriate);
9. Time that the incident occurred (if appropriate and/or possible).

f. This information is important to obtain so that the dispatcher and crew may make the best judgments possible, based upon all the information available;
   1. A phone number will provide a method of contacting the caller if any unforeseen difficulties occur;
   2. The patient's name is necessary so that the patient may be promptly located and identified;
   3. An accurate set of directions must be obtained so that no confusion or unnecessary loss of time occurs;
   4. The caller's perception of the patient's problem is important since the caller may already understand the patient's illness or injury situation very thoroughly. (This information must be examined very carefully, since the caller may only be guessing);
   5. More specific information concerning vital signs must be gathered to assist in an evaluation of the accuracy of the caller's general statement concerning the nature of the call;
   6. By obtaining the name of the patient's doctor (and if in fact he has one), it will be possible to determine:

Text References Visual Aids/ Notes

a. An idea of the patient's clinical history;
b. Who may know more about the problems of this particular patient.

7. It is necessary to record the time the call was received in order to measure vehicle response time and, if possible, the dispatcher should attempt to determine the time which the incident occurred (the incident which has resulted in an ill or injured patient):
   a. If possible, the dispatcher should record all times including, incident occurred, call received, vehicle enroute, arrived at scene, depart scene for destination, arrived destination and ready for service;
   b. Time at which incident occurred in a situation such as a CPR case.

g. Determine nature of the problem based upon the information gathered and determine if an ambulance is needed.
   1. May be very difficult decision.
   2. If patient is 14 years old, has a cast on his left arm and is otherwise healthy, he probably doesn't need an ambulance.
   3. If there is the slightest possibility that an ambulance is needed, it should be dispatched.

h. Inform caller of the estimated time of arrival and explain any anticipated delays or why an ambulance is not being dispatched.
   1. If an ambulance is not being dispatched, suggest an alternate method such as a relative, a taxi or other non-emergency source.
   2. If it is necessary, inform the caller of where to meet the ambulance so the caller can escort the crew to the patient.

i. Review elements 8-10 in the EPI dispatch task description. — Instructor's Note 2

5. Other stages

a. Travel to the scene — B 38-39

   1. During travel to the scene, the crew should "size up" the situation, taking into account all available information. — B-TR 34

2. Several important questions should be considered:
   a. Is it a routine run, or an emergency run requiring the exercise of special driving privileges?
   b. What is the shortest route? Will the time of day affect traffic on the shortest route? Will bridges, railroad tracks or detours affect the route?
   c. Will weather affect driving conditions?
   d. Will other emergency units be responding? If so, by what route?
   e. Is the response to a building? If so, what sort of building? Will there be an elevator for transporting equipment?
   f. What special equipment should be carried in initially?
   g. Will police assistance or additional equipment be needed?

b. Actions at the scene — B 39-42

1. At the scene a good rule of thumb for developing a course of action is the "Three A's": analyze, act, anticipate. — AAOS 46-49, 256; B-TR 35
2. To analyze the scene is to continue to size-up operations that started when the call was first received; the EMT must consider four elements: the scene, the situation, the traffic, and the patient(s).
3. Analysis of the scene helps the ambulance crew to determine their approach to the accident.
   a. The ambulance should be parked in a spot allowing easy access to the patient(s), but well out of the roadway and clear of spilled gasoline and other dangerous conditions.
   b. If the ambulance must be parked away from the danger area, the driver can pull it into the roadway when it is time to load the patients.
4. Analyzing the situation means determining exactly what has happened, who is available to help, and what additional emergency personnel and equipment will be needed.
5. Analyzing the traffic conditions is always important in highway accidents.

		Text References Visual Aids/ Notes
	a. It may be necessary to recruit bystanders to aid in traffic control until sufficient police officers arrive, but they must be carefully instructed. b. If flares are used in night accidents, they should be set up far enough from the scene to serve as warning to oncoming traffic; they should be kept away from flammable materials. c. If wreckage and dangerous conditions at the accident scene require that the road be closed completely, blockades should be set up at the nearest intersection.	
6.	Analysis of the patients in a multiple patient accident involves the process of triage, or sorting the patients according to the severity of their injuries; they should be sorted into three groups. a. High priority injuries include airway and breathing difficulties; cardiac arrest; uncontrolled bleeding; severe head injuries; open chest or abdominal wounds; severe medical problems, such as poisonings and heart attacks; and severe shock. b. Second priority injuries include burns; major multiple fractures; and back injuries with or without spinal damage. c. Third priority injuries include minor fractures; other minor injuries; obviously mortal wounds in which death appears reasonably certain; and the obvious dead.	B-TR 35, OL 1
7.	When analysis is completed, the EMT must act. a. Initial emergency care measures must be started, treating first the life-threatening problems and then less serious injuries. b. Further accidents at the scene must be prevented and bystanders restrained from causing additional injury to patients. c. Distraught relatives must be reassured.	B-TR 35, OL 2
8.	Finally, the EMT must anticipate, or carry out a second triage for loading and transportation; this step includes: a. Planning, loading and transportation (e.g., some critical patients may be loaded while others are receiving care).	B-TR 35, OL2A

b. Obtaining assistance as needed for loading the patients into ambulances.
c. Loading patients carefully to avoid aggravation of injuries.
d. Determining the best route for leaving the scene.
e. Determining the hospital to which the patients should be taken, depending on the particular facilities needed.

c. Travel to the hospital
1. During travel to the hospital, the delivery of the patient in an improved or stabilized condition is in the hands of the EMT alone.
2. The EMT must remain at the patient's side, observing diagnostic signs that indicate the need for further treatment.
3. The driver must provide a safe, smooth trip and notify the hospital of the arrival of the patient, his condition, and any technical assistance that may be needed.

d. At the hospital — B 43-44, B-TR 37
1. While the patient is unloaded at the hospital, the EMT should continue any specific procedure, such as artificial ventilation, until the hospital staff can take over.
2. The emergency department staff should be informed of all known facts about the accident and the patient, such as changes in diagnostic signs or emergency care measures used.
3. In a multiple patient situation, ambulance personnel may assist the hospital staff, but only if they are asked to do so.
4. The ambulance should be prepared for the next run before it leaves the hospital.

Text References Visual Aids/ Notes

II. Travel to the Scene

A. Once the necessary information has been received by the crew, the crew members may have to determine if the call should be handled as an emergency.

EPI
Travel to Scene
Elements 1-11
B 38-39
B-TR 34

1. The dispatcher should provide a strong indication of the nature of the call.
2. If the dispatcher provides no specific decision, the crew must decide if the call will be handled as an emergency, based on the information available.
3. Review dispatch task description - Note #6.

B. Discuss hypothetical ambulance call descriptions and determine if calls should or should not be handled as emergencies.

Instructors
Note 3

C. Once it has been determined how the call will be handled, the driver (with help from other crew members or dispatcher) must select the best route of travel to the scene.

1. If the call is not an emergency, the selection of the route is not very critical.
2. If the call is an emergency, the selection of the route may be very critical and is based upon several factors including:
   a. Distance to the scene for each route being considered;
   b. Time of day is important since traffic conditions vary widely on most roads at extreme hours (i.e., 1730 hours and 0200 hours) and if a local industry releases its personnel at 1500 hours, it may be best to use an alternate route which may be a little longer in mileage;
   c. Weather conditions may have an effect on the routes chosen since a snow storm may require that hills be avoided and travel be only on major roads;
   d. Any other activities which may be causing abnormal conjestion along any portion of the route such as a fire or accident scene, must also be considered.

3. If the route of travel selected is the best and/or only route, the driver and crew must determine if an escort is needed.
   a. Types of escorts may be varied under different conditions.
      1. Many ambulance services have obtained a police escort to maneuver through heavy traffic.
      2. Some ambulance services have required a snow plow escort to move through a deep snow fall.
   b. Regardless of the nature of the escort (and it may be noted that police escorts occur much more frequently than snow plow escorts), the driver or another crew member must inform the dispatcher of the:
      1. Nature of the escort needed;
      2. Route of ambulance travel;
      3. Point at which the ambulance needs the escort vehicle;
      4. Time at which the ambulance will meet the escort vehicle; and,
      5. Destination of the ambulance.
   c. Review EPI Travel to Scene, Loop 2, Element #3 and explanation.

      Meet escort vehicle and follow that vehicle by one car length for every 10 miles per hour speed. It may not be necessary to sound the siren of the ambulance in the case of a police escort, however, it may be necessary to avoid being overlooked by other drivers concentrating on the police vehicle.

      One of the major disadvantages of an escort situation is that other drivers tend to observe the first passing vehicle (police) and may pull back onto the roadway or into an intersection before the ambulance has arrived. Great care must be exercised during an escort to avoid that situation. Another problem which may occur is that the police vehicle may go too fast for the condition of the patient if the policeman driving is not aware of the condition of the patient. If the police vehicle goes too fast, the ambulance driver should go only as fast as may be comfortable for and best for the patient's condition.

d. Escorts may also be used under non-emergency conditions to assist the driver in locating either the patient or the destination of the vehicle.

D. Driving to the scene must be safe under all conditions (emergency and non-emergency) and state laws must be obeyed.

1. Discussion of Pennsylvania Department of Health handouts on:
   a. Pennsylvania statutes;
   b. Applicable sections of Pennsylvania Vehicle Code; and,
   c. Statistical summary of Accidents Involving Ambulances.
2. Legal Responsibilities
   a. State laws almost always grant the driver of an emergency vehicle certain privileges; however, these privileges do not relieve him of the consequences of reckless disregard for the safety of others. — B 11, AAOS 253
   b. The ambulance driver must recognize certain responsibilities.
      1. His primary responsibility is a safe and comfortable ride for the patient.
      2. He must realize that there are no guarantees that other drivers will grant the right-of-way.
      3. He must maintain a safe following distance.
      4. He must have his vehicle under control at all times and drive in a manner appropriate to road and weather conditions.
3. The use of warning devices — B 13, AAOS 254
   a. Several points should be remembered when the emergency vehicle siren is to be used.
      1. Use of the siren should be limited to true emergencies.
      2. The pitch should be varied to improve audibility, since it is difficult for a driver in a closed car to distinguish one continuous tone, especially if his air conditioner and radio are on.

Text References Visual Aids/ Notes

3. In many medical problems, the siren itself may have an adverse effect on the patient by upsetting him and causing unnecessary apprehension.

b. Rapid alternation of the headlights between high and low beams is quite effective for clearing traffic, even in the daytime.

4. The reckless use of speed — B 13-14, AAOS 254-255

a. Very few injury or illness situations require a high-speed run to the hospital; these runs rarely gain more than a minute or two, and the time contributes little to the ultimate recovery of the patient.

b. Wild, high-speed runs may actually aggravate the injury or illness in cases such as heart attack or spinal injury.

5. Causes of ambulance accidents — B 14, AAOS 255-256

a. A sense of urgency may cause the driver to speed; coupled with the vehicle's weight and road characteristics, this speed often causes accidents.

b. Cars that stop suddenly when they hear or see the ambulance often present an obstacle that the driver cannot avoid hitting.

c. Intersections cause particular hazards, especially when one ambulance is following another and the drivers of other vehicles pull out as soon as one ambulance has passed.

E. Once underway, the crew members may begin to prepare for the tasks they will have to perform at the scene.

1. If the dispatch information has been properly relayed, the EMT may be able to anticipate what equipment may be needed at the scene.
2. That equipment should be gathered in one appropriate location within the vehicle.
3. It is most helpful if the equipment which may be used is stored in a "jump kit" of some type.
4. Upon arriving at the location of the patient, it may be necessary to have a variety of equipment at the side of the patient as soon as possible. In order to assure that certain basic items of emergency care equipment are within easy reach and ready for use at all times, it may be helpful to store those items in a portable container which may be taken to a patient's side. The size of the

container and the items carried must permit the EMT to carry the stretcher and the basic equipment at the same time. That container may be the size of a tackle box or knapsack and may include such items as:

a. Bag-valve mask;
b. Assortment of airways;
c. Padded tongue blades;
d. Stethescope;
e. Blood pressure cuff;
f. Assorted elastic bandages;
g. Assorted gauze dressings;
h. Assorted trauma dressings;
i. Assorted gauze bandages;
j. Triangular bandages;
k. Assorted adhesive bandages;
l. Assorted tape rolls;
m. Scissors;
n. Portable suction with catheters;
o. I.V. fluids administration set (if applicable)
p. I.V. fluids (if applicable)
q. Eurhythmia control drugs (if applicable)

This kit is usually referred to as a jump kit and has become a vital part of the equipment used by many emergency medical technicians.

F. Any equipment which is to be used at the scene should be "checked out" on the way to the scene, if time permits.

1. If any piece of equipment is not working properly, the EMT should try to perform any minor repairs possible.
2. If any piece of equipment cannot be repaired or is missing (e.g., from the jump kit), the EMT should substitute another type of equipment for the original piece selected.

G. During this preparation stage (before actually seeing the patient or patients), the crew members should discuss and/or assign tasks and responsibilities to be acted upon at the scene.

III. Primary Contact of Survey of Patients

A. Review description of the actions of the EMT at the scene.

1. Analyze
2. Act
3. Anticipate

B. Arriving at the scene

1. The vehicle should be parked as close to the patient(s) as possible without:
   a. Interfering with traffic flow;
   b. Endangering patients; or,
   c. Interfering with rescue operations.
2. Upon arriving at the scene, the EMT should rapidly conduct a visual survey from his vehicle (if possible) to determine if:
   a. Additional ambulances may be needed, due to large numbers of patients;
   b. Additional support vehicles are needed such as heavy rescue equipment;
   c. Traffic control personnel are needed; or,
   d. Any other support services.
3. If any other services or personnel are needed, it is up to the EMT on the scene to contact the dispatcher to request any assistance necessary.
   a. The EMT must provide as much specific information as possible to the dispatcher so the dispatcher will have a thorough knowledge of what is going on at the scene.
   b. It is then the dispatcher's responsibility to dispatch the necessary help to the scene.

C. Primary patient contact

1. If there is more than one patient, the job of delivering emergency care is much more difficult.
2. The EMT may visually survey all potential patients to determine a "long distance" priority so the EMT will have some logic to the method of performing the initial or primary survey.
   a. It may be possible to determine which patients may be most critical by just glancing at all patients.

b. This is not an accurate or final determination of which patients are more serious than others.
   1. The patient which looks the most grotesque and is making the most noise may not be the most serious patient.
   2. The total situation must be analyzed rapidly and the EMT must determine which patient will be surveyed first (not necessarily treated first). Instructor's Note 4

3. Once the EMT selects the patient or patients to be surveyed (if there is more than one EMT, it will be possible to survey several patients at the same time), the EMT should quickly move to the side of the patient selected.
   a. The EMT must determine if the patient is breathing.
      1. If the patient is conscious and breathing on his own, it may not be necessary to position the patient's airway.
      2. If the patient's level of consciousness is not clearly acceptable, the airway should be positioned by hyperextending the neck and the look, listen, feel method should be employed to determine the nature of respiratory activity.
   b. The EMT must determine if the patient is bleeding externally to such a degree that the patient's life is threatened.
      1. This determination is made as the EMT quickly looks at the patient's body for massive blood loss while checking for breathing.
      2. Massive blood loss is equally as critical as lack of oxygen; however, this type of bleeding usually only occurs when a major artery has been severed (e.g., in an amputation or gun-shot wound).
      3. The observation for massive blood loss and establishing an open airway must occur simultaneously.
         a. Without blood - oxygen cannot reach the brain.
         b. Without oxygen - the heart will no longer pump blood to the brain.

4. If the patient is not breathing, the EMT must begin intermittent positive pressure ventilation (IPPV) immediately.
   a. Establish an open airway by hyperextending the neck and inserting an oropharangeal airway.
   b. Ventilate the patient 3 to 5 times, and then check the carotid pulse to determine if there is any cardiac output.
   c. If there is no cardiac output (and there usually is not), the EMT must begin external cardiac compressions by depressing the sternum with the long axis of the heal of the hand.
   d. A rate of 15 compressions to 2 ventilations with one operator. The rate to be maintained is 60 compressions per minute.
      (In order to do this, one rescuer must compress the sternum at an instantaneous rate of 80 per minute, since no compressions are occurring during the ventilation process.)
   e. A rate of 5 compressions to 1 ventilation occurs with two rescuers, with the sternum being compressed at least once every second. There should be no interruption in compressions for ventilation.
   f. All the specifics of cardiopulmonary resuscitation (CPR) will be discussed more completely in module 3.
5. If the patient is bleeding as severely as previously described, that bleeding must be controlled as quickly as possible by either:
   a. Direct pressure;
   b. Digital pressure and/or;
   c. Tourniquet.
6. All of these procedures (assessment of life-support problems and treatment if necessary) must be performed on all potential patients before moving to a survey of greater detail.

D. Once all patients have been surveyed for critical life-support problems, the EMT must select the patient which is to be surveyed first (based upon the primary evaluation during the initial survey).

(Refer to Emergency Care Instructor's Guide, Unit One, The Emergency Situation, pages 16-18)

APPENDIX F

NAMES AND ADDRESSES OF SURVEY SITES

EPI ALLIED HEALTH PROFESSIONS PROJECT

EMERGENCY MEDICAL TECHNICIAN SURVEY

Organization

Belmont Corners First Aid Squad, Pleasant Mount, Pennsylvania

Chinchilla First Aid Squad, Chinchilla, Pennsylvania

Citizens Ambulance Service, Indiana, Pennsylvania

Clark's Summit First Aid Squad, Clark's Summit, Pennsylvania

Cottage Hose Company, Carbondale, Pennsylvania

Erie County Volunteer Fire Association, Erie, Pennsylvania

Erie Volunteer Fire Association, Erie, Pennsylvania

Freedom House Enterprises, Inc. Ambulance Service, Pittsburgh, Pennsylvania

Goodfellowship Ambulance Club, West Chester, Pennsylvania

Greenville Area Ambulance Service, Greenville, Pennsylvania

Jessop First Aid Squad, Jessop, Pennsylvania

Lima Volunteer Fire Department, Lima, Pennsylvania

Lower Marion Police, Ardmore, Pennsylvania

Meadville Area Ambulance Service, Meadville, Pennsylvania

Milmont Volunteer Fire Department, Milmont, Pennsylvania

Monroeville #4 Volunteer Fire Department, Monroeville, Pennsylvania

Monroeville #5 Volunteer Fire Department, Monroeville, Pennsylvania

Moscow First Aid Squad, Moscow, Pennsylvania

Mutual Aid Ambulance Service, Greensburg, Pennsylvania

Newtown Square Volunteer Fire Department, Newtown Square, Pennsylvania

Organization

Northern Wayne First Aid Squad, Lakewood, Pennsylvania

Philadelphia Fire Department, Philadelphia, Pennsylvania (3 locations)

River Rescue, Harrisburg, Pennsylvania

St. Mary's Ambulance Service, St. Mary's, Pennsylvania

Valley Ambulance Authority, Coraopolis, Pennsylvania

Washington Ambulance & Chair Service, Washington, Pennsylvania

Waymart First Aid Squad, Waymart, Pennsylvania